# Southeast Asian Economic Outlook 2010



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# Southeast Asian Economic Outlook 2010



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# Foreword

The global financial crisis was a litmus test for Southeast Asia's economic dynamism. The region has emerged strongly from the test, in large part as a result of the considerable improvements in the macroeconomic and financial policies carried out over the past decade. While this is encouraging, many challenges remain, in particular achieving more balanced growth in the future.

Rebalancing growth is not just a matter of shifting from exports to domestic demand and making the region's growth pattern less dependent on import demand by OECD economies. It involves reducing the region's excessive export dependence on a narrow range of manufactured products, such as electronic parts and components, and moving up the technological ladder in the global value chain.

This rebalancing will require reallocating public resources to meet the growing need for economic and social infrastructure, which is essential to allow the region to exploit untapped growth opportunities. This includes speeding up the regional integration process and expanding transport networks within and across countries. Rebalancing does not mean reverting the economic openness and integration into the global economy achieved so far. It implies making greater use of trade and investment opportunities arising from deeper economic integration in Asia and the Pacific.

This first edition of the *Southeast Asian Economic Outlook* suggests that the rebalancing process is already underway. Real GDP growth in six Southeast Asian countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) is projected to reach 6.0% per year on average in 2011-15, which is similar to the pre-crisis level. This time, however, the region's economic growth is likely to rely more on domestic consumption and investment.

Southeast Asia is a region of strategic importance to the OECD. In May 2007, the OECD Ministerial Council adopted a resolution to strengthen the Organisation's relations with the region under its Enhanced Engagement Strategy. In order to contribute to this initiative, in April 2009, the OECD Development Centre launched its new economic outlook project for the region. This *Outlook* is not just a report. It is a tool to facilitate informed dialogue between OECD and Southeast Asian countries. I hope it will also help the dialogue among Southeast Asian countries themselves around those policy areas that are critical for the region's development.

November 2010
Angel Gurría
OECD Secretary-General

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# Preface

The *Southeast Asian Economic Outlook* (SAEO) is the latest of three regional economic outlooks published by the OECD Development Centre. The others are the *African Economic Outlook* and the *Latin American Economic Outlook*. This new *Outlook* focuses on Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. It also addresses relevant economic issues in China and India in order to fully reflect economic developments in the region.

Overall, Southeast Asia has demonstrated a V-shaped recovery from the global financial crisis. This remarkable resilience underscores a considerable improvement in the region's macroeconomic and financial policies over the past decade. Many Southeast Asian economies have also benefited from both the large fiscal and monetary stimulus packages implemented in the early stages of the economic downturn and China's early rebound. Yet, we may wonder what these economies will look like in the next five years. Are they likely to go back to export-led growth patterns as observed before the crisis or adopt different growth and development paths?

"Rebalancing growth" seems to be the catchphrase in the region. In a final communiqué by the 16th ASEAN Summit in Hanoi in April 2010, regional leaders recognised the need to support more balanced growth within and across economies. This is indeed the main theme running throughout the inaugural edition of the SAEO. Despite the importance of this topic for the future of Southeast Asian economies, there is so far little information on whether there has been any real progress in this direction and what form rebalancing will take place over the medium term. The SAEO 2010 starts addressing this gap by providing comparable quantitative information on rebalancing of growth patterns in the region.

Achieving a more balanced growth requires new policies and credible medium-term fiscal frameworks under national development plans and strategies. The development of transport infrastructure, for example, has been emphasised as an important area where new financing methods are badly needed. Further efforts should be made to improve both "hard" and "soft" infrastructures in the region, as they are central to promoting regional integration and connectivity while reducing poverty and inequality.

The Development Centre is a bridge between OECD member countries and developing and emerging economies. We enjoy the full membership of three Southeast Asian countries, namely Indonesia, Thailand and Viet Nam and have benefited from the generous support of other countries in the Asia-Pacific region (*i.e.* Malaysia, the Philippines and Singapore) to carry out this work. Both government officials and academic experts from these countries have provided us with substantive inputs and important policy insights.

I hope that this new publication by the Development Centre will promote informed policy dialogue between Southeast Asian and OECD countries and serve as a tool to foster a better understanding of the development prospects of this dynamic region, home to almost 10% of the world population.

Paris, 9 November 2010
Mario Pezzini
Director, OECD Development Centre

# Acronyms and Abbreviations

| | |
|---|---|
| ABCIs | Asian Business Cycles Indicators |
| ABMI | Asian Bond Markets Initiative |
| ACB | ASEAN Compliance Body |
| ACFTA | ASEAN-China Free Trade Agreement |
| ADB | Asian Development Bank |
| AEC | ASEAN Economic Community |
| AEM | ASEAN Economic Ministers' Meeting |
| AFAFGIT | ASEAN Framework Agreement on the Facilitation of Goods in Transit |
| AFAS | ASEAN Framework Agreement on Services |
| AFTA | ASEAN Free Trade Area |
| AH | Asian Highway Network |
| AHN | ASEAN Highway Network |
| AHTN | ASEAN Harmonised Tariff Nomenclature |
| AIA | ASEAN Investment Area |
| AISP | ASEAN Integration System of Preferences |
| AMAF | ASOF and Ministries on Agriculture and Forestry |
| AMBDC | ASEAN-Mekong Basin Development Cooperation |
| AMCs | ASEAN Member Countries |
| APEC | Asia-Pacific Economic Co-operation |
| APMS | ASEAN Community Progress Monitoring System |
| APSC | ASEAN Political-Security Community |
| ASAM | ASEAN-wide Single Aviation Market |
| ASCC | ASEAN Socio-Cultural Community |
| ASEAN | Association of Southeast Asian Nations |
| ASEAN-6 | Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand |
| ASEAN plus 3 | 10 ASEAN countries plus China, Japan and Korea |
| ASEAN plus 6 | 10 ASEAN countries plus Australia, China, India, Japan, Korea and New Zealand |
| ASOF | ASEAN Senior Officials Meeting on Forestry |
| ASP | ASEAN Surveillance Process |
| ATAP | ASEAN Transport Action Plan |
| ATM | ASEAN Transport Ministers |
| BIDV | Bank for Investment and Development of Viet Nam |
| BIMP-EAGA | Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area |
| BIS | Bank for International Settlements |

| | |
|---|---|
| CDS | Credit Default Swap |
| CEPA | Comprehensive Economic Partnership Agreement |
| CEPEA | Comprehensive Economic Partnership for East Asia |
| CEPT | Common Effective Preferential Tariff |
| CERT | Computer Emergency Response Teams |
| CGE | Computable General Equilibrium |
| CGI | Consultative Group on Indonesia |
| CLMV | Cambodia, Laos, Myanmar and Viet Nam |
| DSGE | Dynamic Stochastic General Equilibrium |
| ECSPA | Economic Co-operation Strategy Plan of Action |
| EPA | Economic Partnership Agreement |
| ERPD | Economic Review and Policy Dialogue |
| ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| EU | European Union |
| EEC | European Economic Community |
| EMEAP | Executives' Meeting of East Asia-Pacific Central Bank |
| FAFAIT | ASEAN Regional Framework Agreement on the Facilitation of Interstate Transport |
| FAIST | ASEAN Framework Agreement on the Facilitation of Inter-State Transport |
| FAMT | ASEAN Framework Agreement on Multimodal Transport |
| FDI | Foreign Direct Investment |
| FTA | Free Trade Agreement |
| GDP | Gross Domestic Product |
| GMS | Greater Mekong Sub-region |
| GPC | Global Production Chains |
| GT | Gross tonne |
| GTP | Government Transformation Programme |
| HS | Harmonised System |
| IAI | Initiative for ASEAN Integration |
| ICT | Information and Communication Technology |
| IDR | Indonesian Rupiah |
| IIT | Intra-Industry Trade |
| IMF | International Monetary Fund |
| IMS-GT | Indonesia-Malaysia-Singapore Growth Triangle |
| IMT-GT | Indonesia-Malaysia-Thailand Growth Triangle |
| IPC | Indonesian Port Authority |
| IRBs | Infrastructure Revenue Bonds |
| JICA | Japan International Cooperation Agency |
| LPEM-FEUI | Indonesian Institute for Economic and Social Research, University of Indonesia |
| LPI | Logistics Performance Index |
| MFN | Most Favoured Nation principle |
| MoF | Ministry of Finance |

| | |
|---|---|
| MPF | Medium-term Projection Framework for growth and development |
| MPS | Macro-Prudential Surveillance |
| MRAs | Mutual Recognition Agreements |
| MRC | Mekong River Commission |
| MTWG | Maritime Transport Working Group |
| NIEs | Newly Industrialised Economies (NIEs) |
| NSW | National Single Window |
| NTB | Non-Tariff Barrier |
| NTM | Non-Tariff Measure |
| NTT | Indonesia's East Nusa Tenggara province |
| OPEC | Organisation of Petroleum Exporting Countries |
| OECD | Organisation for Economic Co-operation and Development |
| PCF | Peer Consultation Framework |
| PFI | Private Finance Initiative |
| PGS | Priority Goods Sectors |
| PIS | Priority Integration Sectors |
| PPP | Purchasing Power Parity |
| PPPs | Public Private Partnerships |
| PSS | Priority Services Sectors |
| R&D | Research and Development |
| RCA | Revealed Comparative Advantage |
| RM | Malaysian Ringgit |
| RMB | Renminbi |
| RoO | Rules of Origin |
| RIATS | Roadmap for Integration of Air Travel Sector |
| SAEO | Southeast Asian Economic Outlook |
| SEZs | Special Economic Zones |
| SKRL | Singapore-Kunming Rail Link |
| STEER | Singapore-Thailand Enhanced Economic Relationship |
| STOM | Senior Transport Officials Meetings |
| TEUs | Twenty-foot Equivalent Units |
| THB | Thai Baht |
| THC | Terminal Handling Charges |
| TPP | Trans-Pacific Strategic Economic Partnership Agreement |
| TTRs | Transit Transport Routes |
| UN | United Nations |
| USD | United States Dollar |
| VAP | Vientiane Action Programme |
| VEC | Viet Nam Expressways Corporation |
| VGFs | Viability Gap Funds |
| VMTC | Viet Nam's Ministry of Transport and Communications |
| WTO | World Trade Organization |

# Executive Summary

Southeast Asia has emerged strongly from the global financial crisis. The average economic growth rate of six countries[1] in the region (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) is projected to reach 7.3% in 2010, compared to 1.3% in 2009. What stimulus measures have these governments adopted to counteract the economic downturn? How should exit strategies be formulated and implemented without jeopardising the current recovery? Looking beyond near-term developments, policy makers in the region have expressed their strong desire to rebalance growth towards domestic demand and to become more resilient to external shocks. What steps should then be taken to stir their economies in this direction while reducing poverty and inequality? In what way can regional integration contribute to making Southeast Asian economies more balanced and inclusive?

The inaugural edition of the *Southeast Asian Economic Outlook* (SAEO) addresses these questions. It also includes an in-depth analysis of transport infrastructure development and its implications for regional integration.

## Southeast Asia's near-term growth outlook is bright, but downside risks remain

Emerging strongly from the crisis, export-dependent Southeast Asian countries (Malaysia, Singapore and Thailand) have benefited considerably from China's early rebound through their close trade linkages. Indonesia, the Philippines and Viet Nam, with relatively large domestic markets, have also proved resilient to the crisis, as they were able to provide effective fiscal and monetary stimulus packages in the early stages of the economic downturn.

The current cycle has underscored a considerable improvement in the region's macroeconomic and financial policies over the past decade. Both leading and coincident indicators point towards steady growth in the region based on the initial strong growth of exports and sound domestic consumption and private investment, supported by improved business sentiment.[2]

While budget deficits and public debt levels, if not carefully managed, could raise concerns in some of these countries, the greater risk could come from outside the region through weaker-than-expected import demands in OECD countries. Another element to consider is related to China. The People's Bank of China is tightening monetary policy to restrain very rapid growth in domestic credit and to contain excessive increases in asset prices. This is likely to slow down Chinese real economic growth for several months. Those economies with the strongest trade links to China could face headwinds from such a slowdown.

## Shifting macroeconomic policies towards more normal stances is necessary but requires caution

The fiscal stimulus measures put in place after the global economic downturn were of unprecedented scale for the region[3] and contributed significantly to the rebound of real gross domestic product (GDP) growth in 2009 and 2010. With recoveries now well underway, the region's macroeconomic policies will need to shift towards less expansionary fiscal and monetary policy stances, restrain

inflation and maintain sound fiscal and external finances, while allowing for temporary changes during the process to respond to further external shocks should they arise. Greater flexibility of exchange rates combined with more effective management of capital flows will be needed to support the exit measures. Enhancing regional macroeconomic co-operation, in particular strengthening regional monitoring and surveillance, is also important to manage potential risks in the region.[4]

## The region's medium-term growth and development outlook is favourable[5]

Real GDP growth in six Southeast Asian countries is projected to achieve 6.0% per year on average in 2011-15, which is more or less the same as the pre-crisis level (see Table 0.1). The region's steady growth will be led by the above-average growth rates in Indonesia and Viet Nam, supported by strong domestic demand. The results of the medium-term economic projections highlight three main features of rebalancing growth in the region.

**Table 0.1. Real GDP Growth**
(annual percentage changes)

| | 2010 | 2015 | Average 2003-07 | Average 2011-15 |
|---|---|---|---|---|
| Indonesia | 6.1 | 7.1 | 5.5 | 6.6 |
| Malaysia | 6.5 | 5.3 | 6.0 | 5.5 |
| Philippines | 6.0 | 4.4 | 5.7 | 4.6 |
| Singapore | 14.0 | 4.5 | 7.5 | 4.7 |
| Thailand | 7.0 | 5.1 | 5.6 | 5.2 |
| Viet Nam | 6.8 | 7.2 | 8.1 | 7.1 |
| Average of the six countries | 7.3 | 6.0 | 6.1 | 6.0 |

*Source:* OECD Development Centre, MPF-SAEO 2010.
StatLink http://dx.doi.org/ http://dx.doi.org/10.1787/888932344957

First, the process of rebalancing growth in Southeast Asia is likely to be gradual over the next five years. Both private consumption and investment will become the new engines of growth in the region, though exports will remain important. The current account surplus relative to GDP is expected to shrink gradually as the growth of imports outpaces that of exports. This is also mirrored in the saving-investment balance as the region's gross domestic investment ratio is projected to increase steadily by 2015.

Second, the pattern of rebalancing growth will differ considerably across countries. For example, the current account surplus in the Philippines and Thailand is projected to move back to the pre-crisis level, while in Malaysia and Singapore it is expected to decline to 12-16% of GDP. In Indonesia, the current account balance is likely to turn from a surplus of 1.9% in 2003-07 to a deficit of -0.8% in 2011-15. In Viet Nam, the current account balance will remain in deficit throughout 2011-15, though its relative size is projected to shrink from the 2010 level.

Third, the fiscal balances of four of the region's Association of Southeast Asian Nations (ASEAN) countries (Indonesia, Malaysia, the Philippines and Thailand) are projected to remain in the range of -1.2% to -2.4% of GDP in 2011-15. In Viet Nam, it would be difficult to cut government spending as many infrastructure projects are already in the pipeline. Therefore, the country's fiscal deficit is likely to increase to -4.6% in 2011-15. Singapore is an exceptional case in which the revenue streams from sovereign wealth funds provide fiscal space for the government to finance infrastructure projects. In short, it is important that Southeast Asian countries keep their fiscal policy frameworks in line with the medium-term policy goals set by their national development plans.

## Improved fiscal policy frameworks are required to implement national development plans

The key question for policy makers in Southeast Asia today is how to shift to a more balanced growth model over the medium term. To be sure, most countries in the region have already taken several measures necessary to rebalance growth under their new five-year development plans. A significant number of infrastructure development projects and those aimed at poverty reduction and social protection have been planned for the coming years. However, concerns have been raised about the financing of such projects, given the reduced fiscal space governments will face in the post-crisis period. Setting a credible medium-term fiscal framework is therefore critical for the feasibility of a country's five-year development plan, because such a framework will lead to greater fiscal discipline and thereby allow for more efficient use of scarce public resources.

To improve their fiscal policy frameworks, ASEAN countries need to create well-designed fiscal rules. Independent fiscal institutions can oversee such fiscal rules. Medium-term budgetary frameworks consistent with national development plans are also required to ensure that planned targets can be met.

## Regional integration in Southeast Asia is being shaped by ASEAN's two-pronged strategy

ASEAN countries are engaged in a two-pronged strategy for regional integration: promoting the progressive transformation of ASEAN from a free trade area (AFTA) today to a single market and production base envisioned as an ASEAN Economic Community (AEC) by 2015; and enhancing ASEAN's competitiveness through bilateral and plurilateral trade agreements with major partner countries in Asia and beyond. Meanwhile, ASEAN countries' links with global production networks have been strengthened and substantially transformed by China's emergence as a regional production centre.

Rebalancing growth does not mean turning back from the economic openness and integration into the global economy that have generated enormous gains for the region. ASEAN countries should implement domestic policy reforms that are necessary to reap the full benefits of creating a single regional market for their 600 million people. In particular, they should consider mechanisms to address the different and divergent levels of productivity within the region.

## Promoting regional integration helps to rebalance growth

ASEAN countries should take a fresh look at their economic ties with China. ASEAN-China economic relations are likely to become even stronger and deeper owing to the latter's continued high growth and implementation of the *ASEAN-China Comprehensive Economic Co-operation Agreement* that came into force in early 2010. A major challenge for ASEAN countries is to reduce their excessive export dependence on a narrow range of electronic products (mostly parts and components) and to move up the technological ladder in the value chain. ASEAN countries should also develop more niche and speciality products within the nine Priority Goods Sectors (PGS).[6] These priority sectors are politically and economically important for AEC implementation – politically because they have been chosen to serve as front-runners for deeper economic integration, and economically because the nine PGS taken together account for more than half of the total ASEAN merchandise exports. The idea of rebalancing growth, therefore, is not just to move away from exports to domestic demand but also involves reallocating public resources to support new growth areas (for example, diversification into healthcare product markets).

## Transport infrastructure development is central to promoting ASEAN integration and reducing development gaps among and within its member states

Efforts need to be made at both national and sub-national levels in order to reap the full benefits of the regional integration process. Transport infrastructure development involves not only investment

in physical facilities but also improvements in "soft" infrastructure comprising transport policies, regulations and procedures, and multilateral initiatives and agreements. Transport infrastructure is most developed in Singapore followed by the region's middle-income countries, and it is significantly less developed in Cambodia, Laos and Myanmar.

The region's distinctive geographical features and rapid economic growth have created a number of challenges that are shared to varying degrees by its members. These include excessively high transport costs, urban congestion, and inadequate competition and efficiency in air transport. A case in point is the weak transport infrastructure in Indonesia. This has hindered Indonesia's integration into regional production chains and its internal economic integration and development. The problems in transport can be attributed to a combination of inadequate roads, ports and other physical infrastructure, together with weak regulatory policies, customs procedures and planning. Indonesia's authorities have recently taken a number of important steps to promote more effective infrastructure development, including measures to encourage private-sector investment, improve customs procedures and combat corruption. It is therefore important to monitor the implementation and impact of these measures.

## New financing methods can promote private infrastructure investment in Southeast Asia

Southeast Asian countries need to finance a huge amount of infrastructure investments, such as highways, railways, ports and air transport systems.[7] Tax revenues provide a stable source of funding for infrastructure investment. There are, however, increasing concerns over their future, as the fiscal capacity of many Southeast Asian economies will be constrained in the post-crisis period. Individual governments do not have sufficient funds to meet the potential demand for infrastructure investment. New financing methods that are already successful in some OECD countries, such as infrastructure revenue bonds, could also be applied to the transport sector in Southeast Asian countries. This financing method is appropriate to support construction and maintenance of transport infrastructure in the form of Public-Private Partnerships (PPPs), as the construction and operation of transport services can generate fee revenues from daily operations. However, soft infrastructure, such as policies, regulations and procedures, and multilateral initiatives and agreements must complement the PPP approach.

## Conclusions and policy recommendations

The global financial crisis has offered an important opportunity for Southeast Asian countries to rethink past growth strategies and project new development visions. The analyses and discussions presented in this *Outlook* highlight the need to implement five-year development plans with a view to rebalancing growth and instituting a credible fiscal policy framework which is conducive to greater fiscal discipline. In particular, well-designed fiscal rules, independent fiscal agencies and a medium-term budgetary framework are crucial institutional ingredients to ensure fiscal discipline. While such institutions are becoming increasingly important across OECD countries, there is room for improving such institutional settings in Southeast Asia.

Another conclusion emerging from this *Outlook* is that the future development of Southeast Asian countries is likely to be uneven across sectors and economies, unless necessary measures are taken. Areas of policy action are to identify and support national and local comparative advantages. In the Roadmap for an ASEAN Economic Community, policy makers in these countries have taken a number of sector-specific measures (*e.g.* through investment in R&D and capacity building) necessary to enhance the external competitiveness of their priority sectors. Further work will be required to monitor the progress of existing sector-specific measures and to identify new measures, where necessary, through regular consultations with national and local stakeholders, including ASEAN dialogue partners.

The development of a more integrated transport infrastructure constitutes another area of policy action necessary to foster regional and sub-regional connectivity. During the last two decades there has been significant progress in developing road, rail, maritime and air transport networks within

and across countries. The expansion of transport networks has spurred both internal and regional trade growth. More areas and people have benefited from greater access to economic opportunities thanks to improved transport infrastructure and logistics services. In this way, regional integration can help to promote more balanced growth in the region. However, given the huge investment needs for infrastructure development, new financing methods, such as infrastructure revenue bonds, should be further explored to promote effective PPPs in the region.

Finally, the effectiveness of regional co-operation hinges largely upon the form of co-operation. While co-operation may take different forms, OECD's peer review mechanism presents a flexible instrument which may be suitable for policy dialogue and capacity building in Southeast Asia. Regional monitoring and surveillance based on peer reviews could potentially work well in the region, including the support of macroeconomic policy co-operation.

## 20 NOTES

1. In 2009, these six countries constituted 95% of the total GDP (in USD using purchasing-power-parity exchange rates) and 86% of the total population of ASEAN countries. The Association of Southeast Asian Nations, or ASEAN, consists of ten member countries, namely Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

2. Leading indicators in the third quarter of 2010, however, suggest some signs of growth moderation in Southeast Asian economies. This is due largely to slower inventory accumulation and a reduced contribution from net exports. The OECD Development Centre's *Asian Business Cycle Indicators* (ABCIs) are available at www.oecd.org/dev/asiapacific/abcis.

3. The aggregate of the stimulus packages adopted by the six ASEAN countries amounted to an average of 4% of their combined 2009 GDP. This number would be much larger should two additional stimulus packages in Thailand and Viet Nam be included here.

4. See Tanaka, K. (2009), "Regional Integration in Southeast Asia: Better Macroeconomic Co-operation Can Mitigate Risks", *Policy Insights* No. 90, OECD Development Centre, February.

5. The OECD Development Centre has developed the Medium-Term Projection Framework for Growth and Development (MPF-SAEO 2010). The MPF-SAEO 2010 provides individual five-year growth and development outlook (2011-15) for six countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) to feed the discussion on major policy challenges for rebalancing growth in the region. The coverage of the MPF will be extended to other ASEAN countries in future issues of the SAEO.

6. The nine PGS are agro-based products, automotives, ICT equipment, electronics, fisheries, healthcare products, rubber-based products, textiles and apparel, and wood-based products.

7. According to a recent Asian Development Bank Institute study, total investment needs for national infrastructure development in ASEAN countries (excluding Brunei Darussalam and Singapore) are estimated to be in the order of USD 1.1 trillion during the period of 2010-20. See Bhattacharya, B.N. (2010), "Estimated Demand for Infrastructure in Energy, Transport, Telecommunications, Water and Sanitation in Asia and the Pacific: 2010-2020", *ADBI Working Paper* No.248, September.

PART ONE

# Regional Economic Monitor



## CHAPTER ONE
**Recent Macroeconomic Developments and Near-Term Policy Challenges**

## CHAPTER TWO
**Medium-Term Growth and Development Outlook**

## CHAPTER THREE
**Regional Integration: A Sectoral Approach**

CHAPTER ONE

# Recent Macroeconomic Developments and Near-Term Policy Challenges



## ABSTRACT

Southeast Asian economies are recovering strongly from their most severe contraction since the 1997 Asian crisis. The recovery was initially spurred by exports and reinforced by fiscal stimulus but is now becoming dependent on private domestic demand, whose momentum has been steadily increasing.

Timely and effective counter-cyclical macroeconomic and financial policies were major factors underlying the recovery. The next challenge in the near term is to exit from the stimulus measures while continuing to support real growth, beginning with monetary policy and followed by the phasing out of fiscal stimulus in the coming years. Greater flexibility in the region's exchange rates and more effective management of capital flows are needed. Increased regional co-operation on macroeconomic and financial policies, including the development of an effective regional surveillance system, can help to achieve a successful transition in the policies.

# INTRODUCTION

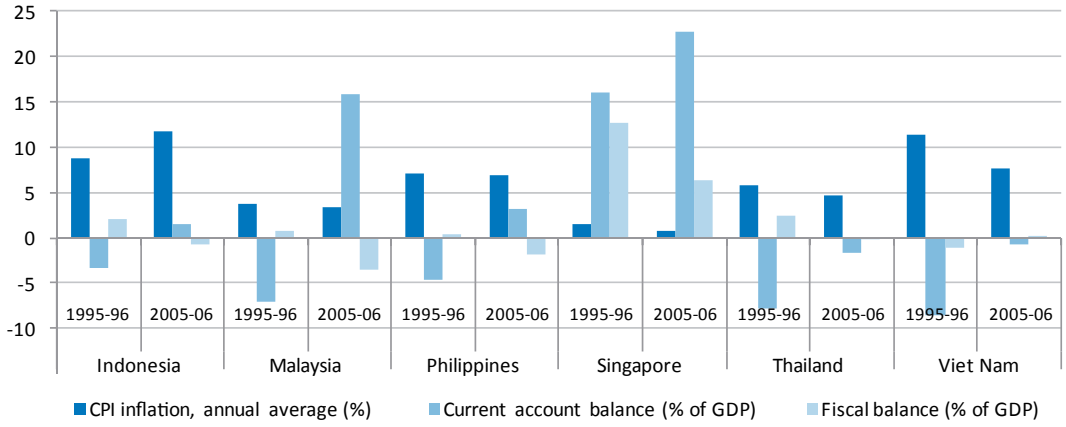
The Southeast Asian region is now emerging from its most severe economic contraction since the 1997 Asian crisis. The recent downturns in real GDP have been both less severe and less prolonged than the previous one, and were precipitated by external shocks rather than by imbalances in its own economies. The more favourable macroeconomic and financial policy conditions preceding the global financial crisis have provided much more room for policies to counteract the decline than was possible in the pre-1997 period (Figure 1.1).



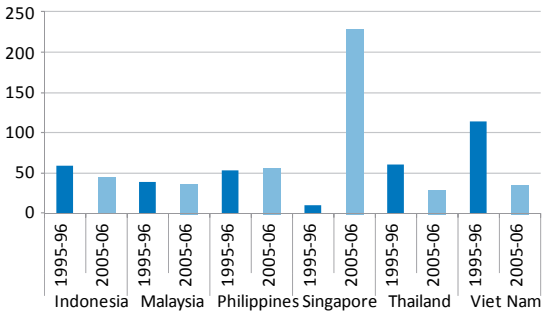
After a short review of recent macroeconomic developments and prospects, the remainder of this chapter discusses the macroeconomic policies adopted during the present cycle as well as near-term challenges.

**Figure 1.1. Comparison of pre-1997 crisis and years preceding the current downturn**

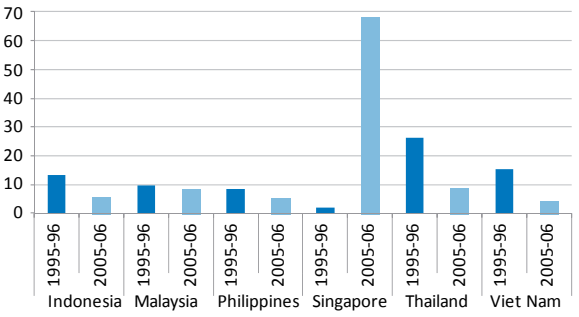
**(a) CPI inflation, current account balance and fiscal balance**




**(b) Total external debt**
(percentage of GDP)




**(c) Short-term external debt**
(percentage of GDP)




*Source:* Asian Development Bank and IMF.

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# RECENT MACROECONOMIC DEVELOPMENTS IN SOUTHEAST ASIA

## Southeast Asian economies began to slow down in 2008

Following two years of rapid real growth, Southeast Asian economies began to slow down in 2008 as the recessions in OECD countries resulting from their financial crises led to a sharp contraction in their demand for ASEAN exports. The fall in exports, reinforced by pronounced inventory destocking, spread quickly to weakness in domestic demand, particularly business fixed investment. Real GDP growth for the region as a whole fell to 1.3% in 2009, its slowest annual rate since the 1997 crisis (Table 1.1).



The downturn underscores the fact that the ASEAN region, despite its integration with the rest of Asia, remains quite sensitive to demand fluctuations in the OECD countries (Box 1.1). The most severely affected ASEAN countries were Singapore, Malaysia and Thailand whose exports are most concentrated in electrical machinery and automobiles, industries particularly sensitive to the business cycle. All three countries recorded annual declines in real GDP in 2009 for the first time since 1998. Cambodia's real GDP also fell owing to declining textile shipments to the United States, which are the dominant component of its exports, while Brunei's economy was hit by falling oil prices and shipments arising from the downturn in world demand. In contrast, Indonesia and Viet Nam, where domestic demand supported economic activity, had comparatively mild downturns in real growth. The same was true for Laos and Myanmar, whose less open economies were not so affected.

### Box 1.1. Macroeconomic implications of China's ties with Southeast Asia

ASEAN's economic integration with the rest of Asia has greatly increased over the past decade as a result of the emergence of China as the focal point of regional production chains. As documented in detail in Chapter 3, China has become the platform for manufacturing final products using parts and components produced in ASEAN countries. This new division of labour within Asia reflects the relocation of assembly facilities from ASEAN and other Asian countries to China, mediated by multinational corporations seeking to take advantage of China's lower labour costs. As a result, while ASEAN intra-regional trade has increased modestly since 1997, its trade with China has increased substantially. This trade is dominated by parts and components, and is concentrated in consumer and business electronic products and automobiles, whose share of ASEAN exports has increased while that of textiles has declined. This trade is very important in terms of its share of total exports and in relation to GDP for many ASEAN countries.

Greater trade integration with China has not appreciably reduced ASEAN countries' dependence on export demand from OECD countries. The bulk of ASEAN exports still ultimately go to countries outside the region, although a larger portion go first to China rather than directly to their ultimate destination than was the case a decade ago. ASEAN countries have become increasingly open over the past decade in terms of their ratios of trade to GDP and the contribution of exports to total demand (Pula and Peltonen, 2009). As a result, ASEAN economies remain very exposed to cyclical fluctuations in demand from OECD countries, especially the United States and Europe (Asian Development Bank, 2007; Park and Shin, 2009a). ASEAN's sensitivity to OECD business cycles is further increased by its concentration on electronics and automobile exports, which are highly sensitive to demand fluctuations.

There is some evidence that China is increasing its importance as a final source of demand for ASEAN, although it is still less than that of OECD as a whole (Park and Shin, 2009b). Integration into regional production chains also tends to increase the synchronisation of business cycles among ASEAN countries and with China (Brooks and Hua, 2009). This tendency is illustrated by the OECD Development Centre Asian Business Cycle Indicators**.** These indicators show that China's recovery has been consistently leading that of the Southeast Asian region.

**Table 1.1. ASEAN GDP growth from 2005 to 2009**
(percentage change over previous period)

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| Brunei Darussalam | 0.4 | 4.4 | 0.2 | -1.9 | -0.5 |
| Cambodia | 13.3 | 10.8 | 10.2 | 6.7 | -2.0 |
| Indonesia | 5.7 | 5.5 | 6.3 | 6.0 | 4.5 |
| Laos | 6.8 | 8.7 | 7.8 | 7.2 | 6.5 |
| Malaysia | 5.3 | 5.8 | 6.5 | 4.7 | -1.7 |
| Myanmar | 4.5 | 7.0 | 5.5 | 3.6 | 4.4 |
| Philippines | 5.0 | 5.3 | 7.1 | 3.7 | 1.1 |
| Singapore | 7.6 | 8.7 | 8.5 | 1.8 | -1.3 |
| Thailand | 4.6 | 5.1 | 4.9 | 2.5 | -2.2 |
| Viet Nam | 8.4 | 8.2 | 8.5 | 6.3 | 5.3 |
| ASEAN, average | 5.8 | 6.1 | 6.6 | 4.4 | 1.3 |

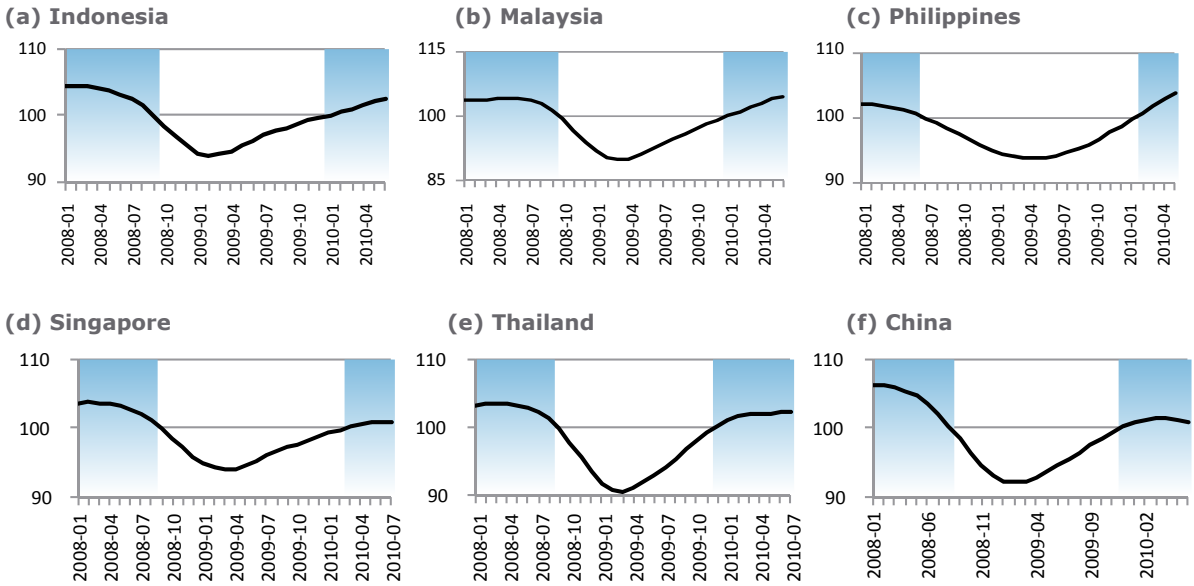
*Source:* Asian Development Bank.

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## Growth began to revive in the spring of 2009 and is gaining momentum

The ASEAN economies shared in the comparatively early and strong recovery in the Asian region as a whole. The OECD Development Centre's recently developed Asian Business Cycles Indicators (ABCIs) indicate that the downturn in Indonesia, Malaysia, the Philippines, Singapore and Thailand bottomed out in early 2009 and that an expansion began in early 2010 (OECD, 2010a) (see Figure 1.2 and Box 1.2). Their revival slightly lagged behind that of China. Owing to a relatively quick rebound and the robust growth afterwards, negative output gaps of most Southeast Asian countries are closing, although the contributions to the improvement of output gaps differ by countries (see Box 1.3).

**Figure 1.2. Business cycles of ASEAN and China: Composite coincident indicators**




*Note:* For the description of the indicators, see Box 1.2.

*Source:* OECD Development Centre, ABCIs.

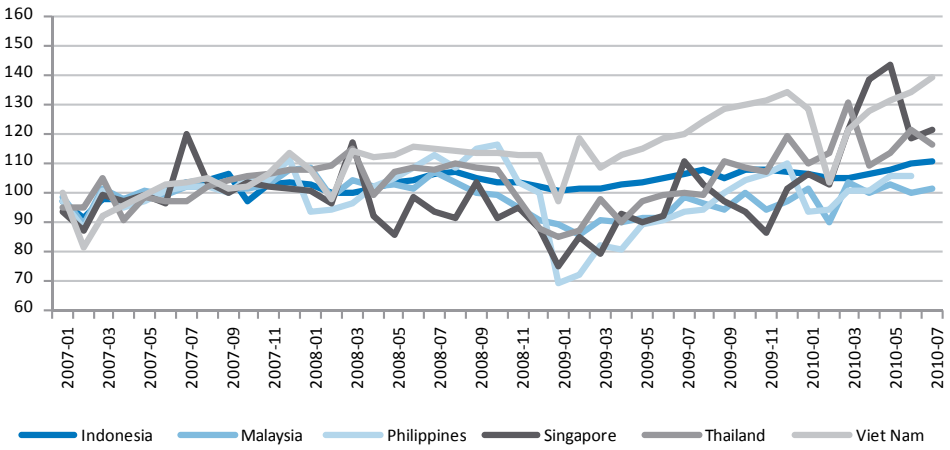
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The ASEAN recovery was sparked by a rebound in exports accompanied by inventory restocking. Shipments to China accounted for a large share of the ASEAN export growth – about 30% of the total increase during 2009 compared to 10% of their level. The revival in China's domestic demand, spurred by that country's early and large fiscal stimulus, also contributed to the growth in the region.

As with the downturn, the recoveries have been strong in those ASEAN economies – Singapore, Malaysia and Thailand – that are specialised in exports of electronic products. The recoveries began in the first half of 2009. The Asian business cycle indicators together with industrial production and other data highlight that the recoveries gained momentum during the first half of 2010 (Figures 1.2 and 1.3). Real GDP growth was particularly strong in Singapore and Malaysia, averaging 17.8% and 9.5% (year-over-year) respectively during the first two quarters. Strong growth was also recorded during the first half of 2010 by the Philippines, Indonesia and Viet Nam, as well as Thailand despite a slowdown in the second quarter (as compared with the first quarter). Industrial production is now above its pre-crisis levels throughout the region, although in most cases it is still below its longer-term trend.



**Figure 1.3. Industrial production in six ASEAN countries**
(index, 2007=100)




*Source:* CEIC and national sources.

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**Box 1.2. How do the ABCIs measure business cycles in the region?**

The OECD Development Centre Asian Business Cycle Indicators (ABCIs) provide:

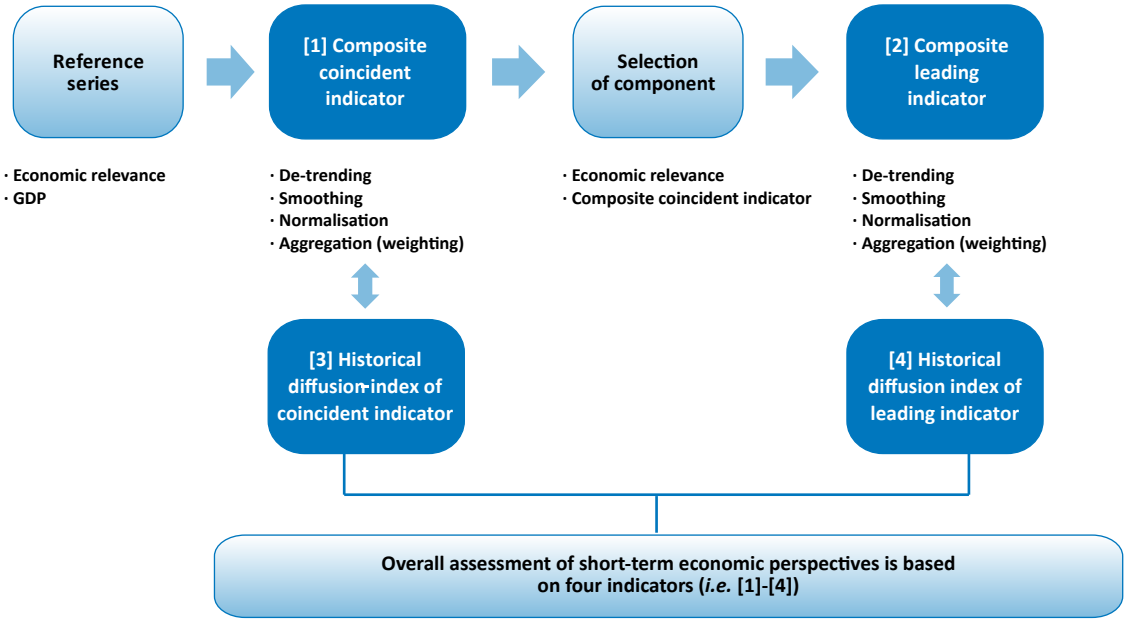
- comparable information on the near-term economic situation in the next five to six months in ASEAN countries as well as China and India;
- early warning of potential macroeconomic risks in the region; and
- a tool for regional monitoring and for tracing business cycle synchronisation in Asia.

The OECD Development Centre's ABCIs are constructed in co-operation with the OECD Statistics Directorate. The ABCIs are based on the "growth cycle" approach consistent with the OECD Composite Leading Indicators (OECD CLIs), in which cycles are measured as deviations of economic activity from their long-term trend.

The methodology of the construction ABCIs is tailored to country-specific circumstances. The ABCIs identify cycles by using both *i)* composite indicators (*i.e.* leading and coincident) and *ii)* diffusion indices (*i.e.* leading and coincident). Each provide different information and, as such, are complementary: the composite index reveals "change" in economic fluctuations and the diffusion index provides a broader picture of "the overall economic activity of the country". The ABCIs' coincident indicators are selected mainly by economic relevance and statistical fitness to quarterly GDP. Leading indicators are created based on the coincident indicators and the lead time is in general five to six months.



**Figure 1.4. Construction of ABCIs**




*Source:* OECD Development Centre, ABCIs.

In the ABCIs, evaluation of the phase of business cycle is done comprehensively by using four sets of information: *i)* leading indicators of both composite and diffusion and *ii)* coincident indicators of both composite and diffusion. More precisely, four cyclical phases are identified by composite indicators: *expansion*, when the composite indicator curve is above 100 points and increasing; *downturn*, when the composite indicator curve is above 100 but decreasing; *slowdown*, when the curve is below 100 and decreasing; and *recovery*, when the curve is below 100 but increasing. On the other hand, the diffusion index identifies two phases; *upwards* when the diffusion index crosses the 50% threshold from below and *downwards* when the diffusion index passes the threshold from above.

The results of ABCIs are released on a quarterly basis on the web (See *Asian Business Cycles Quarterly* www.oecd.org/dev/asiapacific/abcis).

## Box 1.3. Which shocks were critical for output gaps in Thailand and Indonesia?

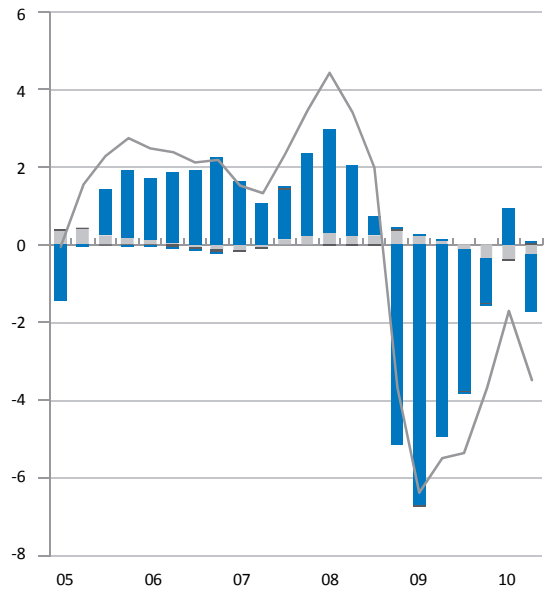
Historical data for the gap between potential and actual GDP ("output gap") and its decomposition by the DSGE (dynamic stochastic general equilibrium) approach show that Thailand and Indonesia have experienced a rebound following the global financial crisis, but that both the path and nature of recovery differs between the two countries (see the baseline models of the Medium-Term Projection Framework for Growth and Development in Chapter 2). The differences in the composition of output gaps are related to the different nature of economic growth in Thailand and Indonesia.

In Thailand, owing to heavy reliance on exports, external demand shocks (usually interpreted as demand shocks of larger OECD countries and neighbouring Asian countries) are critical drivers of the level of output gap. For instance, the large negative output gap in 2009 can largely be explained by large negative external demand shocks. Technology shocks did not appear to have a large impact on the output gap over the past decade. Monetary shocks in Thailand appear to have been well managed by the effective implementation of inflation targeting.

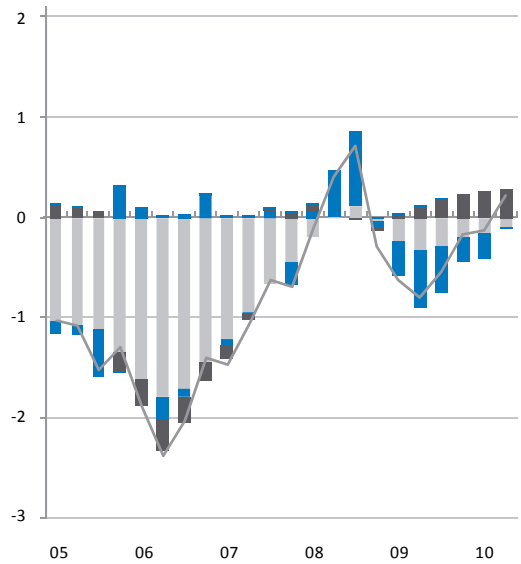
Indonesia, with comparatively higher dependence on domestic demand, did not experience as much volatility of the output gap as Thailand. Instead, technology shocks and price mark-up shocks explain a large part of the fluctuation in the output gap over the past decade. A relatively large portion of the negative impact of technology shocks during 2005-08 reflects high output growth under stable inflation during the period. Price mark-up shocks had a small but positive impact on the output gap in the past few years, indicating that inflationary pressures may be forming. Monetary shocks also seem to be well managed in Indonesia.

### Figure 1.5. Historical decomposition of output gaps
(percentage)

**(a) The case of Thailand (2005-10)**




**(b) The case of Indonesia (2005-10)**







*Source:* OECD Development Centre.

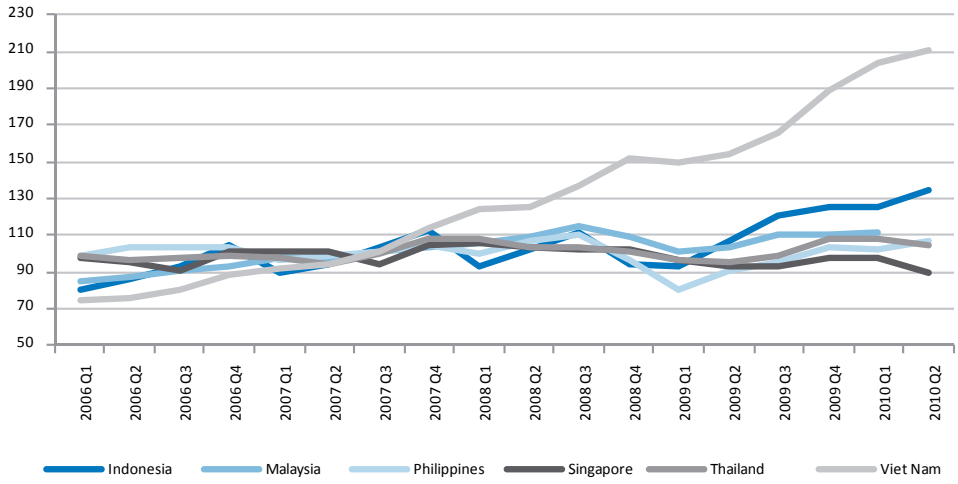
## The recovery is broadening as consumption gains strength

Although led initially by the revival of exports and inventory accumulation, the recovery in the ASEAN region has broadened over the past year, with domestic demand becoming the dominant source of real GDP growth. Consumption began to rebound in the second half of 2009 and gained further momentum during the first half of 2010. Retail sales were up by 20% or more over their previous-year value in the summer of 2010 in Indonesia and the Philippines and also in Viet Nam (although much of the increase was due to rising prices) (Figure 1.6). Retail sales growth has also been strong in Thailand and Malaysia, although it has been weaker in Singapore owing to fluctuations in automobile sales.



Business surveys in the region suggest continued strength in consumption in the near term. Consumer sentiment indicators have recovered strongly in Indonesia, Malaysia and the Philippines.

**Figure 1.6. Retail sales index in six ASEAN countries**
(index, 2007=100)




*Source:* CEIC and national sources.

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## Private investment is reviving after a sharp contraction

Private investment in ASEAN countries was particularly hard hit by the global financial crisis, especially in the most export-oriented economies. The contraction in private investment led to a fall in overall gross fixed investment of 2.9% in 2009, which subtracted nearly 1 percentage point from regional growth. Thailand suffered the sharpest downturn (-9% for gross fixed investment) but gross fixed investment also dropped considerably in Malaysia (-5.5%), the Philippines (-3.5%) and Singapore (-3.1%). The contraction in total fixed investment was milder than private investment because of increased public investment initiated by the fiscal stimulus packages.

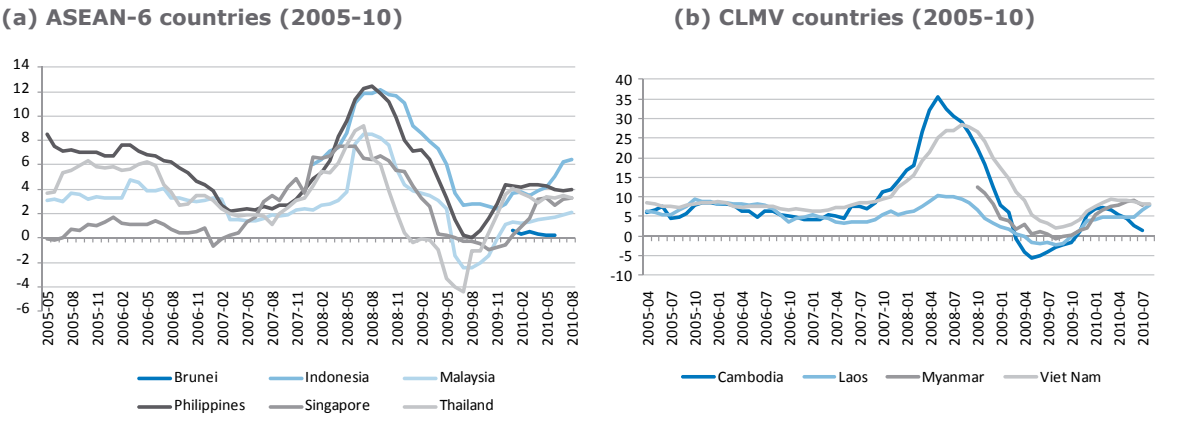
Private investment began to revive in the second half of 2009 owing mainly to inventory investment. Business fixed investment remained depressed during 2009 but has begun to recover, in some cases with increasing strength, during the first half of 2010. This recovery is reflected in the marked acceleration in overall fixed investment in the middle income countries: fixed investment rose 9.6% in the first quarter of 2010 (year-on-year), compared to 3.9% in the previous quarter, and was the biggest contributor to the four countries' aggregate growth during that quarter. Private investment excluding transport equipment has recovered strongly in Singapore. The recovery in private investment in Thailand has also been robust and seems to have been little affected by the political turmoil during the second quarter of 2010. Improvements in business sentiment in many ASEAN countries suggest that private investment is likely to remain reasonably strong in the near term.

## Core inflation pressures have remained subdued in the majority of countries

The majority of ASEAN countries maintained low to moderate inflation rates in the several years prior to the onset of the downturn. Consumer price inflation averaged about 5.8% for the region during 2005-07, and was below 4% in Brunei Darussalam, Malaysia, Singapore and Thailand (Figure 1.7). Headline inflation rates rose throughout the region in 2008 but the increase for Indonesia, Malaysia, the Philippines, Singapore and Thailand was due mainly to rising oil and other commodity prices, although there was some increase in core inflation in the Philippines. However, Cambodia, Myanmar and Viet Nam were experiencing much more severe underlying inflation pressures by 2008 owing to prior rapid credit expansion.



**Figure 1.7. CPI inflation in ASEAN countries**
(percentage changes, year-on-year)




*Source:* CEIC.

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As in other regions, headline and core inflation rates have fallen markedly owing to falling oil and other commodity prices and increased slack in labour and product markets. Consumer prices rose by an average of 2.7% for the region as a whole in 2009, compared to 8.8% in 2008. Inflation rates in Indonesia, Malaysia and Singapore fell to below 3% by the second half of 2009, while rates in the lower income countries were somewhat higher.

Headline inflation rates have risen moderately since the middle of 2009 as international oil and other key commodity prices rebounded. However, core inflation has remained low to moderate in many ASEAN countries, although noticeably higher in Viet Nam. The risk of a significant surge in core pressures in the near term is limited given the slack still remaining in labour and product markets. Inflation risks are greater for CLMV countries given their recent history and the rapid credit expansion in 2008-09 in Laos and Viet Nam.

## Exports and imports are overtaking pre-crisis levels and current account surpluses are rising again

Export growth of the ASEAN countries continued to gain momentum during the first half of 2010, with six countries of ASEAN (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) all recording year-over-year increases of 30% to more than 40% by the end of the second quarter. Although lower in 2009 as a whole than in 2008 (except for Myanmar), exports have now overtaken their pre-crisis levels in most ASEAN economies. China, and to a lesser extent other East Asian economies, accounted for a disproportionately large share of the ASEAN export growth

during 2009, but growth is likely to come increasingly from outside Asia as the recoveries in other regions take hold.

Falling domestic demand and declining need for imported parts and components in export production led to a sharp drop in ASEAN imports in 2008 and early 2009. Imports are now recovering briskly but their (year-on-year) growth has in most cases been somewhat less than that of exports. Six countries of ASEAN (except for Viet Nam) recorded large current account surpluses in the several years prior to the crisis.



The contraction in exports led to a marked drop in current account surpluses for 2008 but the surplus rebounded in 2009 as import declines followed. Indonesia, the Philippines and Thailand recorded substantial increases in their current account surpluses in 2009 and the deficits of CLMV countries fell. The surpluses fell in Singapore (because of an improved balance on services and other non-merchandise current items) and Malaysia but remained the highest in the region. The surpluses of Indonesia, Malaysia, the Philippines and Thailand have fallen back somewhat in the first half of 2010, to approximately 4-5% of GDP for the group as a whole.

## External financial stresses have eased considerably and capital inflows are recovering

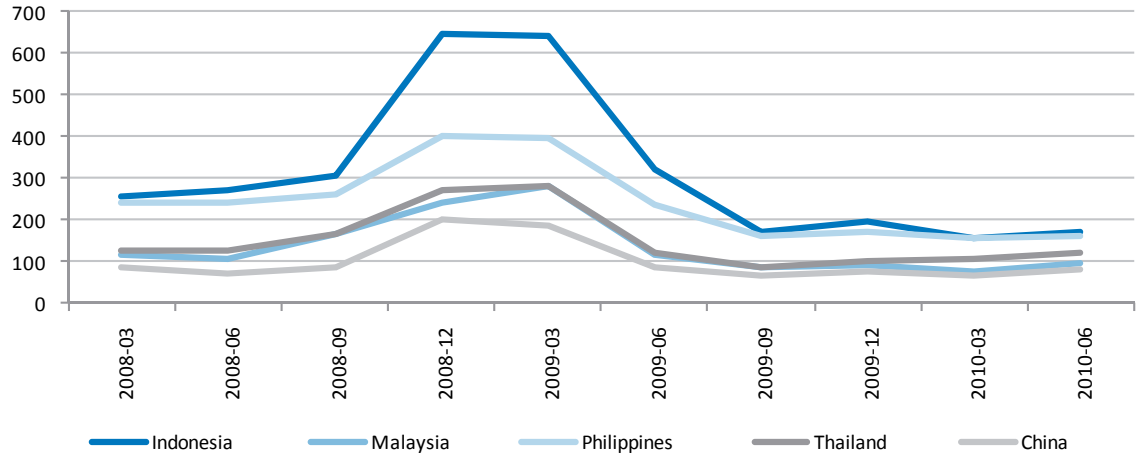
ASEAN countries experienced several bouts of severe financial stress during 2008 and 2009, most notably in the wake of the failure of Lehman Brothers in September 2008. The external stresses were manifest in increased risk premiums on domestic and foreign currency obligations issued by regional borrowers, the pull back of foreign direct investment (FDI) and portfolio capital flows, and episodic downward pressures on currencies. At their peak, the external stresses experienced by many ASEAN countries approached in severity those that occurred during the 1997 crisis – with the important exception that the precipitous drop in the foreign exchange value of the currency did not occur.

Also in contrast to 1997, regional financial stress indicators have been driven primarily by global fluctuations in the risk appetite of international investors. The impact on individual countries of the fluctuations has been roughly in line with pre-crisis perceptions of their risk. This helps explain why ASEAN countries tended to experience somewhat greater peak stresses than other more highly rated Asian countries, such as Japan and Korea, as well as China. Credit default swap rates and sovereign bond spreads rose most sharply in late 2008 and early 2009 for Indonesia, Viet Nam and the Philippines, whose rates were comparatively high just prior to the crisis, while the increase was less for Singapore and Malaysia, whose pre-crisis rates were relatively lower.

There has been little adverse change in the international credit standing of the ASEAN countries since the onset of the crisis, despite the external financial stresses. Most of the ASEAN countries have at least sustained their pre-crisis credit ratings by the major international ratings agencies – and the ratings of Indonesia and the Philippines were upgraded in 2009. The downgrades by Standard and Poor's and Fitch in April 2009 of Thailand's ratings were prompted by uncertainties over the political situation. And although Malaysia's long-term credit rating was downgraded slightly (from a high level) by Fitch it has been maintained by the other major agencies.[1]

External financial stress indicators have eased considerably since the first quarter of 2009, although they remain less favourable than before the crisis. Credit default swap (CDS) rates of most ASEAN countries have fallen to near pre-crisis levels. CDS rates and other ASEAN financial stress indicators have risen back from time to time when market tensions have recurred, most recently following the downgrade of the sovereign debt of Greece in May 2010; however the increase was moderate and short-lived.

**Figure 1.8. Five-year credit default swap rates**
(basis points)




*Source:* World Bank (2010) and DataStream.

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All Asian emerging market economies experienced a sharp decline in net inflows of foreign direct investment and portfolio and other capital flows during the downturn, but the withdrawal was most severe for Indonesia, Malaysia, the Philippines and Thailand. Capital surged back in 2009 into China and Southeast Asian countries, reaching above their rate just before the crisis. In contrast, according to preliminary figures, four economies of ASEAN (Indonesia, Malaysia, the Philippines and Thailand) recorded a total net outflow of USD 20 billion for 2009 as a whole, most of it occurring in the first half. This was an improvement over the outflow of USD 34 billion in 2008 but well short of the pre-crisis level.

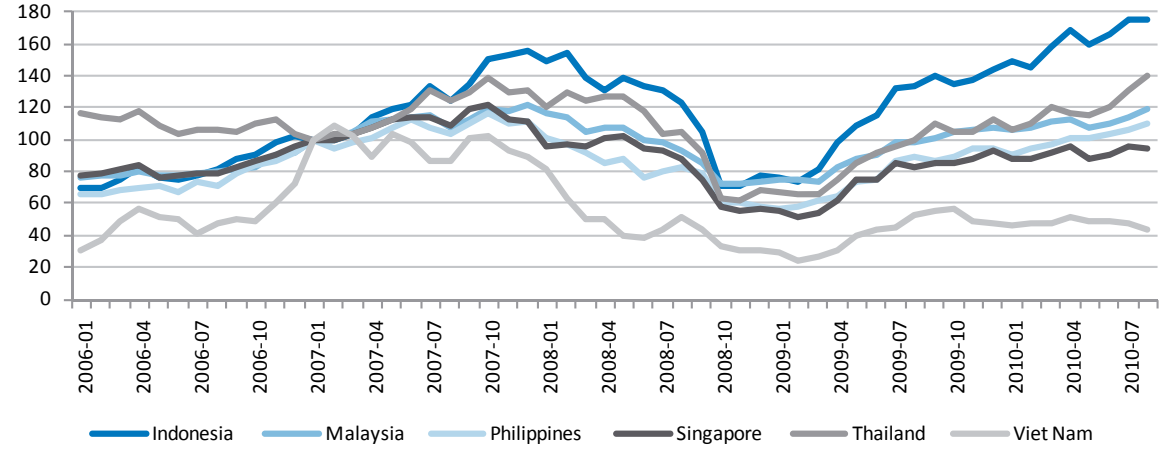
Capital inflows into many ASEAN countries began to recover in the second half of 2009 and have continued to be strong during the first half of 2010. Portfolio investments have dominated the increased inflows, reflecting increased interest by international investors in the higher yields available in emerging markets. Indonesia recorded especially heavy portfolio inflows in the first quarter of 2010. Indonesia and the Philippines were able to sharply increase their issues of foreign currency -denominated bonds in the latter half of 2009 and the first quarter of 2010 at spreads near to pre-crisis levels.

There has been noticeably less recovery in FDI inflows into the ASEAN region. Positive net FDI inflows into the six countries of ASEAN did resume in the first quarter of 2010, following net outflows during the second half of 2009. However, foreign direct investment inflows are still depressed compared to pre-crisis levels in Indonesia, Malaysia and Thailand.

## Domestic financial conditions have improved considerably

Compared to the aftermath of the 1997 crisis, the spillover of external financial stresses to domestic financial markets has been much less severe. Regional stock market indices did fall sharply beginning in late 2007 through the first quarter of 2009 (Figure 1.9). However the declines were not noticeably more severe than those in the United States, Europe, or other emerging markets. ASEAN stock markets have since recovered considerably although they remain below their pre-crisis peaks. Stresses in domestic interbank as well as offshore banking markets were moderate, at least compared to those observed in the markets of many OECD countries, thanks in part to decisive measures by authorities to inject liquidity and expand the range of instruments eligible for trading with the central bank.

**Figure 1.9. Stock price indices in six ASEAN countries**
(index, January 2007=100)




*Notes:*
Indonesia: Jakarta Composite, Jakarta Stock Exchange
Malaysia: KLSE Composite Index
Philippines: PSEi, Philippine Stock Exchange
Singapore: SGX Strait Times, Singapore Exchange
Thailand: SET, The Stock Exchange of Thailand
Viet Nam: HCMC, Ho Chi Minh City Securities Exchange Centre

*Source:* CEIC and national sources.

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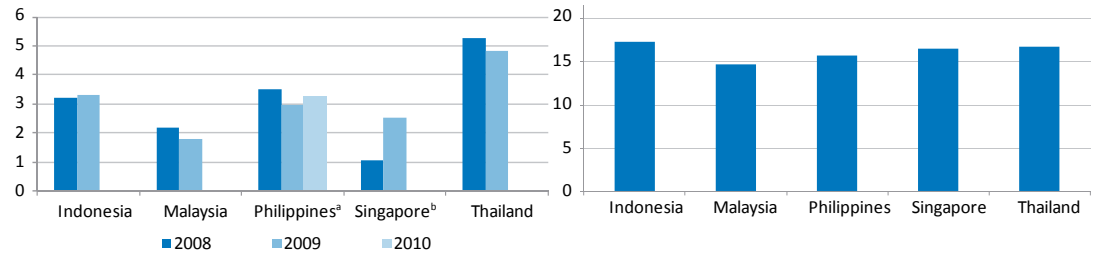
Domestic credit growth also fell off markedly, although much less severely than during the 1997 crisis in many ASEAN countries, and the drop was more in line with the contraction in real GDP. Access to bank loans became more difficult, especially for smaller and medium-size enterprises (SMEs) and lending risk premia rose, but the changes again appear roughly in line with the severity of the downturn in real activity.

The strong financial positions of the banks and other major financial institutions before the crisis were instrumental in limiting the stresses on domestic financial system. Banking systems in most ASEAN countries entered the crisis with capital adequacy ratios that were not only well above the BIS minimum but among the highest in Asia. These capital ratios have been maintained with little or no erosion during the crisis. There has so far been little rise in non-performing loan rates, which remain at modest rates, although somewhat higher in some cases than the rates in the strongest banking systems of the region (Figure 1.10).

**Figure 1.10. Banking indicators in ASEAN countries**

**a) Non-performing loans**
(percentage of total loans outstanding)

**b) Capital adequacy ratios**
(percentage)[c]




*Notes:*
*a)* As of June 2010; *b)* As of September 2009.; *c)* As of June 2009 for Indonesia, December 2009 for Malaysia and the Philippines, September 2009 for Singapore and June 2010 for Thailand.

*Source:* national sources.

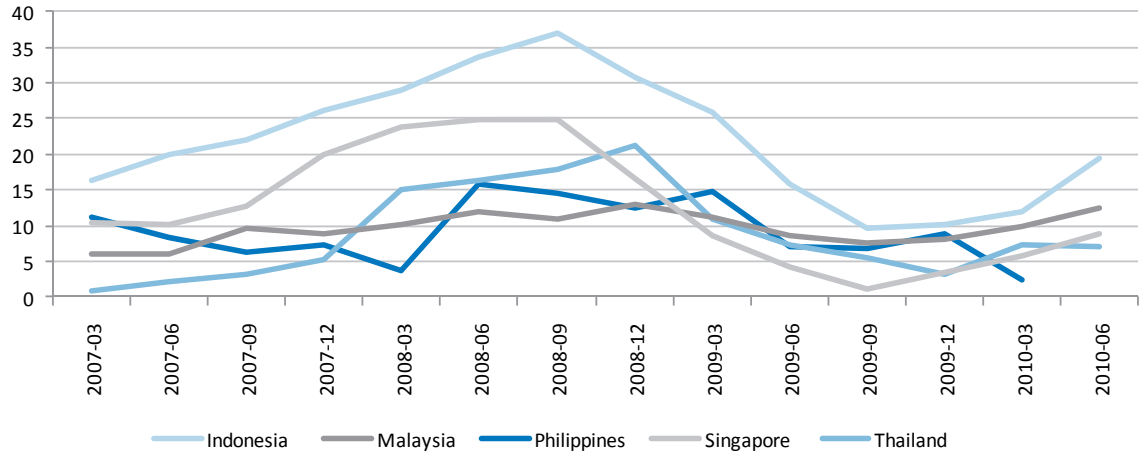
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Risk concerns in domestic markets have eased considerably since the onset of the crisis, although they still remain high. This is particularly evident for the most highly rated corporate borrowers, whose bond interest spreads over comparable government issues had fallen by the end of 2009 by 50 to 100 basis points compared to their peak at the end of 2008 in Malaysia and Thailand. However there has been much less of a decline in risk premia for lower rated corporate borrowers, and the premia appear to have edged up slightly in the first quarter of this year, most noticeably in Malaysia.

The easing of financial strains and pickup in real demand has only recently begun to be manifest in a recovery in domestic lending growth beginning in the last quarter of 2009 (Figure 1.11). Loan growth has been strongest in Indonesia and Malaysia but is still subdued compared to past trends in the Philippines. Private sector credit growth has also begun to pick up in Cambodia.



**Figure 1.11. Bank loan growth in ASEAN countries**
(percentage changes, year-on-year)




*Note:* In Malaysia, total loans do not include loans sold to Danaharta, the National Asset Management Company.

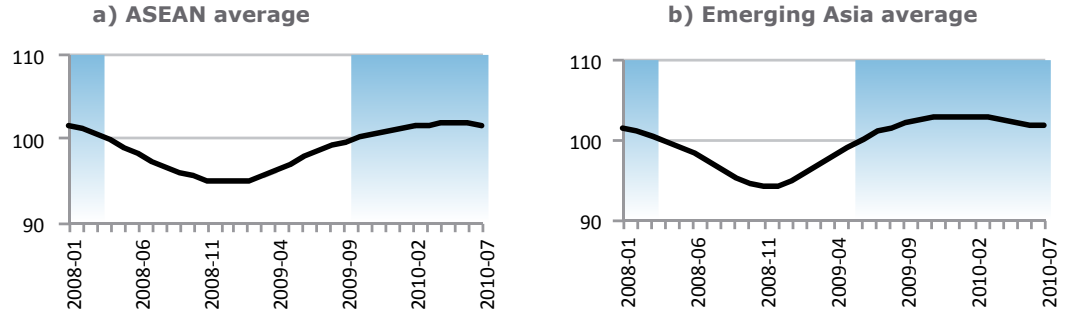
*Source:* CEIC.

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## The near-term outlook is favourable but there remain risks

The most recent Asian Business Cycles Indicators suggest that ASEAN real growth has begun to moderate in the third quarter of 2010, thanks largely to slower inventory accumulation and a reduced contribution from net exports (Figure 1.12). Nevertheless, real growth should remain robust, although growth in 2011 as a whole is likely to be somewhat less than in 2010. Private domestic demand will become the main source of real growth as the contribution from fiscal stimulus and net exports wanes.

**Figure 1.12. Business cycles of ASEAN and emerging Asia: composite leading indicators**




*Notes:*

For the description of the indicators, see Box 1.2.
*ASEAN average* includes Indonesia, Malaysia, the Philippines, Singapore and Thailand.
*Emerging Asia average* includes ASEAN average plus China and India.

*Source:* OECD Development Centre.

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Nevertheless, the recovery remains vulnerable to adverse developments. The greatest risks probably come from outside the region, although, as discussed in the next section, inflation, capital flows and budget deficits could pose risks to some ASEAN recoveries if they are not carefully managed.

Perhaps the greatest risk is the possibility of an interruption of recovery in OECD economies, particularly the United States and Europe. In the United States, continued weakness in the housing sector and uncertainty over the strength of the jobs recovery raise questions about the sustainability of consumer spending. The recovery in Europe is likewise weak, further clouded by the commitment to undertake large-scale consolidation by most countries in the medium term, an intervention that could constrain demand in the region (OECD, 2010b).

Renewed stalling of growth in the United States and Europe would at the very least slow the present recovery in ASEAN exports. The ASEAN countries that are most dependent on exports, particularly Malaysia, Singapore and Thailand, would be most vulnerable to such a development, with the Philippines, Cambodia and Viet Nam also experiencing negative if smaller effects.

The possibility of renewed financial turmoil also cannot be excluded, particularly given the nervousness of investors manifest in the still relatively high volatility in major stock markets and foreign exchange markets. Perhaps one of the near-term risks is that the heightened international investor concerns over fiscal sustainability recently focused on Europe spread to emerging markets.[2]

The increase in market uncertainty from such problems if they were to occur could spill over to ASEAN economies by raising global investor risk aversion, leading to declines in regional stock markets and possibly to further weakness in capital inflows and setbacks in the recovery of ASEAN bond markets. Provided it did not lead to renewed recessions in OECD countries, such stress would probably not interrupt the recoveries in the real economies now underway in the region.

Finally, a tightening of monetary policy in China to restrain the very rapid growth in domestic credit and to contain excessive increases in asset prices would likely slow Chinese real economic growth for several months. Those ASEAN economies with the strongest trade linkages to China could face headwinds from such a slowdown.

# MACROECONOMIC AND FINANCIAL POLICY RESPONSES TO THE CRISIS

The current cycle has underscored the considerable improvement in ASEAN macroeconomic and financial policies over the past decade. These improvements allowed countries to make greater use of macroeconomic policies to moderate the downturn in economic activity than was feasible in earlier cycles. Monetary and financial regulatory measures were taken quickly and effectively and were critical in containing financial strains**.** Fiscal stimulus measures put into place soon after the economic downturns were unprecedentedly large for the region and contributed significantly to real GDP growth in 2009 and 2010.



## Early measures were taken to address financial tensions and ease monetary policy

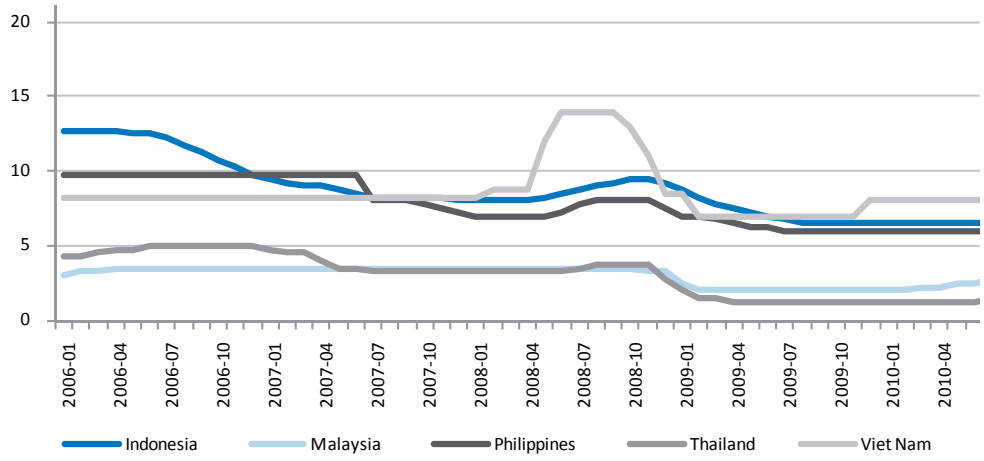
Monetary and other financial policy actions taken throughout the ASEAN region during 2008 and 2009 were very important both in limiting the extent of the economic downturn and in initiating and supporting the recovery. These actions involved special measures to ease conditions in financial markets and counter-cyclical adjustments in monetary policy instruments.

Monetary and financial regulatory authorities in the ASEAN countries reacted quickly to relieve domestic market stresses and reassure foreign investors as the global crisis intensified after the failure of Lehman Brothers. The measures included bank deposit guarantees of varying duration in the more financially open economies (Malaysia, Thailand, Singapore and Indonesia); special injections of central bank funds into especially stressed short-term markets; and broadening of the range of instruments used in open market and central bank discount operations (BIS, 2009). Several countries (Indonesia, Malaysia and the Philippines) employed regulatory forbearance (by relaxing enforcement of mark-to-market rules) to ease strains on financial institutions. To counter exchange-rate pressures, a number of countries also drew on swap lines with the People's Bank of China and the Bank of Japan. Further currency resources were available through the Chiang Mai arrangement, although they were not drawn upon.

Authorities were initially cautious in easing monetary policy to counter the contractionary effects of the global financial crisis. Pressures on their currencies led several ASEAN countries to either raise policy interest rates (Thailand, Indonesia, the Philippines and Viet Nam) or to maintain them during the third quarter of 2008, even though the prospective impact of the global downturn on the region was becoming evident.

However, as the effects of the crisis on regional output began to take hold and financial pressures reached a climax in the wake of the Lehman Brothers failure, policy sharply reversed course. Policy interest rates were cut several times to their lowest levels since the middle of the decade (Figure 1.13); and Singapore modified its exchange rate target in October 2008 to zero appreciation from the "modest appreciation" target maintained during the prior three years. Laos and Viet Nam cut their policy rates by a cumulative total of 600 basis points from their peak in 2008 to their trough in the summer of 2009, while policy rates in Indonesia, Thailand, the Philippines and Malaysia were cut by 300, 250, 200 and 150 basis points respectively over the same period.

**Figure 1.13. Policy interest rates for ASEAN countries**
(percentage)




*Source:* CEIC.

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The cuts in policy rates, reinforced by declining aggregate demand, led to a marked drop in market nominal and real short-term interest rates in most ASEAN countries that helped to support domestic spending. The support to spending was probably more limited in Singapore, however, given that short-term interest rates were already low before the crisis and could fall only modestly and still remain above zero (Takagi, 2009). Longer-term interest rates have come down only modestly, with the result that yield curves have steepened markedly.

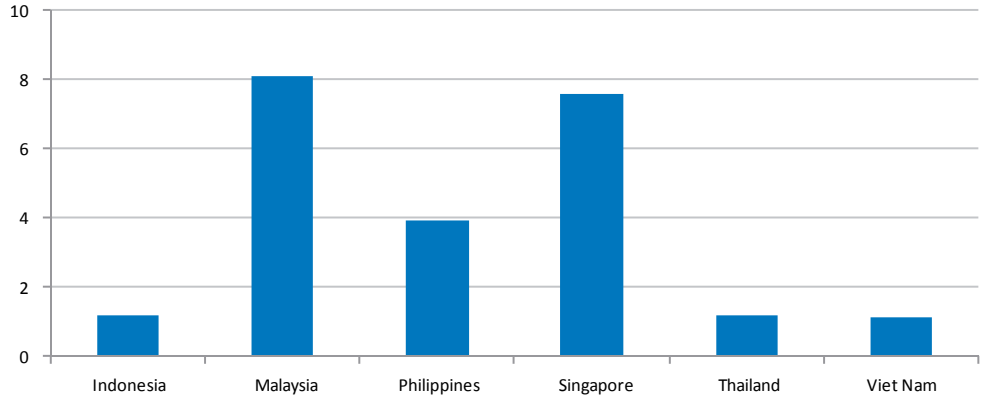
Overall, both the run-up to the crisis and the downturn have demonstrated the considerable improvement in ASEAN monetary policy frameworks since the 1997 crisis. Improved frameworks and the generally good record of inflation control before the crisis were important factors behind the more extensive and rapid use of counter-cyclical monetary policy actions during the present downturn compared to prior contractions. Indonesia, the Philippines and Thailand were able to reduce policy rates while maintaining inflation within bounds that were broadly consistent with their stated inflation targets. The less formal approach followed by Malaysia seems also to have allowed adequate flexibility to counter the downturn.[3]

However, the experience during this cycle has highlighted areas in some countries where monetary policy capabilities could be strengthened. As discussed below, consideration may need to be given to modifying, or at least clarifying, the response of monetary policy instruments to exchange rate movements. Limited financial development in the region has made monetary policy reliant on credit limits and other direct controls that can distort credit allocation and which make it difficult to limit credit expansion when fiscal deficits emerge. Development of financial markets and institutions, while a gradual process, is critical to improving the flexibility and overall effectiveness of monetary policy in these countries.

## ASEAN's fiscal stimulus came early and was comparatively large

As with China and other Asian economies, the ASEAN countries began to put in place fiscal stimulus measures soon after their downturns began. Malaysia and Viet Nam led with adoption of a first set of measures in November and December 2008 respectively, and were followed by Thailand, the Philippines and Singapore in January 2009 and Indonesia in February of that year. These adoptions roughly coincided with the timing of fiscal packages in China, India and other Asian countries but were slightly ahead of the adoption of fiscal stimulus in OECD countries.

**Figure 1.14. Size of fiscal stimulus in ASEAN countries**
(percentage of GDP)




*Notes:* Two stimulus packages which are not implemented yet are not included here. These are the stimulus package in Thailand, "Strong Thailand 2012 scheme", equivalent to USD 42 billion, and the Viet Nam stimulus equivalent to USD 8 billion.

*Source:* Economic & Social Commission for Asia and the Pacific, UN and Abidin (2010).

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The ASEAN fiscal stimulus programmes are comparatively large in relation to GDP (Figure 1.14). The aggregate of the stimulus packages adopted by the six countries of ASEAN amount to an average 4% of their 2009 GDP. The countries experiencing the sharpest growth slowdowns, notably Malaysia and Singapore adopted comparatively large stimulus packages in relation to GDP, while those instituted by Indonesia and Viet Nam were more moderate in size.

The ASEAN stimulus programmes seem to have contributed significantly to real GDP growth in 2009, although by precisely how much is difficult to determine (Box 1.4). The packages were generally well structured, with a high proportion allocated to measures most likely to support domestic spending in the near term. The accommodative stance of monetary policy that accompanied the stimulus also helped to boost its impact, as did the co-ordinated implementation across the region and its reinforcement by fiscal stimulus in the rest of Asia and OECD countries with strong linkages to the region (Freeman *et al.*, 2009).

### Box 1.4. How much did the fiscal stimulus packages contribute to real GDP growth?

Determining the impact of fiscal stimulus measures on real growth is difficult given the considerable variation in estimates of fiscal multipliers. Most studies suggest that direct spending, particularly on infrastructure, has significantly greater short-term (first year) fiscal multipliers than reductions in taxes (Spilimbergo *et al.*, 2009; Horton *et al.*, 2009). Tax cuts, subsidies or other measures that directly augment incomes of liquidity constrained households and businesses may also have proportionately greater impact than reductions in other revenue sources.

Highly open economies tend to have smaller fiscal multipliers than less open economies because a larger portion of the income initially created is spent on imports rather than domestically produced goods. Studies also suggest that fiscal multipliers also depend (positively) on the degree to which fiscal stimulus is accommodated by monetary easing (Spilimbergo *et al.*, 2009). Recent studies based on "new Keynesian" macroeconomic models generally find that short-term fiscal multipliers are below one while other studies based on the standard Keynesian model or other approaches have reported substantially higher figures.

Analyses by International Monetary Fund (IMF) country experts imply that the stimulus programmes added around 1% to 1.5% to real GDP in 2009 in Indonesia and the Philippines, whose packages were the smallest in relation to real GDP, and between 1.5 and 2.25 percentage points in Malaysia, Singapore and Thailand (IMF, 2009 and 2010). In contrast, simulations by the Oxford Economics Group based on their ("old" Keynesian) model imply that the contributions to growth were much greater – by several times – than those estimated by the IMF (Asian Development Bank, 2009a).

The stimulus spending in 2009, particularly that in the latter half, is likely to boost real GDP growth in 2010 as well. Growth will be further boosted in 2010 and beyond in those countries which plan additional stimulus spending in fiscal years 2010 and 2011.



The stimulus programmes contained a wide variety of spending and tax measures of three main types: income support for households via tax reductions and price or other subsidies for energy, food or other household staples; support to industry and smaller businesses through tax cuts, payroll subsidies, and special lending facilities; and public infrastructure investment. Stimulus programmes instituted by Asian countries generally were more focused on direct government spending and less on tax cuts than those adopted by OECD countries. This was also true for the ASEAN countries: spending, primarily for infrastructure investment, accounted for a large part of the aggregate stimulus amount for the six countries for which detailed data are available. A substantial portion of the tax cuts and other subsidies were targeted at direct income support or support for purchases of household durables.

The composition of the stimulus packages varied considerably across countries according to their shorter-term conditions and longer-term budget priorities. Indonesia, with the mildest downturn, focused its package on tax relief for households and businesses in order to support their spending and allocated only a modest portion to direct government purchases. The majority of Singapore's package was focused on support for businesses, including a jobs credit and property and rental tax relief in order to help them sustain employment and alleviate pressures on cash flow. Malaysia and the Philippines emphasised large-scale infrastructure spending on projects that are consistent with their longer-term development objectives. The packages adopted by Malaysia and Viet Nam also gave considerable emphasis to personal and business tax cuts, but less so than in Indonesia and Singapore. In contrast to China where they were dominant, quasi-fiscal measures, such as loan guarantees and support for lending by government-owned or sponsored financial institutions were generally a small portion of the ASEAN stimulus packages. Thailand, Malaysia and Viet Nam focused on sustaining lending to small and medium-sized businesses.

On the whole, the ASEAN fiscal stimulus programmes appear to have been fairly successful in supporting real growth in the near term through means which in some cases also contributed to medium-term development objectives. Nevertheless, some problems with implementation did occur. Particularly in the Philippines, difficulties in collecting tax revenues have limited the authorities' flexibility in spending to meet domestic needs and complicated the recent efforts to calibrate and predict the effects of the fiscal stimulus package. Delays in disbursing scheduled infrastructure spending, for instance in Thailand, somewhat reduced the impact of the stimulus in 2009. These problems underscore the need for improvements in the frameworks for fiscal policy planning and implementation.

# NEAR-TERM POLICIES TO MANAGE THE EXIT FROM STIMULUS

With recoveries now well underway, ASEAN macroeconomic policies will need to shift in their near-term policies toward more normal stances that can sustain growth in line with potential, while restraining inflation and maintaining sound fiscal and external finances. As discussed below, there are four key challenges that need to be addressed.



- **Monetary policy stimulus and financial support measures need to be phased out, while allowing for temporary changes in course to respond to further external shocks should they arise.**
- **Fiscal policy stimulus should be phased out gradually to ensure medium-term fiscal sustainability.**
- **Greater flexibility of exchange rates is needed to support the exit measures.**
- **Strengthening regional co-operation, in particular monitoring and surveillance, is important.**

## Special financial measures can be ended but need to be held in reserve

ASEAN countries have begun to take steps to return macroeconomic and financial policies back towards settings consistent with more normal conditions and longer-term goals. If anything, ASEAN countries, along with China and some other Asian countries have begun this process somewhat ahead of many OECD countries.

With the easing of financial market tensions, most of the special measures to support liquidity and ease financial market pressures taken during the crisis are no longer needed. The process of ending such measures has begun in the Philippines, where authorities have moved to phase out the liberalised criteria for access to the peso rediscount facility instituted during the crisis. However, the capability to reinstitute such provisions if market turmoil re-emerges should be retained. Relaxations of normal prudential requirements, such as the suspension of mark-to-market requirements in a number of countries, should be withdrawn to maintain high standards of financial transparency and soundness.

In some cases, however, the special measures taken represent an appropriate longer-term response to the lessons underscored by the crisis. The authorities in Thailand have taken steps to strengthen capital adequacy in some weaker institutions that would have been needed even in the absence of the crisis. The global financial crisis has prompted a broad movement extending to all major regions to strengthen bank deposit insurance schemes. The increased ceilings on maximum deposits covered which have been instituted by several ASEAN countries (Singapore, Malaysia, the Philippines and Indonesia) and extension of coverage to foreign currency deposits are in line with this trend and should be sustained. The temporary unlimited deposit guarantees instituted by Singapore and Malaysia should be allowed to lapse as scheduled but replaced by explicit ceilings. Deposit insurance terms may need to be further modified as international standards for deposit insurance evolve. Moreover, it would be useful to review arrangements for funding deposit insurance to ensure that the insurance commitments can be met if called for and thereby sustain their credibility.

## Monetary policy has already begun to tighten in some ASEAN countries

Policy interest rate cuts came to an end in July 2009 as the economic recovery became evident and in most cases have been held flat since then. The rates are now at their lowest levels in nominal terms in nearly five years. Short-term market interest rates are also quite low in nominal as well as real terms, and bank liquidity is generally high. The key challenge now is to manage an exit from this exceptional monetary ease while accommodating the recovery and maintaining room to counter major negative disturbances to growth should they occur.



This process has already begun in a number of countries. Viet Nam raised the policy rate slightly in December 2009, in part to counter pressures on its currency. Malaysia raised its policy rate three times since March 2010, by a total of 75 basis points, while Thailand increased its policy rate by 25 basis points in July 2010 and again in August. Monetary tightening is also being pursued through other instruments. Singapore authorities have restored the exchange rate objective back to the "mild appreciation" stance maintained before the crisis; and Indonesian authorities raised commercial bank reserve requirements by three percentage points in September 2010. Other ASEAN countries will probably begin to reverse course soon. Policy interest rates will need to rise at least enough to offset any increases in core inflation, so that real interest rates do not move in a counter-cyclical direction.

However, several considerations argue for caution in monetary tightening. At least for the next several quarters, monetary policy needs to give high priority to increasing the momentum of recovery in domestic demand as a hedge against the still significant uncertainties surrounding the recoveries in ASEAN's main export markets. The fact that OECD countries have not yet begun to reverse their prior monetary easing further suggests that ASEAN countries should tighten fairly gradually, at least until real GDP returns to near its long-term trend.

Caution in tightening is likely to be most important and least risky for Thailand, Malaysia and Singapore. Despite the growing growth momentum, considerable slack in product and labour markets is likely to remain until later next year and should restrain core inflation pressures. Monetary policy may need to be tightened more rapidly in Indonesia and the Philippines given more limited excess capacity and somewhat higher core inflation.[4] Monetary policy may need to tighten in the near term in Cambodia, Laos and Viet Nam to bring down inflation and to rein in rapid credit growth.

As the recoveries gain momentum and investor confidence increases, the probability that asset markets will over-react causing unsustainable booms in prices ("bubbles") will increase. The risks of such booms in ASEAN and other emerging market economies relative to those of more advanced economies are probably accentuated by the limited development and diversity in their financial markets and their openness to sometimes very large inflows of capital into those markets. Moreover, past history suggests that boom and bust asset price cycles, if they occur, can cause serious harm to the real economies of ASEAN and other emerging Asian countries (Gochoco-Bautista, 2009).

Monetary authorities in the People's Republic of China are already facing this issue as the rapid growth in bank lending has threatened to restart the potentially unsustainable booms in property and stock prices that were developing before the downturn. The risks of such booms in most ASEAN economies are probably limited in the near term, given that property price increases have in most cases been moderate over the past several years and the fact that capital inflows are still subdued. However, Singapore, where real estate prices have been rising briskly in some areas and Indonesia, which has been experiencing comparatively large portfolio capital inflows, may face somewhat greater risks. Risks of financial bubbles may also rise in other ASEAN countries as their recoveries proceed, and foreign investors' risk appetite grows. This possibility underscores the need for financial authorities to review prudential regulations and measures to sustain market transparency as the first line of defence against asset market bubbles.

Whether or not, and how, monetary policy frameworks should explicitly incorporate domestic asset prices as indicators or intermediate objectives is controversial even in theory (Box 1.5). Such incorporation would present considerable practical problems. It is quite difficult to determine in practice whether a boom in asset prices represents a sustainable response to their fundamental determinants or an unsustainable "bubble". Detecting unsustainable booms may be particularly difficult in rapidly growing economies where the relation between asset prices and observable economic conditions may

be changing. Introducing additional complexity into monetary policy frameworks by incorporating asset prices as targets could make it more difficult for policy makers to clearly and credibly explain the rationale for their decisions to the markets and the public, particularly where the frameworks are relatively new, as they are in most ASEAN countries.

Given the considerable challenges monetary authorities in ASEAN and other emerging economies are likely to face, a policy of varying monetary policy instruments in response to the likely effects of the asset price increases on monetary policy objectives - consistent with the present frameworks - may prove most effective and reliable. Such a policy need not rule out policy responses on those (infrequent) occasions when asset prices become so substantially and obviously misaligned as to present a clear risk to policy objectives for inflation and real growth.



Finally, improving the capacity of policy to prevent asset market bubbles and deal with them if they occur also calls for strong co-operation between monetary policy authorities and financial regulators. Information from financial regulators can help monetary policy authorities in detecting asset bubbles and in improving their ability to interpret asset price movements. As the global financial crisis has graphically underscored, financial and monetary authorities need to monitor jointly and assess systemic risks to the economy.

**Box 1.5. How should monetary policy react if asset bubbles arise?**

While the risk of unsustainable bubbles in property, equity, or other asset markets seems limited for the ASEAN region in the near term, they are far from unprecedented and conceivably arise once global financial risk appetites recover and capital inflows return to the region.

Policies that minimise the likelihood of their occurrence are the first, and best, line of defence against unsustainable asset price bubbles. Prudent financial standards and effective regulation are crucial in this respect. This further suggests that temporary relaxations in prudential standards to encourage lending or support markets, where they were instituted, need to be phased out as soon as possible. Sound monetary policy that avoids excessive credit expansion is equally important.

There is more controversy as to how monetary policy should react to indications of unsustainable asset price increases and if so how. Theoretical arguments have been made that incorporating asset prices as intermediate targets for monetary policy can improve outcomes for inflation and real growth by preventing or limiting boom-bust cycles in financial markets (*e.g.* Cechetti *et al.*, 2000). However, explicit targeting of asset prices presents considerable practical challenges. It is very difficult to distinguish unsustainable asset price changes from those that are justified by fundamentals. Given the large volatility in asset prices, varying monetary policy settings in response to their movements can lead to excessive and unwarranted fluctuations in monetary policy instruments (Asian Development Bank, 2010a and 2010b). Partly for this reason, theoretical analyses suggest that any variations in policy instruments in response to asset prices need to be small and probably not continuous.

Effective asset price targeting also requires a high degree of central bank credibility (Asian Development Bank, 2010a and 2010b). To sustain credibility, it is essential that central bank monetary policy operations be transparent and their rationale well understood by markets.

## Fiscal stimulus should be phased out gradually

In addition to monetary policy, exit strategies for fiscal policies are also critical. The key near-term issue for regional fiscal policies is the pace at which the stimulus measures are withdrawn. Public sector deficits rose markedly in the ASEAN region during 2009 as a result of the stimulus packages and economic downturns. Most ASEAN countries' deficit rose by approximately 2-3 percentage points.

The deficit increases were not exceptional in terms of their size – most ASEAN economies recorded somewhat higher deficit to GDP levels in at least one year over the prior decade. The increases were also moderate compared to OECD countries, where the deficit for the region as a whole increased by approximately 5% of GDP in 2009. Although the ASEAN fiscal deficits have raised government debt levels in relation to GDP, they remain moderate if higher than in most of the rest of East Asia.

The pace of fiscal consolidation varies across countries. In Malaysia and the Philippines, where debt levels are high and straining the ability of available financing sources, consolidation needs to begin soon and the scope for new stimulus measures is likely to be limited.

In other ASEAN countries, the "exit" should be managed flexibly in the near term to allow for the possibility of renewed adverse shocks. ASEAN countries should retain some scope to reinstate carefully targeted fiscal stimulus measures (*e.g.* for income support or infrastructure) in the event that external demand weakens.[5] The consolidation process is likely to be most successful and robust to unexpected developments if it is embedded in an explicit medium-term fiscal strategy (see Chapter 2 for a more detailed discussion).



## Greater exchange rate flexibility will be needed

ASEAN exchange-rate regimes are now more flexible than they were before the 1997 crisis, when fixed or quasi-fixed pegs to the United States dollar predominated. In practice, though, the region's authorities have allowed less flexibility in their exchange rates than their *de jure* frameworks would imply. Although the variability of the exchange rate of many ASEAN economies has been higher in recent years than in the five years prior to the 1997 crisis, it has in most cases remained lower compared to exchange rates for major industrial countries in both bilateral and nominal trade-weighted terms. Indonesia's currency has varied most, and evidence suggests that it has been the most flexibly managed among the major ASEAN currencies (Frankel and Wei, 2008; Asian Development Bank, 2010a). The currencies of the Philippines, Thailand, Malaysia and Singapore appear to have been allowed less flexibility.

All the countries of the region have at times engaged in heavy foreign-exchange market intervention to limit fluctuations in their currencies. This intervention and the exchange-rate pressures prompting it have had an upward bias since mid-2008, resulting in substantial increases in foreign exchange reserves.[6] The region's authorities have also, less frequently, varied policy on interest rates in response to exchange-rate pressures, most recently in the early stages of the downturn in 2008. These interventions have been most focused on the bilateral exchange rate against the dollar, particularly in the case of Malaysia and the Philippines.

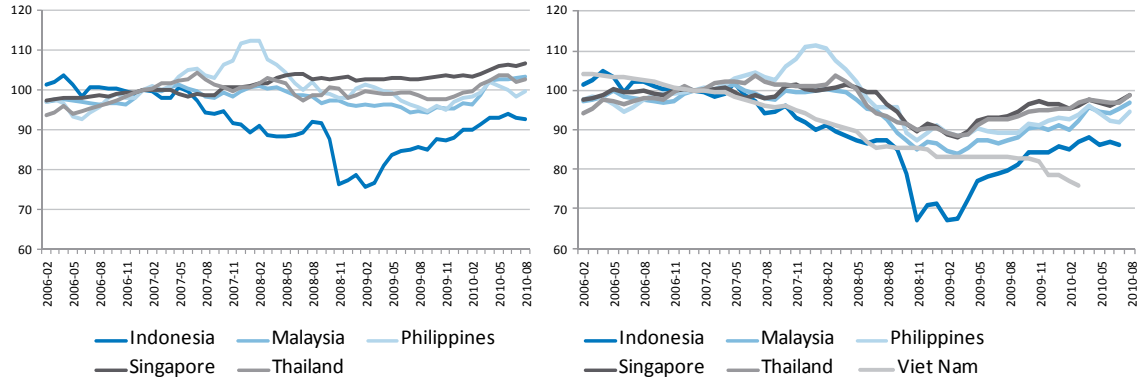
At least to some degree, such interventions might be viewed as appropriate responses to "disorderly" foreign exchange market conditions or as a normal reaction of monetary policy to the likely impact of a substantial movement in the exchange rate on domestic real growth and inflation, particularly in the most open economies. However, the limited flexibility in the exchange rate that has resulted *de facto* suggests that policy has gone beyond this point.

At present, most ASEAN currencies are moderately higher, roughly 5% to 10%, on a nominal effective basis compared to their levels at the beginning of 2007 and are also up *vis-à-vis* the United States dollar (Figure 1.15). ASEAN currencies have fallen against the renminbi (RMB), although the decline in most cases has been modest.

**Figure 1.15. Exchange rates of ASEAN countries**
(2006-10)

**a) Nominal effective exchange rate**
(index, 2006-10, January 2007=100)

**b) Exchange rates for the Reminbi and Southeast Asian currencies**
(index, 2006-10, January 2007=100)




*Note:* A decline indicates a depreciation of the currency .

*Source:* BIS and CEIC.

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## The global crisis highlights the need to review financial regulatory and supervisory policies

The resilience of ASEAN countries' financial institutions to the global financial crisis is mainly attributable to their very limited exposure to the complex instruments that originated the crisis and to the prompt responses of their financial authorities. Financial supervision and regulation have been greatly strengthened, and principles and practices have become more closely aligned with international norms (Adams, 2008; Lee and Park, 2008). This has facilitated a considerable strengthening of bank financial soundness. Non-performing loans, while still somewhat high by best international standards in Indonesia, the Philippines and Thailand, are backed by high levels of loan provisions. The development of bond markets, although still limited, and the diversification of activities of banks and other financial institutions into household lending and more sophisticated business services, have also helped to improve the robustness of the systems (Adams, 2008).

Despite these improvements, financial regulatory and supervisory systems in the region remain limited compared to counterparts in the most advanced economies. Regional financial authorities are pursuing longer-term plans to further improve financial supervision and develop financial markets, in part to reduce the still relatively high dependence on banks as funding sources. The global financial crisis has increased the need for these efforts and has revealed some new lessons that need to inform policies beginning in the near term. Three areas in particular merit review.

First, further efforts need to be made to bring regional financial regulatory and supervisory standards into better alignment with international norms, including accounting and disclosure standards and consolidated and cross-border supervision. There are areas where ASEAN countries' compliance has been found to be somewhat below the international average (Lee and Park, 2008). Prudential rules, such as those governing leverage, the definition of capital and other areas will also need to be periodically reviewed and revised as necessary in response to the tightening of standards formulated by the BIS and the other major international financial bodies.

Second, the global financial crisis has underscored the need to review standards for liquidity management, which were found to be woefully inadequate. Such a review is particularly important for ASEAN countries given their exposure to capital flow volatility. Probably the most immediate

priority is to review existing prudential standards and financial institution practices concerning foreign currency exposures to determine where and how these standards need to be strengthened. Such a review should be based as far as possible on effective stress tests incorporating realistic "worst-case" scenarios including interruption of access to key markets.

Third, financial authorities in Southeast Asian countries, as with their counterparts in the rest of Asia, need to develop stronger capabilities for macro-prudential surveillance (MPS) of systemic risks to the financial system as a whole. The publication of regular reports assessing financial stability in a number of ASEAN countries is an important element of MPS. However, more is likely to be needed, including formal designation of responsibilities for assessing systemic risks and the development of indicators for assessing these risks. In strengthening their capabilities in this area, authorities in the region will be able to draw on efforts now underway by the Financial Stability Board and IMF to develop a framework and standards for MPS. As discussed below, these efforts could also benefit from strengthened co-operation among ASEAN countries.



## Greater regional co-operation can improve policies in various areas

Enhancing ASEAN regional macroeconomic co-operation would help to reduce the vulnerability of the region to economic shocks and to ensure a sustained recovery. The recent crisis has underscored the need to strengthen macroeconomic co-operation within ASEAN, which is lagging behind other forms of regional co-operation.

ASEAN already has an example of macroeconomic co-operation – the Chiang Mai Initiative. This initiative was originally established in 2003 in the framework of ASEAN+3 as a series of bilateral currency swap arrangements. As originally formulated, the initiative was subject to constraints that limited its use. The agreement by ASEAN finance ministers in May 2009 to recast the facility into a single multilateral facility is intended to remedy the constraints in order to make the facility more functional.

Co-operation in some other areas deserves further attention. There are, for example, discussions of co-ordinated exit strategies in the context of the G20 and in Asia as well. Singapore, Malaysia and Hong Kong, China agreed in November 2009 to exit jointly from full guarantees offered on bank deposits. This plan to co-ordinate government guarantees should help in limiting risks of disruptive capital flows among the region's banks, especially in a risk-sensitive environment. Co-operation, at least through consultation, on fiscal policies could also be beneficial to the ASEAN region. Highly open economies receive only part of the overall benefit of their own fiscal stimulus actions, much of which spills over to partner countries through trade and interest rate channels. As a result of this externality, open economies, acting independently, may be more reluctant to apply fiscal stimulus to counter a regional downturn than they would be if they were acting in concert.

As their recoveries become increasingly firm, ASEAN countries, particularly those that exit from monetary stimulus earlier than OECD countries, would face an increasing risk of surges in capital inflows and their potentially disruptive impacts on exchange rates and domestic financial markets. Such surges are already an issue of concern for Indonesia and China. Evidence on the effectiveness of controls and other measures to limit capital inflows is mixed. There is some agreement, though, that controls are likely to be most effective for relatively short periods of time rather than as permanent measures.

The management of capital flows is closely related to exchange rate issues. Asian economies entered the onset of the crisis with considerable diversity in exchange rate regimes: some countries have a floating exchange rate regime with considerable flexibility, while other exchange rate systems remain tightly managed. Greater co-operation on exchange rate policies, financial market surveillance and financial integration can provide useful tools in managing capital flows (Kawai and Lamberte, 2008). Such co-operation can help to reduce risks of disruptive fluctuations in capital inflows and allow for orderly exchange rate movement while limiting adverse effects on competitiveness.

## Peer review could provide an effective means of regional co-operation

The effectiveness of regional co-operation largely hinges upon the form of co-operation. Co-operation can take the form of a legally binding rigid framework or a non-binding, flexible scheme. Peer review is an example of the latter and its "soft law" nature makes it suitable as a tool for policy dialogue and capacity building in Southeast Asia. Regional monitoring and surveillance based on peer reviews could potentially work in the region (OECD, 2008; Tanaka, 2008). Peer reviews could be applied to different areas of economic activity, not only to macroeconomic surveillance.



Different institutions such as APEC, ASEAN+3 and ASEAN conduct peer reviews in different ways. For instance, APEC has been using peer reviews to achieve the common goals of creating free trade and investment in the Asia-Pacific region (Woodhead, 2008). These goals, known as the Bogor Goals, were laid down in the Bogor Declaration in 1994. In the framework of the ASEAN+3, the Economic Review and Policy Dialogue (ERPD) process linked with the Chiang Mai Initiative is evolving. Within the ASEAN Secretariat, the ASEAN Surveillance Process (ASP) was institutionalised in 1998 after the Asian Crisis, with the aim of strengthening the capacity of policy making at the regional level. Two mechanisms facilitate this; one is a monitoring mechanism that allows early detection of problems that might affect the ASEAN economy in general and the financial sector in particular; and the other is a peer review mechanism that identifies policy issues arising from the monitoring exercises that need to be addressed. More recently, the ASEAN Surveillance Co-ordination Unit (ASCU) was established within the ASEAN Secretariat to co-ordinate the surveillance process. This surveillance mechanism, however, is still in its infancy.

Among ASEAN countries, the peer consultation process has already started. The first example of peer review adapted to regional needs and conditions is the ASEAN Peer Consultation Framework (PCF) in the area of the forest sector. Two consultations have so far been conducted. The first consultation was conducted on the forestry sector of Brunei in 2007. The ASEAN Secretariat participated in the assessment team. The second consultation was on the forest sector of the Philippines, with Indonesia and Malaysia acting as assessing countries in 2008. The implementation of peer consultation under the concept of PCF has paved a way forward for ASEAN regional co-operation (see Box 1.6).

Peer reviews are implemented in a number of ways within the OECD and are an important working method. There is no standardised peer review mechanism as such, but they are tested instruments that help member countries improve their policy making capacity. When considering the application of peer reviews to Southeast Asia, there are two major prerequisites for its success. The first is information sharing; providing high quality data in a timely and systematic manner is critical. Initial attempts by different institutions to produce high quality data in a comparable and timely manner could be useful in this respect. The other prerequisite for the success of peer reviews in the region is to ensure incentive compatibility to participate in the peer review mechanism. It is crucial to share the benefits of collective policy actions among participating countries. For instance, the reputation effect stemming from continuous macroeconomic co-operation and peer learning from other countries will enhance incentives to participate in collective actions. Strong commitment to co-operation is also critical for effective collective actions (Tanaka, 2009).

Finally, the importance of strengthening regional surveillance is now increasingly recognised. For instance, the creation of a new surveillance unit in Singapore has been agreed under the framework of ASEAN+3 (*i.e.* the ASEAN+3 Macroeconomic Research Office, AMRO). Regional monitoring and surveillance should be strengthened in the near term.

**Box 1.6. The ASEAN Peer Consultation Framework (PCF) in the forestry sector**

The ASEAN Peer Consultation Framework (PCF) in forestry is based on the OECD peer review approach and adapted to regional needs and circumstances (Azmi, 2009). It is a policy tool for regional co-operation and joint learning which is based on an examination of one state's performance by other member states.

PCF was approved at the ASEAN Senior Officials meeting on Forestry (ASOF) in 2006, in Bali, Indonesia and is based on mutual trust and commitments of ASOF and Ministries on Agriculture and Forestry (AMAF). It is consistent with the ASEAN Vision 2020 and ASEAN Economic Community (AEC).

Under the PCF, two consultation processes have so far been finalised on Brunei and the Philippines. The PCF exercises suggest that the ASEAN's fundamental principle of "non-interference" is now changing.

The experience with PCF highlights the following points:

- Comparability and reliability of statistical definitions and data are crucial for its success.
- The role of the co-ordinators including the chair and the ASEAN Secretariat is critical to enhancing the effectiveness and efficiency of the process.
- The sector under review should not be viewed in isolation, but in consultation with related authorities; for instance, in the case of the forestry sector, ministries of forestry, agriculture and environment should be involved.

Azmi (2009) points out that the PCF approach lays down the foundations for effective co-operation in the forestry sector among ASEAN member states.

For more detailed information, see www.aseanforest-chm.org



## CONCLUSIONS

The ASEAN countries have been able to recover remarkably well from the shock created by the global financial crisis. Their recoveries have gained considerable momentum over the past year and have become increasingly driven by domestic rather than external demand.

Strong macroeconomic fundamentals and sound macroeconomic policies sustained in the run-up to the global financial crisis allowed ASEAN countries to use counter-cyclical monetary and fiscal policies to a much greater extent than in past regional cycles. The rapid and effective implementation of these policies was instrumental in limiting the economic downturns and initiating the rapid recoveries. The key near-term challenge is to exit from the counter-cyclical policies, beginning with monetary policy. This should be followed by budget deficit reductions over the next several years to put fiscal policies on to long-term sustainable paths. Greater flexibility in exchange rates is required to deal with rising capital inflows into the region. The success of exit policies in the region would be further enhanced by greater regional consultation and co-operation on macroeconomic and financial policies. While regional co-operation may take different forms, OECD's peer review mechanism presents a flexible instrument which may be suitable for policy dialogue and capacity building in Southeast Asia.

# NOTES

1. Moody's upgraded its sovereign credit rating for the Philippines in July 2009, from B1 to Ba3 on the basis of its resilient financial system and favourable external payments position. Indonesia's long-term foreign currency credit rating was raised one level to BBB by Standard and Poor's in January 2010 and its overall rating raised to BBB+ by Fitch the following March. Standard and Poor's lowered the Thailand local currency rating from A to A- in March 2009 and Fitch reduced the long-term foreign currency rating to BBB that same month. Both agencies cited political uncertainties as the main reason. As noted later in the text, investor concerns over the impact of its growing fiscal deficit on bond yields prompted Fitch to lower Malaysia's long-term credit rating from A+ to A in June 2009, while changing the rating prospect from "negative" to "stable". Other agencies maintained their ratings of Malaysia debt.



2. Another round of failures of the large financial institutions in one or more OECD countries also cannot be ruled out, although the likelihood is probably very low. The extent of the vulnerability of financial institutions in the United States from the weakness in real estate, particularly commercial real estate, is not yet clear and there have been recent signs of continued financial strains on some European banks.

3. Thailand, Indonesia and the Philippines officially base policy on an inflation targeting framework in which monetary policy instruments are varied to maintain (core) inflation within a pre-announced range. Other countries base policy on less formal and explicit frameworks to achieve similar goals of sustaining non-inflationary growth in line with potential. Exchange rate developments have played, to varying degrees, an important role in determining near-term policy adjustments, especially in the most open economies. Only Singapore, however, uses the exchange rate explicitly as an intermediate target: until the crisis, authorities pursued "moderate appreciation" of the currency against a basket of currencies with unannounced weights.

4. Analysis cited by the Asian Development Bank (Asian Development Bank, 2010) implies that policy interest rates in Indonesia and Malaysia were somewhat higher in 2009 than would be suggested by their historical responses to inflation and real growth (Taylor rule). This suggests that policy tightening could be slower during the initial stages of recovery than would normally be the case.

5. According to IMF estimates, (IMF, 2009a) the overall planned consolidation in these countries amounts to about 0.9% of GDP, higher than the contractions of 0.75% and less than 0.5% of GDP now envisaged for industrial Asia and the G20 as a group. However the estimates do not take account of the recent shift in budget plans in Thailand, which now envisages less consolidation than earlier planned.

6. Estimated "reaction functions" determining central bank foreign currency intervention developed by ADB analysts (Asian Development Bank, 2010a) imply that Thailand and Singapore tend to intervene most strongly against appreciations against the United States dollar while interventions by the Philippines and Indonesia tend to be more symmetric.

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CHAPTER TWO

# Medium-Term Growth and Development Outlook



## ABSTRACT

The global financial crisis has highlighted the need for Southeast Asian economies to rebalance the sources of economic growth. More open economies in the region need to rely less on exports and more on domestic demand, although some need to improve the competitiveness of their exports.

Economic projections developed for the SAEO 2010 suggest that this rebalancing process is now underway. Growth in the region as a whole will reach pre-crisis levels by 2015 but will be more dependent on domestic investment, followed by private consumption, and less dependent on net exports than before the crisis.

Governments in the region need to strengthen their fiscal frameworks in order to meet the challenge of reducing fiscal deficits to sustainable levels while financing infrastructure and other programmes essential to achieving their development goals. The fiscal frameworks will need to incorporate credible medium-term budgetary targets and the means to achieve them. Well-designed fiscal rules and independent fiscal institutions could further strengthen the frameworks.

# INTRODUCTION

Growth in Southeast Asian economies has traditionally been driven by external demand; these economies have been fast to integrate into global supply chains and flexible in meeting ever-evolving global demand. These growth characteristics are the main source of economic dynamism in the region and have helped to achieve remarkable growth rates in the past.



Although the global financial crisis did not have devastating effects on most Southeast Asian countries, it offers an opportunity to rethink past growth strategies. Having emerged strongly from the crisis, these economies need to exploit new sources of growth, given weaker-than-expected import demand in OECD countries (OECD, 2010). Rebalancing growth is therefore critical to achieving more stable and sustained growth in the medium term.

Balanced growth is a broad concept. There is no definitive path of rebalancing and its character will differ across countries. More balanced growth implies greater dependence on domestic demand in those countries that have been heavily reliant in the past on exports and will help to reduce their vulnerability to external demand shocks. In other countries, where exports have been less important, rebalancing may involve measures to make greater use of exports for growth. Rebalancing growth also means that growth should be socially inclusive and environmentally sustainable and should be consistent with smaller global current account imbalances over the medium term. Overall, Southeast Asia will need to rebalance growth by adopting policies to promote a greater reliance on domestic and regional demand.

The remainder of this chapter discusses the medium-term outlook for ASEAN economies and then examines a key medium-term policy challenge faced by ASEAN countries: the need to adjust fiscal policies to achieve longer-term fiscal sustainability while facilitating growth rebalancing and economic development.

# MEDIUM-TERM GROWTH AND DEVELOPMENT OUTLOOK

This section examines the prospects for rebalancing growth in Southeast Asia, based on projections on the Medium-Term Projection Framework for Growth and Development (MPF) developed by the OECD Development Centre. The results of the projections (MPF-SAEO 2010) are based on assumptions about the external economic environment and ASEAN countries' development plans (Box 2.1). The Medium-Term Projection Framework is composed of baseline models that determine potential output and output gaps using the dynamic stochastic general equilibrium (DSGE) approach and demand-side economic projection models[1] (see Box 2.2). The framework for this first *Southeast Asian Economic Outlook* includes six ASEAN countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) and the coverage of the MPF will be extended to other ASEAN countries in future issues of the SAEO.

The major findings implied by the MPF-SAEO 2010 are as follows.

- **Medium-term prospects are in general favourable. The average growth rate in the region will reach 6% by 2015, maintaining the growth momentum of 2010.**
- **Rebalancing of growth is critical to sustaining rapid growth but its character will differ across countries.**
- **Investment and private consumption will become increasingly important engines of medium-term growth, although exports will remain important.**
- **Moving fiscal policy back towards levels consistent with a sustainable path in the medium term will be critical for rebalancing growth.**

## Overall growth performance in Southeast Asia is expected to remain strong

The OECD Development Centre's MPF-SAEO 2010 implies that the six ASEAN countries will have achieved an average GDP growth rate of 6.0% by 2015 (Table 2.1; Figure 2.1). Growth for the region as a whole is expected to average 5.8% over 2011. Although this figure is somewhat lower than the one for China (9.6%) and India (8.5%) (Asian Development Bank, 2010), it is still higher than the expected growth rates for OECD economies.

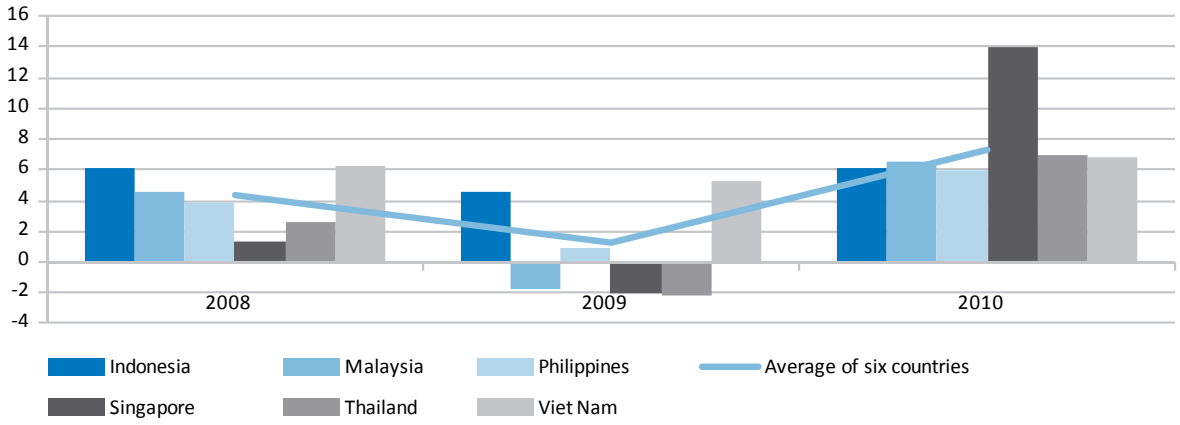


**Table 2.1. GDP growth into 2015 of six ASEAN countries**
(percentage changes)

| | 2010 | 2015 | 2003-07 (average) | 2011-15 (average) |
|---|---|---|---|---|
| Indonesia | 6.1 | 7.1 | 5.5 | 6.6 |
| Malaysia | 6.5 | 5.3 | 6.0 | 5.5 |
| Philippines | 6.0 | 4.4 | 5.7 | 4.6 |
| Singapore | 14.0 | 4.5 | 7.5 | 4.7 |
| Thailand | 7.0 | 5.1 | 5.6 | 5.2 |
| Viet Nam | 6.8 | 7.2 | 8.1 | 7.1 |
| Average of six countries | 7.3 | 6.0 | 6.1 | 6.0 |

*Source:* OECD Development Centre, MPF-SAEO 2010.
StatLink http://dx.doi.org/10.1787/888932350429

**Figure 2.1. GDP growth from 2008 to 2010: Recovery from the global financial crisis**
(percentage changes)




*Source:* OECD Development Centre, MPF-SAEO 2010.
StatLink http://dx.doi.org/10.1787/888932349783

The average growth rate, however, masks significant differences across countries. Indonesia and Viet Nam are projected to lead the region's growth, thanks to robust domestic demand, and their growth is projected to be nearly one percentage point above the ASEAN average during 2011-15. Singapore and Malaysia were hard hit by the crisis among Southeast Asian economies. Their recovery, however, is being reinforced by intra-regional demand and GDP growth is expected to be over 4% in both countries by 2015. Another trade-dependent country, Thailand, also suffered negative growth in 2009, but will achieve a growth rate of 5.1% by 2015. The Philippines is also expected to be

back on a recovery track, bolstered by workers' remittances that have continued to increase in the post-crisis period. Its growth rate is projected to reach 4.4% in 2015, though the large fiscal deficit will be a downside risk to this projection.

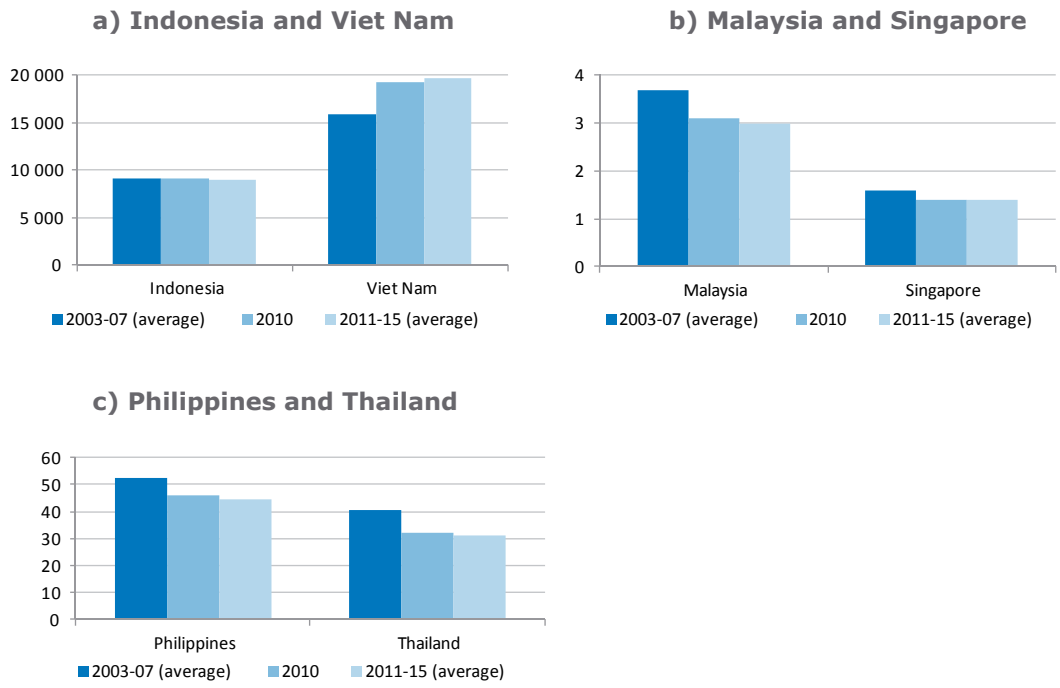
**Box 2.1. Key assumptions for the medium-term outlook in 2015**

- Output gaps — the gap between actual and potential GDP — converge to zero by 2015.
- Most ASEAN currency exchange rates will gradually appreciate through 2015 (Figure 2.2).
- Inflation targeting countries will meet their targets by raising interest rates where necessary (Figure 2.3).
- Recoveries of OECD countries will be relatively slow compared with those of China and India.
- Regional integration in Asia will increase gradually further into 2015.
- Five-year plans of Southeast Asian countries will be implemented where feasible given budgetary and other circumstances.
- Fiscal policies include tax reforms, exit measures from the crisis and other fiscal consolidation plans.

See the Statistical Annex for more detailed information.

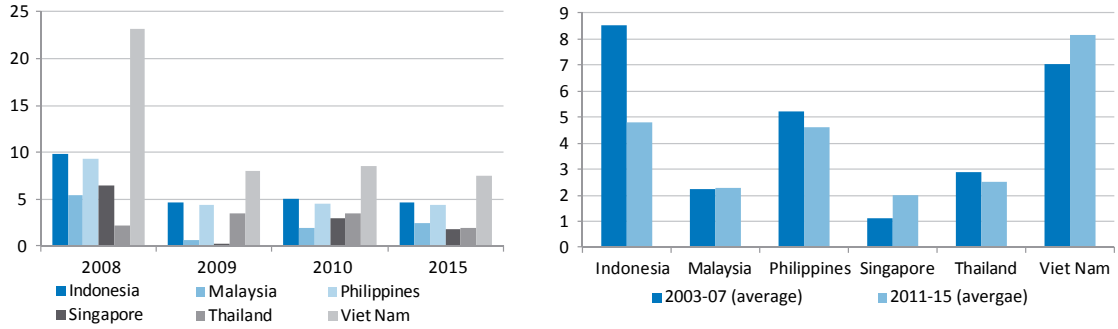


**Figure 2.2. Exchange rates in six ASEAN countries**
(ASEAN currency per USD)




*Source:* OECD Development Centre, MPF-SAEO 2010.
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**Figure 2.3. Consumer prices of six ASEAN countries**
(percentage changes, 12-month average)




*Source:* OECD Development Centre, MPF-SAEO 2010.
StatLink http://dx.doi.org/10.1787/888932349821



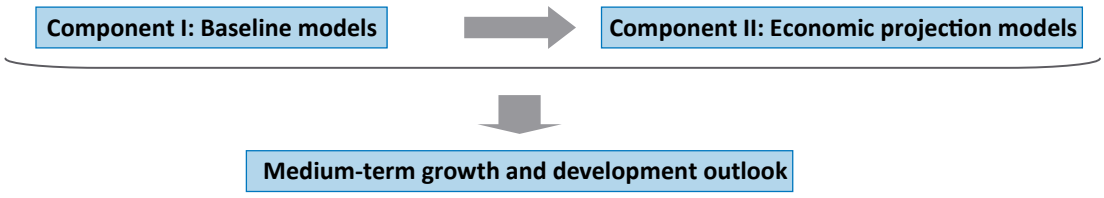
## Box 2.2. The medium-term projection framework for growth and development

### Framework

The OECD Development Centre constructed the Medium-Term Projection Framework for Growth and Development to provide medium-term growth and development scenarios for the *Southeast Asian Economic Outlook 2010* (MPF-SAEO 2010). The Framework has two components: *i)* baseline models for medium-term projections and *ii)* economic projection models, as illustrated below.

Baseline models determine potential output and the output gap, while the economic projection models provide the components of output and other variables. First, the baseline models derive the GDP series that are consistent with the output gap's closing by 2015. Then these reference series are used as input to economic projection models to obtain a set of variables from the models.

### Figure 2.4. How is the MPF-SAEO 2010 constructed?




*Source:* OECD Development Centre, MPF-SAEO 2010.

### *Baseline Models: Estimation of potential outputs and output gaps*

One of the key assumptions for the medium-term projections is related to potential output, which is estimated by baseline models.

In Southeast Asia, there is no comparable information on potential outputs and output gaps. Conventionally, potential output is measured either by applying a statistical filter to actual real output data, such as the Hodrick-Prescott filter, or by a production function approach in which potential output is related to labour and capital inputs. The filtering approach is relatively easy to produce results but there are drawbacks resulting from potential instability in the estimates; moreover the filtering approach lacks a theoretical base. The production function approach is widely used, but its application to Southeast Asian countries has its limits related to the lack of reliable data, in particular capital stock data.

The estimates of potential output and output gaps used in the baseline models of MPF-SAEO 2010 are based on an alternative approach that has been recently developed, the dynamic stochastic general equilibrium (DSGE) method. The properties of potential output and output gap fluctuations derived from the DSGE approach can be different from those derived from the filtering or production function approaches. A clear advantage of this approach is that it can provide comparable information on potential outputs and output gaps for Southeast Asian countries by using relatively easily available data (for instance, GDP, inflation and interest rates). In addition, this approach has strong theoretical foundations which explicitly reflect the optimising behaviour of households and firms and this approach can take account of different types of shocks from both the supply and the demand side.

The model for each country is based on a new Keynesian framework that consists of a dynamic Investment-Savings (IS) equation, a Phillips curve (aggregate supply equation), and a monetary policy reaction function. Equilibrium dynamics are driven by four exogenous shocks: technology, price markup, external demand, and monetary policy shocks. The baseline models' parameters are estimated using Bayesian methods. It is assumed that the shocks in the last sample period gradually converge to zero following the estimated stochastic processes. Under these assumptions, the output gap for each country converges to zero by 2015.

***Economic Projections Models***

With reference to GDP projections conducted by baseline models, economic projection models are used to provide details of the projections for SAEO 2010. Economic projection models are medium-scale demand-driven economic forecasting models that comprise a set of equations describing the five sectors of the economy: real sector, monetary sector, fiscal sector, balance of payments sector and debt sector. The results of projections are derived through iterations to identify a set of economic variables in all sectors including the current account, fiscal balance, investment and private consumption. The Economic Projection Models take into account national development plans considering their feasibility given the budgetary and other circumstances.

**Process**

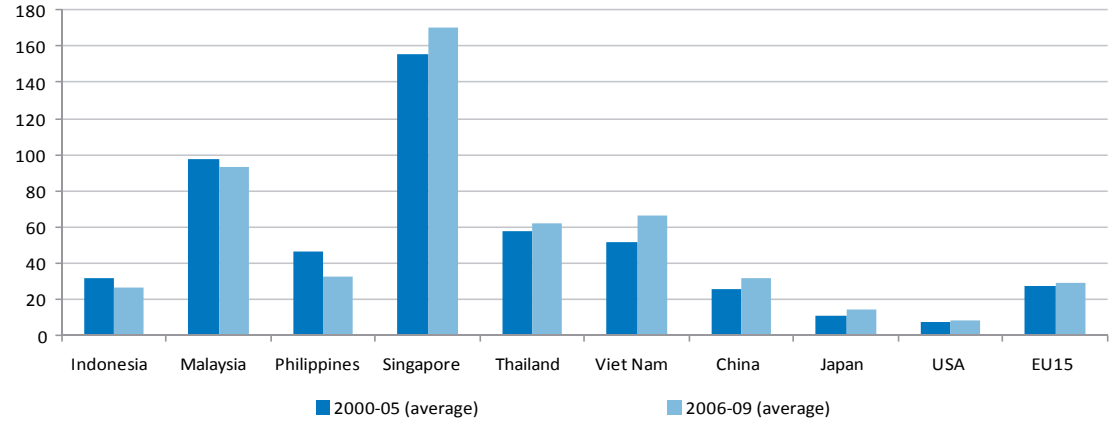
Supplementary data and insights into policy directions were provided during the OECD Development Centre's medium-term outlook missions in July and August 2010. The preliminary results were also discussed with governments and central banks in Southeast Asia during the missions.

For more detailed information, please see the home page of www.oecd.org/dev/asiapacific.

## Rebalancing could help sustain past growth rates in the region

Most Southeast Asian countries experienced remarkable growth in the past couple of decades owing largely to rapid growth of exports of parts and components and assembly of final products from (largely) imported components. The export-driven nature of growth in Southeast Asia is manifest in the very large contribution of exports to growth in some countries. The contributions of net exports are much smaller owing to the high import content of exports, reflecting the focus of export industries on processing and assembly (Figure 2.5 and 2.6; See Chapter 3).

**Figure 2.5. Export to GDP ratios in six ASEAN countries**
(percentages)

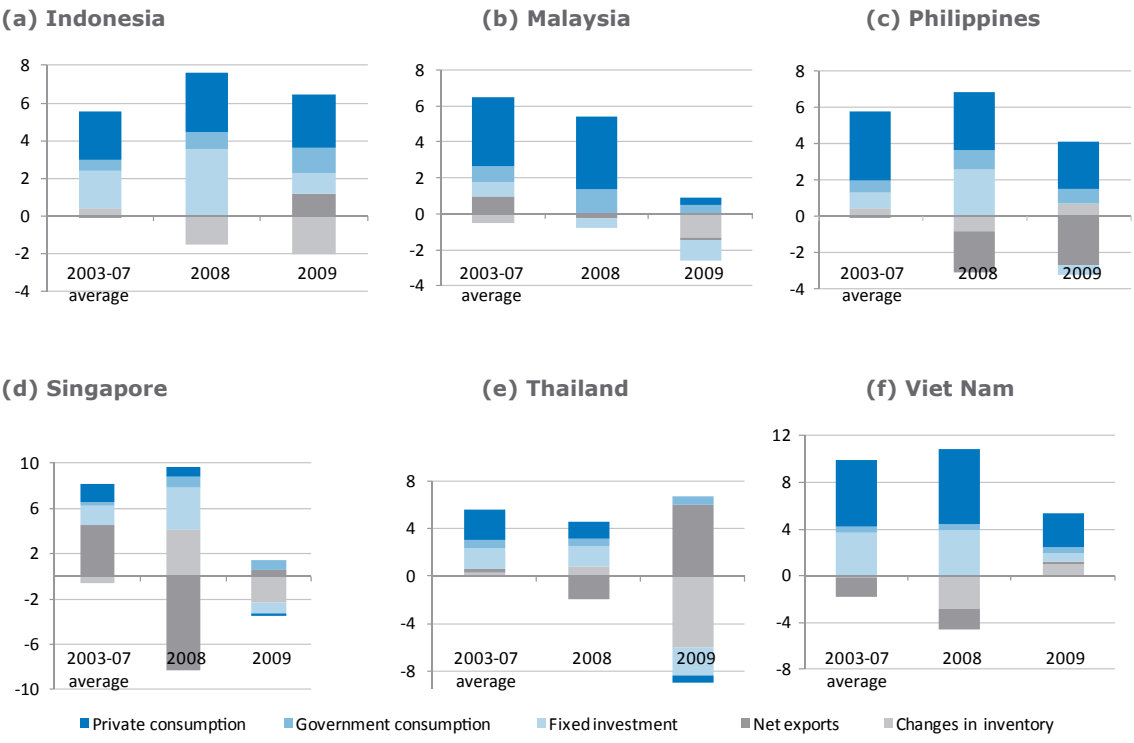



*Note:* EU 15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

*Source:* CEIC and IMF.

StatLink http://dx.doi.org/10.1787/888932349840

**Figure 2.6. Contributions to growth in six ASEAN countries**
(percentage of GDP)




*Source:* IMF and national sources.

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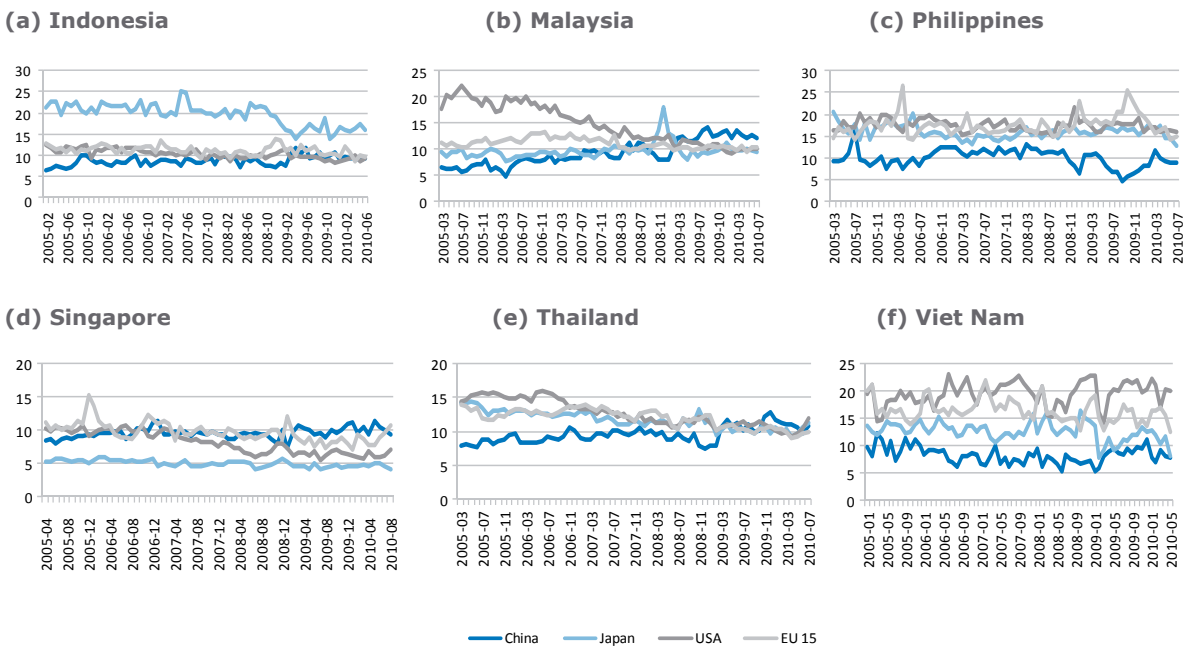
The export-oriented growth strategy, successful in earlier decades, has shown its limits in recent years. The present global downturn, owing to its exceptional magnitude and extent, has in particular increased awareness of the vulnerability to external shocks of the economies of the region (Box 2.3). In fact, excessive dependence on external demand has made many ASEAN countries vulnerable to fluctuations in global demand and more prone to be hard hit during cyclical downturns of economic activites in major export destinations. This vulnerability has prompted regional policy makers to consider ways to make their economies more resilient.



The relatively slow recovery of OECD countries will retard export growth of the Southeast Asian economies, but this will to some extent be compensated for by the emergence of China as new export market for the region. East Asia is expected to become an increasingly important destination for ASEAN exports, particularly for more export-dependent countries. For instance, the response of many firms in Southeast Asia (in particular Indonesia, Malaysia, Singapore and Thailand) to the sharp downturn in major industrialised economies was to switch their export destinations to large markets that were less affected by the global recession such as China (Figure 2.7). This helped support export industries across Southeast Asia and to limit the economic downturn.

Redirecting exports to China could, to a certain extent, compensate for the relatively weak demand in OECD economies immediately after the crisis, but is unlikely to fully make up for it. Export market diversification has its limits though, especially when economies are so intertwined through global production chains. And there is a limit to the extent to which expansionary monetary and fiscal policy can fill the void created by the decline in external demand. Therefore, new sources of growth are needed for ASEAN countries to maintain past growth rates and are most likely to be found in domestic demand and regional demand.

**Figure 2.7. Export shares of major trading partners of six ASEAN countries**
(percentages, 2005-10)




*Note:* EU 15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

*Source:* CEIC.

StatLink http://dx.doi.org/10.1787/888932349878

**Box 2.3. Volatility in growth models**

When searching for a new growth model for Southeast Asia, there are two important concepts to consider: one is coping with economic volatility and the other one is dealing with a sort of "disequilibrium" situation.

Traditionally, the concepts of economic volatility and long-term growth were analysed separately in theoretical growth models. However, recent growth theory has shed light on the interaction of these two factors. Stadler (1990) analysed the impact of volatility on long-term growth based on the AK model* approach. Jones *et al.* (1999) examined how macroecnomic volatility would affect growth through its impact on aggregate savings and investment and concluded that volatility negatively affects aggregate growth by depressing total investment. Acemoglu and Zilibotti (1997) pointed out that at an early stage of development diversification opportunities are limited, owing to the scarcity of capital and indivisibility of investment projects. In a similar analysis, Koren and Tenreyro (2007) concluded that volatility of country-specific macroeconomic shocks falls with development. The empirical evidence shows a negative correlation between volatility and growth, in particular in less financially developed economies.

Aghion *et al.* (2005) examined how credit constraints affect the cyclical behaviour of productivity-enhancing investment and thereby volatility and growth: when firms face tight credit constraints, long-term investment turns procyclical, accentuating the volatility in aggregate output growth. Tighter credit therefore leads to both aggregate volatility and lower mean growth for a given total investment rate. Other studies examine the impact of volatility through budgetary policies (Aghion and Marinescu, 2006).

Furthermore, most growth models assume a return to equilibrium once the economy has got away from the equilibrium path for some reason. White (2010), however, highlighted the importance of considering a disequilibrium situation as well, where countries do not necessarily return to the equilibrium path.

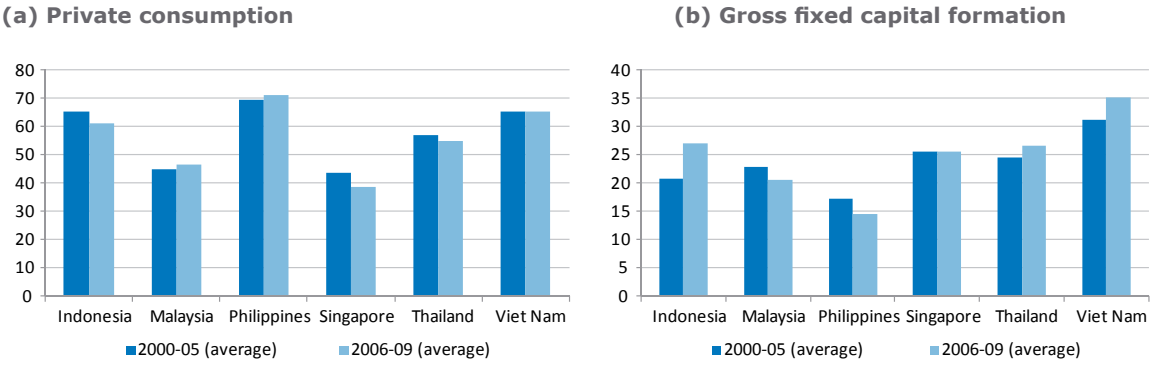
While these arguments are useful to discuss new growth models for Southeast Asia, more theoretical and empirical analyses will be needed for the development of sound policy guidelines.

* The *AK* model is the first version of endoegeneous growth theory and assume an aggregate production function with fixed coefficients; it is derived from the production function in the form of *Y* (output)= *AK* in which marginal product of capital is equal to the constant *A* (*K*= capital).

## Rebalancing could help sustain growth but the path of rebalancing will differ by country

The relative importance of major growth drivers has differed considerably among ASEAN countries over the past couple of decades and suggests that the growth rebalancing over the medium term is likely to take different forms as well. For instance, consumption to GDP ratios vary substantially across Southeast Asia, from the Philippines at 70% to Singapore at 40%; similar diversity is also apparent in the investment to GDP ratios, which range from 30% for Viet Nam to 15% for the Philippines (Figure 2.8). This suggests that rebalancing in some countries, the Philippines for example, is likely to involve increasing investment while in other countries, such as Malaysia and Thailand, there may need to be greater emphasis on increasing consumption. The policies needed to achieve rebalancing are thus likely to differ among ASEAN countries.

**Figure 2.8. Consumption and investment to GDP ratios of six ASEAN countries**
(percentage of GDP)




*Source:* CEIC.

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In general, in those economies that rely heavily on exports for growth, rebalancing towards domestic demand could help maintain a high growth rate and at the same time help reduce vulnerability to external shocks. Rebalancing, however, would not mean a sudden switch to domestic-driven growth — a move that might prove disruptive — but rather a gradual boost to consumption and investment, while exports remain a major driver of growth. In economies that were not so much export-driven in the past, rebalancing may include a greater exploitation of opportunities for trade. In this sense, rebalancing may mean more reliance on domestic demand in some countries but greater dependence on exports in others.

Rebalancing growth is therefore a broad concept — there is no definitive path of rebalancing. As the challenges for rebalancing countries face may differ, development strategies to achieve rebalancing are also likely to be different. Many ASEAN countries already recognise the need to change their growth strategies and have included (or plan to include) an element of rebalancing growth in their new medium-term development plans, in particular, Malaysia and Thailand (see Box 2.4).

Thailand, where growth has been dependent on exports, has comparatively greater room for boosting domestic demand in a rebalancing strategy. Social policies would be critical to rebalancing, particularly policies to address population ageing, income disparities, and unemployment. For Malaysia, the development of the private sector, in particular small and medium-sized entreprises (SMEs), is critical for stimulating domestic demand, together with shifting to knowledge-based industries. Singapore is aiming to strengthen its human capital to be a hub of the global economy. Coping with its vulnerability to external shocks will be critical and will require improvement in the business environment. Considering the small size of the domestic market, rebalancing needs to be more focused on supply-side productivity growth, based on fostering skilled labour.

Indonesia, boasting sound macroeconomic management, including recent fiscal improvements, is now trying to make full use of its large domestic market. Domestic purchasing power is increasing and gradually placing the economy on a domestic demand-driven growth path. Maintaining steady private consumption and investment growth is important for rebalancing. In addition, there is a potential to increase exports by reducing transport costs, easing behind-the-border regulations, removing remaining barriers to trade, and increasing the value added of exports (See Chapter 5; and Molnár and Lesher, 2008). In Viet Nam, improvement of macroeconomic management is the priority. Reform of state-owned enterprises is also critical for rebalancing. In the Philippines, infrastructure development is urgently needed and could also attract foreign investment. The information and communications technology (ICT) industry has important potential for this country, but income disparities and poverty remain big problems for sustained growth.

**Box 2.4. Summary of medium-term development plans in ASEAN countries**

Malaysia and Thailand are addressing the challenges of rebalancing growth. The new Malaysian plan (10th Malaysia Plan, 2011-15) targets an average annual growth rate of 6%, which will be supported by public outlays of RM 230 billion during the five years (equivalent to approximately 34% of GDP in 2009). In order to ensure this target, the focus is to shift to a high value-added and high-income economy and to transform the structure of the economy. The strategy to promote domestic demand to become a major driver of growth includes energising the private sector and creating an environment which encourages productivity growth. The government will also leverage more vigorous private sector expansion, particularly in taking the lead in the development of new growth areas. The new sources of growth will be health care, education and ICT and will depend on innovation and high quality of human capital.

Thailand faces major changes under the 10th National Economic and Social Development Plan (2007- 11). Many of the reforms in the medium-term development plan are intended to achieve greater balance and sustainability in growth. In particular, following the global financial crisis, the Thai government is trying to change the direction of development by focusing on rebalancing growth. The new development plan starting from 2012 will focus on agriculture, infrastructure, education, healthcare, energy, and community-based development. In addition, co-operation with neighbouring countries, especially the development of the Mekong sub-region, will play an important role in boosting economic growth.

Viet Nam is also seeking socio-economic development together with macroeconomic stability. The objective of the forthcoming medium-term plan (2011-15) is to retain a high economic growth rate based on continued structural adjustment, improvement in competitiveness, and global integration while fostering socio-economic development. The draft plan sets an average GDP growth target of between 7.5-8.5% per annum for the five years and mandates a number of specific tasks including stabilising the macro-economy and renewing the model of growth; improving the market economy institutions within the socialist system; creating a non-discriminatory, transparent, stable and open investment environment; and reforming the state-owned sector.

Indonesia and the Philippines plan to focus on boosting employment and reducing income inequality. Indonesia's National Development Policy in 2010-14 stresses sustainability and a more equal income distribution. Social security must be developed in order to make workers more productive, educated and skilled. The Plan also sets some development targets such as achieving average annual economic growth of 6.3-6.8%, average annual inflation of 4-6%, an unemployment rate of 5-6% by end-2014, and a poverty rate of 8-10% by end-2014.

The basic task of the Philippine Medium-Term Development Plan (MTPDP) 2004-10 is to fight poverty. The country aims to open up economic opportunities, maintain socio-political stability, and focus on strategic measures and activities that will spur economic growth and create jobs.

Singapore aims at enhancing human capital development. Singapore has set a target for productivity growth of 2% to 3% per year over the next ten years, more than double the 1% rate achieved over the last decade. This involves a major transformation of the economy, including human capital development; raising business efficiency; improving access to global markets; and capturing new growth opportunities in order to promote high value-added activities within Singapore. The government will also invest in education, advanced skills development, research capabilities, and the infrastructure and connectivity needed for a global city.

## Current account balances are expected to shrink gradually as the growth of imports outpaces that of exports

A large and persistent current account surplus is a relatively new phenomenon in Southeast Asia. In fact, many countries in the region ran current account deficits before the Asian crisis in 1997-98 owing to high investment and consumption rates (see Chapter 1). After the Asian crisis, savings remained relatively buoyant, while the ratio of investment to GDP fell, transforming Southeast Asia from a current account deficit to a current account surplus region.

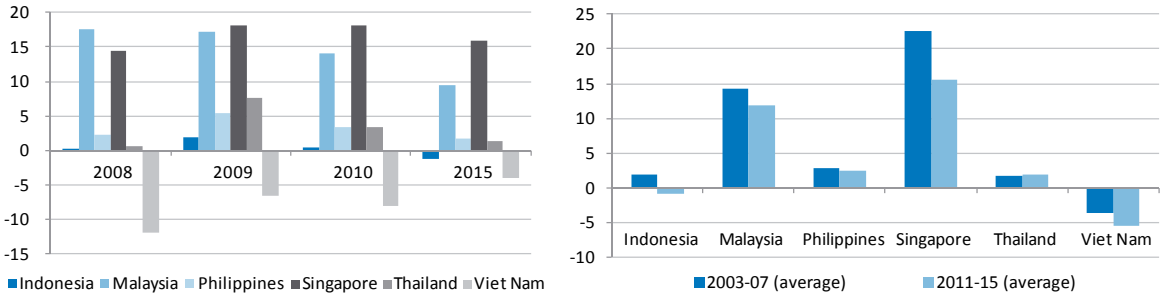
The region-wide average current account balance is projected to fall from 6.5% of GDP in the pre-crisis period to 4.2% in the post-crisis period because of a more rapid rise in imports than in

exports. This decline reflects the moderate progress in growth rebalancing projected for the medium term. While current account balances are expected to deteriorate, they will still be in surplus in most ASEAN economies. The exception is Viet Nam, which recorded current account deficits even before the crisis, reflecting robust import demand due to high GDP growth, large-scale infrastructure projects and tariff reductions.

The medium-term projection results suggest that the current account surplus as a share of GDP will only slightly decrease in Thailand, the Philippines and Indonesia (Figure 2.9). In contrast, the fall in the current account surplus is projected to be relatively large in Malaysia and Singapore, where dependence on external demand is higher. Both countries need to compensate for weak external demand in order to maintain high growth rates. Malaysia has more room to boost consumption than Singapore owing to a larger internal market. Singapore's comparatively high income provides potential for increasing domestic demand to reduce vulnerability to external demand shocks, but the scope for rebalancing towards consumption will be limited owing to the small size of the domestic market.



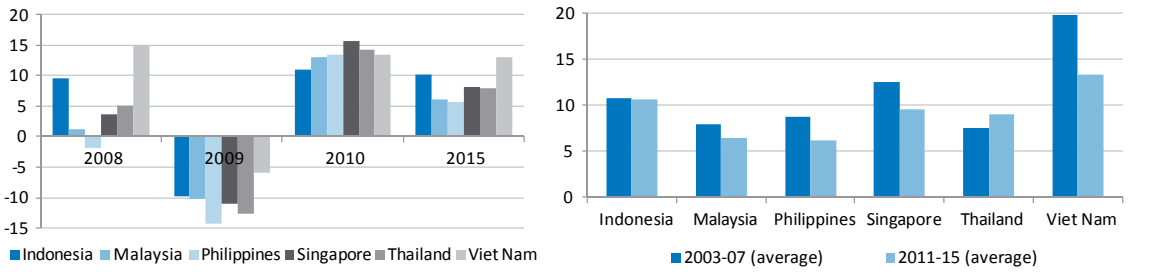
**Figure 2.9. Current account balance of six ASEAN countries**
(percentage of GDP)




*Source:* OECD Development Centre, MPF-SAEO 2010
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Although its importance is expected to fade slightly over 2010-15, external demand will continue to be a major source of growth for most Southeast Asian countries. According to the MPF-SAEO 2010, exports in the six ASEAN countries are projected to grow at approximately 13.5% in 2010 and subsequently subside to around 8.5% by the end of the projection period. Export recovery in the post-crisis period is expected to be particularly robust in Indonesia and Viet Nam, with average annual growth rates of 10.7% and 13.3%, compared with the pre-crisis averages of 10.8% and 19.9%, respectively (Figure 2.10).

**Figure 2.10. Export growth for six ASEAN countries**
(percentage changes)

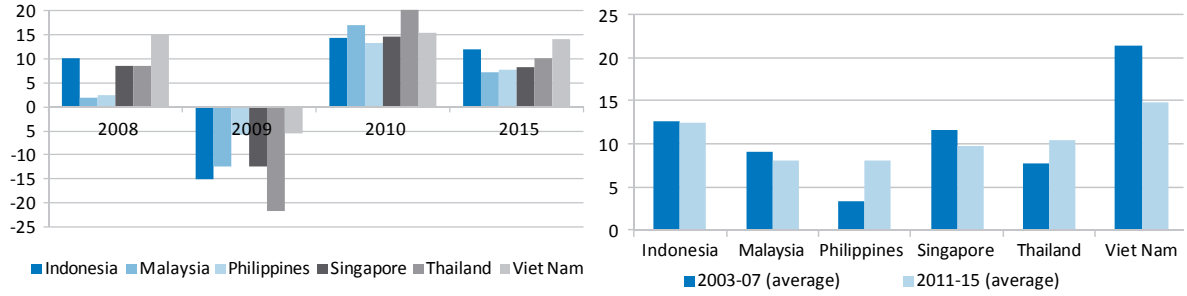



*Source:* OECD Development Centre, MPF-SAEO 2010
StatLink http://dx.doi.org/10.1787/888932349935

Although export growth may not reach pre-crisis rates, it is expected to be accompanied by a pickup in import growth. Import growth will be supported by strengthening domestic demand within the region. This trend is also related to the concentration of Southeast Asian intra-regional trade on processing and assembling of imported parts and components for export as finished goods. Import growth is expected to be particularly robust in Indonesia and Viet Nam, where income levels are rapidly rising and the economies are becoming increasingly integrated into regional supply chains in the post-crisis period (Figure 2.11). Indonesia's high economic growth requires large imports of capital goods pushing overall import growth above 12% by 2015. Vietnamese imports are projected to grow rapidly at 14.8% on average in the post-crisis period. The Philippines and Thailand are also expected to record higher import growth after the crisis. In the case of Thailand, a gradual appreciation of the baht and robust domestic demand are expected to boost imports.



**Figure 2.11. Import growth for six ASEAN countries**
(percentage changes)




*Source:* OECD Development Centre, MPF-SAEO 2010

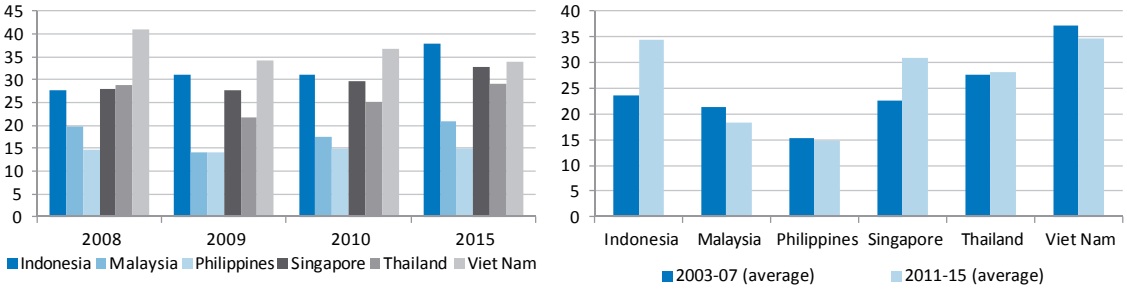
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## Growth rebalancing is reflected in changing trends of savings and investment

Current account balances are mirrored in savings and investment balances. Savings and investment ratios to GDP differ considerably in the six ASEAN countries, reflecting their country-specific characteristics. The gross domestic investment to GDP ratio is projected to increase to 26.8% on average for the region as a whole in the post-crisis period, up from the pre-crisis average of 24.6% (Figure 2.12). Investment will be supported by rising capital inflows to the region as well as large public spending on infrastructure investment. The investment ratio is expected to increase most sharply in Indonesia. The ratio is projected to increase considerably in Singapore as well owing to large-scale public infrastructure projects in the pipeline.

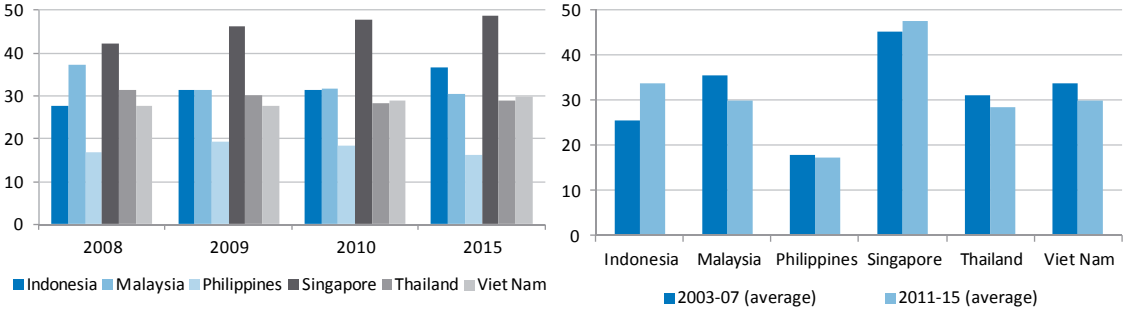
The post-crisis gross national savings to GDP ratio is expected to average 31.6% for the region, virtually the same as the 31.4% recorded in the pre-crisis period. The stability of the ratio is explained by movements in opposite directions in some countries and no change in others (Figure 2.13). The ratio is projected to decline in Malaysia (by 5 percentage points), Thailand (by 2.6 percentage points) and Viet Nam (by 3.8 percentage points) owing to robust consumption growth. Singapore will continue to have a large and persistent saving rate until 2015. The ratios are projected to be more or less stable in the other economies. As a consequence, savings-investment gaps are expected to shrink in the post-crisis period with a stable gross national savings ratio, while the gross domestic investment ratio will be rising as the growth of investments outpaces that of total output.

**Figure 2.12. Gross investment of six ASEAN countries**
(percentage of GDP)




*Source:* OECD Development Centre, MPF-SAEO 2010
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**Figure 2.13. Gross national savings of six ASEAN countries**
(percentage of GDP)



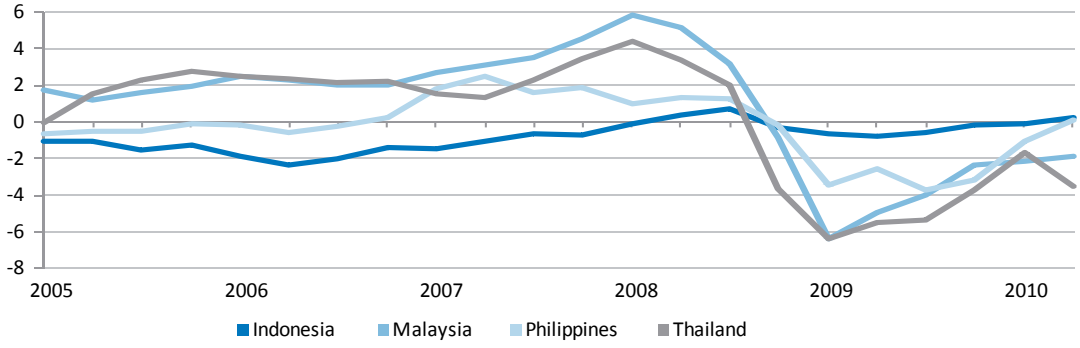

*Source:* OECD Development Centre, MPF-SAEO2010
StatLink http://dx.doi.org/10.1787/888932349992

Fundamentally, the large current account surpluses of ASEAN countries reflects their comparatively high propensity to save in the face of more limited investment demand, a gap which has been manifest by high export relative to import growth. Growth rebalancing should therefore be geared to removing structural impediments to private consumption and investment. Such a rebalancing strategy would help improve the allocative efficiency of the economy, while making it less vulnerable to external shocks.

## Private consumption will play an important role in post-crisis growth in the region

Private consumption helped to cushion the adverse effects of the global turbulence on real growth in the ASEAN economies, notably Indonesia, Viet Nam and the Philippines. Output gap estimates suggest that Indonesia and the Philippines have been more resilient to the global downturn than countries more reliant on external demand (Figure 2.14).

**Figure 2.14. Output gaps of ASEAN countries**
(percentage of potential GDP)



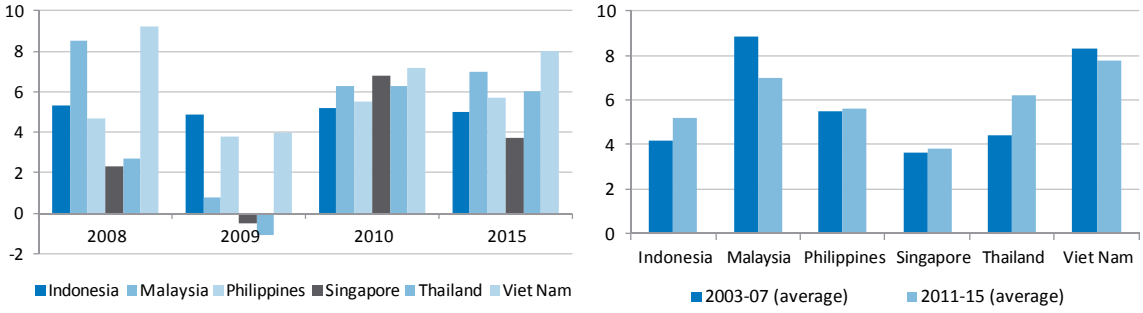

*Notes:* The DSGE-based output gaps are calculated based on real GDP, inflation and interest rates. In general, DSGE-based output gaps tend to be lower in low inflation environments than output gaps obtained by filtering approaches. In addition, DSGE-based output gaps are less volatile during the crisis and the recovery period compared with other approaches, for instance the Hodrick-Prescott filter approach.

*Source:* OECD Development Centre, MPF-SAEO 2010

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Private consumption collapsed in other Southeast Asian economies during the global downturn. Growth in these countries is projected to reach 5.9% over 2011-15, a full recovery to the pre-crisis level (5.8% over 2003-07). In Malaysia, Thailand and Viet Nam, private consumption is expected to grow faster than the regional average, at 7.0%, 6.0% and 8.3% in 2015, respectively (Figure 2.15). In Indonesia and Thailand, the high growth rates of private consumption are attributable to rapidly rising incomes and declining unemployment rates. Robust consumption growth in the Philippines has been supported by remittances from overseas Filipino workers.

**Figure 2.15. Private consumption in six ASEAN countries**
(percentage changes)




*Source:* OECD Development Centre, MPF-SAEO 2010

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To counter the downturn, tax and spending policies to stimulate consumption have been adopted in most ASEAN countries. In Indonesia, the stimulus package amounted to IDR 3.3 trillion (approximately 1.4% of GDP in 2008), which included a cut in the general income tax (IDR 43 trillion) and an increase in energy subsidies and financial support for small business activities (IDR 7.3 trillion). In Malaysia, tax incentives amounting to RM 3 billion (0.4% of GDP in 2009) have been implemented since March 2009. In Singapore, from January 2009, the corporate tax rate was cut from 18% to 17%, and 20% of personal income taxes due were rebated. The Philippines reduced the corporate income tax rate from 35% to 30% and the personal income tax for minimum wage earners has been waived from

January 2009. In Viet Nam, an exemption from personal income taxes was implemented during 2009. In Thailand, support has been extended to unemployed workers under the "Sufficient economy fund for improvement in quality of life" for rural villages. In addition, an old-age support payment of THB 500 per month, equivalent to 6% of income per capita in 2008, has also been decided. These measures have played an important role in holding up consumption during the downturn and are expected to continue supporting consumption in the near term.



In parallel with the tax measures, social policies to strengthen domestic consumption are being implemented. In particular, effective social protection ("safety net") along with public and private pensions, health care and education are critical to support consumption. Many people are forced to save more because of the poor quality or non-existence of such vital services. And many of the policies required for rebalancing are consistent with the objectives of inclusive growth, such as enhancing the social safety net.

In Singapore, a job credit programme was adopted to tackle the consequences of the global downturn, in the form of cash transfers for employers to cover part of their wage bills and to avoid massive lay-offs. In Malaysia, several approaches to boosting employment are planned, including the strengthening and expansion of entrepreneurship programmes for households in the lower 40% portion of the income distribution regardless of ethnicity, with targeted programmes for special needs groups. Promoting Bumiputera representation in high-paying jobs is also part of the social policies. In the Philippines, the government provided special support to unemployed workers in rural villages. In Indonesia, several programmes will be implemented to increase food security such as increasing the quality of nutrition.

Empirical evidence on the effects of social safety net programmes on domestic demand is mixed. Some recent studies have found a positive effect of improved social protection programmes in boosting domestic demand through a reduction in households'precautionary savings as well as increases in income. Particularly when targeted to low-income households that have high spending propensities, the impact of social protection spending on consumption can be significant. Other studies, however, pointed out that their primary objectives of social safety net programmes will alleviate poverty and risk protection and their effects on demand and precautionary savings will be limited. The impact of social protection policy on domestic consumption should be assessed in the context of the overall need and capacities to rebalance growth in the region.

In addition to social protection, enhancing households' ability to borrow is important for consumption. Recent studies have suggested that improving credit constraints may be an important factor for lowering saving ratios. One implication is that the development of capital markets can reduce the need for precautionary saving. Prasad (2009) argues, for example, that improved access to credit can reduce the precautionary saving in China. Expansion of access to housing related loans, which is not well widespread in developing Asia, could be another avenue to expand consumption in the region (IMF, 2010).

## The role of investment in driving growth is increasing

The large infrastructure projects planned in medium-term development strategies will need capital goods that are mainly imported. Large public investments and bright growth prospects for the region are expected to attract large inflows of capital, reinforcing the robust growth of investment. Capital inflows will exert upward pressure on regional currencies in most countries (except for Viet Nam), thereby reducing the price for imported capital goods and further fuelling investment. The resulting improvement in the terms of trade will also contribute to supporting domestic demand.

Given the infrastructure bottlenecks in most countries of the region, growth and investment are expected to be mutually reinforcing: increasing incomes will boost demand for better infrastructure and the expansion of infrastructure projects will greatly contribute to growth. Many ASEAN countries have already addressed infrastructure development challenges in their five-year development plans. In Indonesia, there are several important infrastructure projects in the pipeline, for example the construction of the Trans-Sumatra, Java, Bali, Kalimantan, Sulawesi, West Nusa Tenggara, East Nusa

Tenggara and Papua highway with a total length of 19 370 km in 2014; flood control infrastructure such as the Jakarta East Flood Canal (to be completed by 2012); and the integrated development of the River Basin Area of the Bengawan Solo (to be completed by 2013). In Malaysia, the "First Economic Stimulus Package", totaling RM 7 billion (1% of GDP) are being implemented. RM 6.5 billion has been channelled to various ministries and agencies and a total of RM 1 billion has been spent on projects, including 6 267 projects under the Penyenggaraan Infrastruktur Awam (PIA) programme and the Projek Infrastruktur Asas (PIAS) programme by the Implementation and Coordination Unit (ICU), 2 118 projects by the Ministry of Rural and Regional Development, 1 594 projects by the Ministry of Education and 1 322 projects by the Ministry of Health. In the Philippines, many road infrastructure projects are planned for the coming years. In Thailand, under the "Thai Strength Stimulus Package", several infrastructure projects are planned for 2010-12, including transport and communication, energy, education, health care, housing and water resources, totalling THB 1.43 trillion. Demand for infrastructure in the region is also being driven by demographics and rapid urbanisation (for more detailed information, see Chapters 4 and 5).



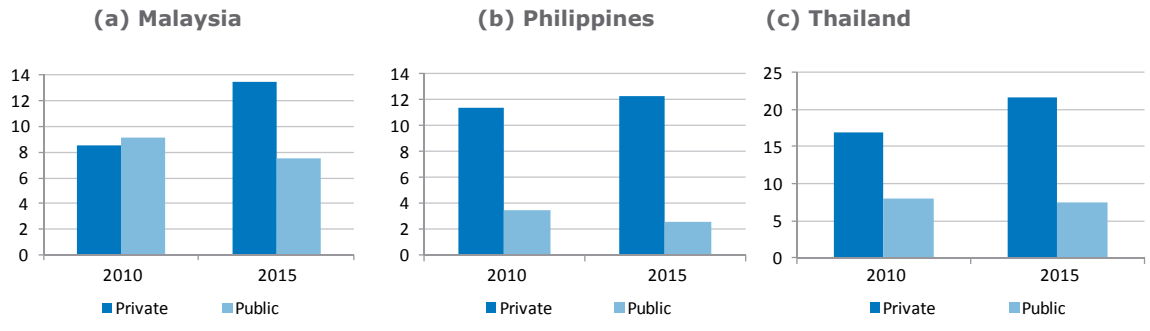
## Private investment will re-emerge alongside government infrastructure projects

Private investment, which was heavily damaged by the recent crisis, is emerging as a driver of growth in the region. Fully mobilising domestic investment will be important for post-crisis growth for Southeast Asian countries. In particular, promoting private-sector participation in infrastructure investment will be necessary to enhance productivity and relieve pressures on government budgets (see Chapter 6 for a more detailed discussion).

Improving the investment climate in the region is key to fostering private investment. Recent attempts to reduce administrative costs for investors in Indonesia and Malaysia are considered critical to improving the investment climate. Better economic prospects for the region and further integration of their economies into global supply chains will also support private investment. A reduction in capital costs due to the appreciation of domestic currencies (as most ASEAN countries import capital goods) will also help firms expand capital outlays.

The medium-term projection results suggest that, in the initial years of the recovery, private investment in Southeast Asian countries will remain relatively weak. In Malaysia, public spending will dominate domestic investment as a result of the stimulus measures adopted to mitigate the effects of the global downturn (Figure 2.16). As the recovery matures and governments begin fiscal consolidation, the relative weight of private investment is expected to increase in several ASEAN countries.

**Figure 2.16. Public and private investment of ASEAN countries**
(percentage of GDP)




*Source:* OECD Development Centre, MPF-SAEO 2010

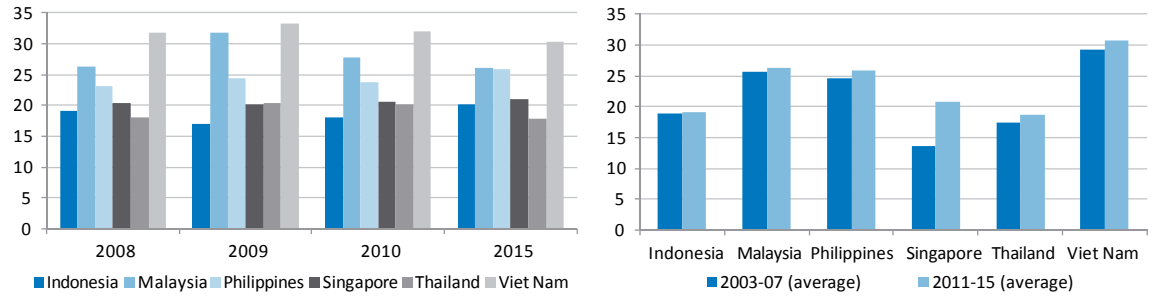
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## Moving fiscal policy back towards levels consistent with a sustainable path in the medium term will be critical

The fiscal stimulus packages along with the fall in revenues during the downturn plunged all the Southeast Asian economies into fiscal deficits that are too large to be sustainable in the longer term. The exception is Singapore, which had a strong balance sheet before the crisis. Looking forward, government spending is expected to be gradually cut back while assuring that the recovery is sustained, particularly for the first few years of the projection period. The extent of consolidation, however, will be relatively limited in most economies as they face large demand for public investment in infrastructure. Government spending is projected to grow at 20.3% on average over 2011-15, slightly down from the pre-crisis figure of 21.5%. The growth of government spending will be slower in Malaysia and the Philippines than in other countries, reflecting their more constrained budgetary situation. Viet Nam's high budget deficit of approximately 9% in 2009 similarly leaves little room for further spending growth (Figure 2.17).



**Figure 2.17. Central government expenditure of six ASEAN countries**
(percentage of GDP)




*Note:* General government for Viet Nam.

*Source:* OECD Development Centre, MPF-SAEO 2010
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While policy measures for increasing revenue (such as improving tax administration and expanding the tax base) may be constrained until the recovery is further advanced, there will be pressure for fiscal consolidation on the expenditure side in the medium term. However, care should be taken when cutting development expenditure. Such cutting could erode the future productivity of the economy. Inappropriate expenditure cuts in social welfare such as pension provision and fuel subsidies may also adversely affect the poor and vulnerable, worsening inequality and aggravating political instability, as well as decelerating private consumption. Some ASEAN economies, for instance Thailand and Indonesia, are ageing fast and are expected to see more increases in social expenditure in the future. In these economies, cutting expenditure is expected to be hard to implement.

In the medium term therefore, fiscal balances in most of the economies are projected to remain in deficit (Figure 2.18). The exception is Singapore, whose fiscal performance is still favourable and is likely to improve further thanks to profit transfers from the sovereign wealth funds such as the Government of Singapore Investment Corporation and Temasek Holdings. In Viet Nam, on the other hand, the many infrastructure projects in the pipeline will leave the government little possibility to curtail spending. In Malaysia, fuel subsidies are expected to increase as fuel consumption rises with economic growth, unless a drastic subsidy cut is implemented. At the same time, volatility of oil price movements and hence of oil revenues, which accounted for more than 40% of total revenue in 2009, represents a downside risk for public finances. In addition, food price hikes will make it extremely hard for the government to implement fiscal consolidation by cutting subsidies. In Thailand, expenditure cuts have to be implemented very carefully, in part to avoid further political turmoil that could impair the growth momentum by damaging investors' confidence.

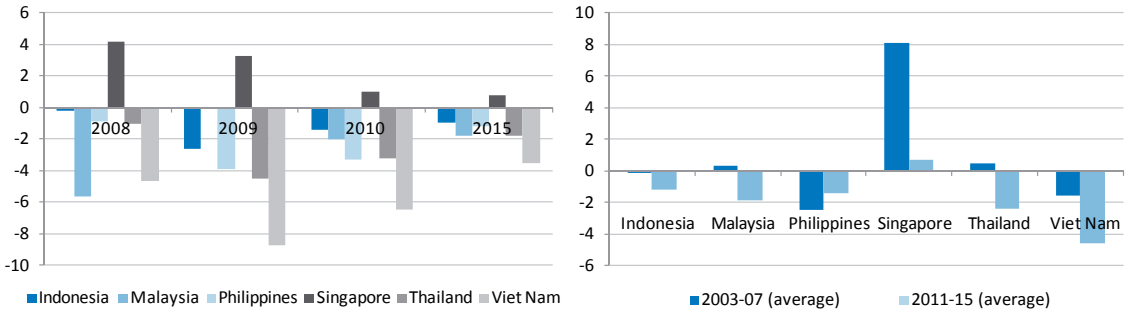
Public debt ratios to GDP are expected to increase in the next few years because of the fiscal stimuli undertaken in 2009 and 2010 and gradually decline as fiscal consolidation advances. In the medium term, many Southeast Asian countries will face a trade-off between continuing expenditure growth to meet public investment targets and cutting back spending to maintain fiscal sustainability. The reduction of public debt will be gradual in most Southeast Asian countries. In the Philippines, however, fiscal consolidation is expected to proceed more quickly than in other countries to put its public finance in order (Figure 2.19).



The levels of public debt relative to GDP in the ASEAN economies are not very high by international standards, ranging from 40% to 60% of GDP (except for Singapore), and the shares of public debt held externally are also relatively low. Nevertheless, how the governments manage public debt still affects investors' confidence and capital inflows, which are a significant driving force of growth in the region.

As primary balances will remain negative for most ASEAN economies over the projection period, they will need to strengthen fiscal management practices to ensure sustainable public finances (Figure 2.20) as further discussed in the next section.

**Figure 2.18. Fiscal balance of general government in six ASEAN countries**
(percentage of GDP)

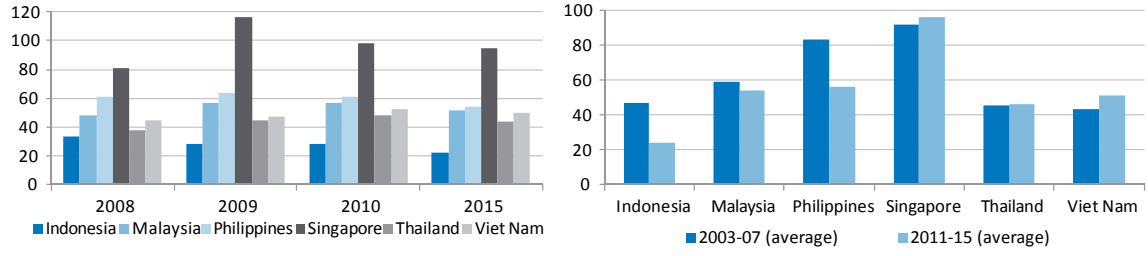



*Note:* Provisional for Singapore.

*Source:* OECD Development Centre, MPF-SAEO 2010

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**Figure 2.19. Public debt to GDP ratios of six ASEAN countries**
(percentage of GDP)

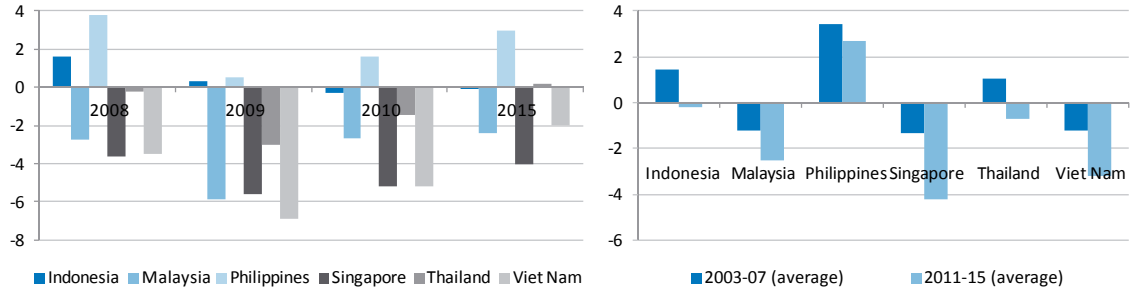



*Note:* Provisional for Singapore.

*Source:* OECD Development Centre, MPF-SAEO 2010

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**Figure 2.20. Primary fiscal balance of six ASEAN countries**
(percentage of GDP)




*Notes:*
The primary balance is the general government budget balance without interest payments.
Provisional for Singapore.

*Source:* OECD Development Centre, MPF-SAEO 2010
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# MEDIUM-TERM POLICY CHALLENGES: ACHIEVING NATIONAL DEVELOPMENT PLANS

The key question for policy makers in Southeast Asia is how to shift to a more balanced growth model. Appropriate medium-term development plans and their implementation should be a first step in the rebalancing process. In fact, most Southeast Asian countries have already included policies for rebalancing in their new medium-term development plans. Myriads of infrastructure projects are planned for the coming years and it is difficult to argue against the necessity of such projects. The large need for infrastructure in the region implies large burdens on budgets. A major issue is therefore how to accommodate these burdens while re-establishing sustainable fiscal positions. This is even more important given the reduced fiscal space owing to the large-scale stimulus packages to address the adverse impacts of the global financial crisis.

Credible medium-term fiscal frameworks would be useful tools to enhance the feasibility of national development plans, in particular large infrastructure projects. Such frameworks would be also helpful in achieving the fiscal consolidation that will be needed in the medium term and allow for more efficient use of scarce public resources.

As discussed further in the remainder of this section, strengthening of medium-term fiscal frameworks should be guided by three key issues.

- **Appropriate fiscal rules need to be the core element of the fiscal framework.**
- **Independent fiscal institutions (or fiscal councils) can oversee fiscal rules.**
- **Medium-term budgetary frameworks consistent with national development plans can strengthen fiscal rules by anchoring expectations.**

## Well-designed fiscal rules are the core part of a credible fiscal framework

The major rationale for fiscal rules is the deficit bias that prevents governments from committing to prudent policies. Even in cases where they do commit, there still remains the time inconsistency issue. The time lag between commitment and action leaves open the possibility that governments may renege. The time inconsistency issue has another dimension; governments may try to saddle their successors (who may be rivals) with large debt so that they have less fiscal space to carry out spending programmes that may not be approved by the present government. To address reneging issues, fiscal rules can be powerful tools. Rules can concern revenues, expenditures, the budget balance and debt (Table 2.2). Rules concerning expenditures and the budget balance are the most common, given that governments have more direct control over them.



### Table 2.2. Fiscal rules

| | |
|---|---|
| Budget balance rules | Can be specified as overall balance, structural or cyclically adjusted balance, and balance over the cycle; can help ensure that the debt-to-GDP ratio converges to a sustainable level. |
| Debt rules | Set an explicit limit or target for public debt as percentage of GDP. |
| Expenditure rules | Usually set permanent limits on total, primary or current spending in absolute terms, growth rates, or as percentage of GDP. |
| Revenue rules | Set ceilings or floors on revenues and are aimed at boosting revenue collection and/or preventing an excessive tax burden. |

*Source:* OECD Development Centre based on IMF (2009).

The reneging problem occurs owing to the deficit bias arising when certain interest groups succeed in getting larger marginal benefits than the cost they have to pay. These groups try to increase the types of spending they benefit from, resulting in expenditure slippages and deficit surges. No matter how well designed, expenditure or balanced budget rules alone cannot ensure debt sustainability. At present, very few countries have adopted debt rules that aim at reducing the debt stock. A possible rule to promote debt reduction is a requirement to use unexpected revenues for debt repayment.

Given the economic diversity of the region, a one-size-fits-all approach will not be applicable to ASEAN countries (Adams *et al.*, 2010). Among the Southeast Asian countries, Indonesia has a set of fiscal rules similar to the Maastricht criteria of the European Union. It has a deficit limit of 3% of GDP and a debt ceiling of 60% of GDP. Given that these figures were set for European Union countries that have lower potential growth rates, such a set of rules seems quite prudent for an emerging economy like Indonesia, which has a relatively low level of debt and high growth potential. Singapore has also adopted fiscal rules concerning the budget balance and net investment income. In any year, the government is obliged to balance the budget and can only draw upon accumulated surpluses in earlier years during their term; the government can spend no more than half of the annual net investment income from its accumulated funds. The constitution also allows for diverging from the above rules by including an escape clause (Blondal, 2006). With the approval of the president, in exceptional circumstances, past reserves can be drawn upon. Malaysia's fiscal rules relate to the budget balance and the level of public debt. These laws stipulate that foreign debt cannot exceed RM 35 billion (roughly 5% of 2009 GDP), that domestic debt can be no more than 55% of GDP, that outstanding treasury bills cannot exceed RM 10 billion at any time, and that debt can only finance development expenditure.

Several other ASEAN countries have no explicit fiscal rules as yet, but their adoption could be helpful in establishing the fiscal discipline necessary for the implementation of medium-term plans and to ensure the sustainability of public finances. The budget balance rule is essentially a guideline aiming at an operating surplus, while the debt rule is enacted in a set of laws.

## Appropriate fiscal rules can help avoid high debt levels

Fiscal rules are adopted with the purpose of keeping governments to their commitments to sustainable public finances. High levels of debt would be also detrimental to growth. Reinhart & Rogoff (2010) argue that for industrialised countries, a public debt ratio above the 90% of GDP threshold lowers the median growth rate by one percentage point. They also show that the source of financing, *i.e.* external or internal, matters for the growth effect. Moreover, the growth effect is different for emerging economies, with growth adversely affected at a lower debt ratio and by a greater amount when debt rises above the critical ratio; once the external debt to GDP ratio surpasses 60%, growth declines by 2 percentage points. In addition, high levels of debt imply higher risk premia, as investors need to be compensated for higher default risk. This increases the debt service burden and makes it more difficult to issue new debt in case of an adverse shock. High debt levels can also bring about higher inflation. According to Reinhart and Rogoff (2010), in advanced countries there is no link between inflation and public debt levels, while in emerging economies there is a strong correlation. This contrast may reflect the much more limited development of financial markets in emerging economies compared to advanced economies, which makes it difficult to finance budget deficits by borrowing from the private sector rather than through central bank credit expansion.



Moreover, higher debt entails higher debt service and more government expenditures to be devoted to paying interest on outstanding debt. Historically, countries have found that higher debt service crowds out other forms of government expenditures, especially on growth-enhancing activities. Such crowding out effects of high debt are particularly detrimental to ASEAN countries, most of which have large needs for growth-enhancing and development-related expenditure programmes. Higher debt may also imply reduced flexibility for the economy to react to sudden shocks. This is another reason for Southeast Asian economies to adopt a fiscal framework that limits debt to sustainable levels, given that most of these countries are very open economies (see Box 2.5).

Although public finances in Southeast Asia are in a relatively healthier state than in many OECD countries, the large stimulus packages necessitate consolidation once recovery is under way. An important question when implementing consolidation plans is the pace at which the deficits should be brought down. Economic theory provides some guidance with regards to the speed of fiscal adjustment. In countries where debt is comparatively high and investors are relatively risk averse, a more speedy adjustment is needed (Bi, 2009). Investor confidence plays an important role in ASEAN countries, in particular where a large part of debt is held by foreign investors. The empirical literature on fiscal consolidation suggests that although gradual adjustments appear to be more successful in bringing the budget balance back to normal following sharp rises of debt and deficits, a cold shower approach could be more effective (European Commission, 2007). Considering these arguments, the speed of adjustment for Southeast Asian countries must be assessed in the country-specific context.

### Box 2.5. How large can the public debt be and what should the debt be used for?

While it is accepted that governments must seek to maintain a sustainable debt to GDP level in the long term, there is no consensus on the maximum debt level an economy can tolerate. The intertemporal equilibrium condition for sustainability of government debt implies that higher debt requires higher present-value surpluses. But that present value is bounded; as a share of GDP, tax revenues have some maximum level and spending has some minimum level. At those levels, the natural fiscal limit is reached and the economy cannot support a value of debt higher than that limit (Bi, 2009). By pushing more debt into the future, economy is brought closer to the fiscal limit and fiscal flexibility will be more limited. This constitutes a great risk as populations are ageing worldwide, and fiscal flexibility will be needed in the future to address the issue of age-related spending needs.

Debt *per se* is not an undesirable burden as long as it is sustainable, given that it provides a tax-smoothing opportunity. Barro (1979) assert that taxes should be smoothed over time and that government debt should be the shock absorber. Similarly, Kirsanova and Wren-Lewis (2007) argue that debt is a better shock absorber than taxes, therefore debt should be used to smooth fluctuations in government income. Given that in some Southeast Asian countries the volatility of government income is particularly high owing to a reliance on oil-related and natural resource-related revenues (in Indonesia and Malaysia, in particular), debt and deficits play an important role in smoothing fluctuations in government revenue. In addition, given the high volatility of oil and other commodity prices, a framework to bring down sharply increased deficits and control public debts resulting from commodity price changes is even more important.



## Independent fiscal institutions complement fiscal rules

In contrast to monetary policy, which normally has narrowly defined targets (price stability and growth, at times supplemented by other objectives, such as reducing the risk of financial crisis), fiscal policy has more numerous objectives that can differ by country. Hence, meeting all the objectives for fiscal policy would require a complex set of rules that may be difficult to implement. To address design and implementation issues, an independent fiscal authority can be useful to provide credibility to the fiscal framework and provide flexibility, if needed, to the formal rules.

ASEAN countries are in particular need of such flexibility, given the large volatility of the tax base in some of them, which implies a need for discretion in the implementation of fiscal rules. Such discretion could be provided by an independent institution given that the government is always susceptible to deficit bias. Independent fiscal institutions are relatively new even in OECD countries, some of which are using the post-crisis period to bring public finances back on to a sustainable path by establishing such institutions. Independent fiscal institutions are often entrusted with providing macroeconomic forecasts that in some countries have to be used for budget preparation. Another typical task includes the evaluation of government policy proposals and their economic impact. Fiscal councils can be a powerful force for transparency.

Southeast Asian countries have not established independent budgetary institutions yet, although the President of Singapore performs such a role. For any government to use past reserves for spending, the approval of the President is needed and in this sense the President enforces the constitutional fiscal rules (Blondal, 2006). The President, however, does not make the decisions on this crucial point by himself, but must consult the Council of Presidential Advisers. In other Southeast Asian countries, an independent view on fiscal policy and the government' s adherence to rules would be useful as well.

## An appropriate medium-term budgetary framework is critical to achieve targets

Given the important role expectations play in the behaviour of the public, an effective framework for establishing credibility with investors and the public is needed. The government could help to achieve such credibility by anchoring policy actions in a medium-term framework that ideally would include targets at least for revenues, expenditures, deficits and debts. The framework should also incorporate responses and outcomes under different scenarios ("stress tests"). The design of such frameworks should be country-specific. For example, when the public debt to GDP ratio is initially above the government's long-term target, the framework should specify a specific path for primary budget surpluses needed to bring the debt ratio back down.

In several countries some form of medium-term expenditure framework is already in place. Malaysia, for instance, publishes budgetary targets for medium-term development plans by main revenue and spending categories. In the Philippines, medium-term frameworks became operational in 2006 (Blondal, 2010). The framework has a three-year horizon comprising the current budget year and the following two years. Indonesia is also introducing a medium-term framework. For such frameworks to be useful, it is important to update them regularly, to formulate them in a manner consistent with

the way the budget is compiled and to place the responsibility of adhering to the framework with the institutions and officials that are responsible for formulating the budget.

Well-designed fiscal rules, a fiscal council that publishes objective reports on government policies and provides recommendations, and a medium-term budgetary framework with achievable objectives can considerably improve the prospects for long-term fiscal soundness. However, formal rules and institutions alone are no absolute guarantee for fiscal discipline. It is government commitment that reinforces the power of this set of tools. If the government does not incur any social cost for breaching the fiscal rules, ignoring the reports of the fiscal council or not observing medium-term objectives, even the best set of institutions may prove ineffective.



## CONCLUSIONS

The recent global financial crisis has underscored the resilience of the Southeast Asian economies, and in particular their relatively favourable macroeconomic and financial fundamentals before the crisis and their strong international competitiveness. Owing in large part to these favourable conditions, the region's economies are projected to reach pre-crisis growth rates by 2015, while maintaining, in most cases, moderate inflation.

The crisis has also underscored the need for rebalancing growth in the region toward less dependence on exports and greater dependence on domestic demand. This need is particularly great for more open economies, notably Malaysia, Singapore and Thailand, where exports have been the key growth engine in the past. In some other countries, such as Indonesia, the rebalancing also needs to involve more effective use of trade opportunities in promoting growth.

Some countries in the region have included policies to facilitate rebalancing in their medium-term development plans. The MPF-SAEO 2010 results suggest that this rebalancing process has already begun, with private consumption and investment expected to make a greater contribution to economic growth during 2010-15 compared to the five years prior to the crisis. Investment is expected to rise relative to GDP and in relation to national savings, owing in part to strong public infrastructure spending. As a result, the large regional current account surpluses relative to GDP recorded during the first half of this decade are expected to decline over the next five years.

Sustaining rapid but more balanced growth poses major challenges for fiscal policies in the region. Fiscal deficits need to be brought down at a pace that allows the recovery to continue but which is rapid enough to ensure that public debt levels in relation to GDP remain sustainable. The challenge is all the greater given the susbstantial need for infrastructure investment in coming years to foster the region's further economic integration, to meet internal development objectives, and to sustain the international competitiveness of Southeast Asian countries.

Improvements in the fiscal frameworks used by governments in the region will be important to achieve these goals while sustaining fiscal soundness. Credible medium-term fiscal targets and specification of the means to achieve them are fundamental to such frameworks. Well-designed fiscal rules and independent fiscal institutions can further enhance the effectiveness of the frameworks by reducing the risk that unanticipated developments will prevent fiscal targets from being achieved and by encouraging governments to adhere to their commitments and to provide accurate and transparent information on their policies. Several ASEAN countries have taken steps to improve their fiscal frameworks in recent years but further efforts will be needed.

## NOTES

1. The cut-off date for data is 1 October 2010. Data between 2003 and 2009 are based on IMF and national sources.

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CHAPTER THREE

# Regional Integration: A Sectoral Approach

## ABSTRACT

ASEAN countries are currently engaged in a two-pronged effort to create a fully integrated ASEAN Economic Community while increasing the international competitiveness of their member countries. These efforts are being driven by trade agreements, both among the ASEAN countries and with partners elsewhere in Asia and beyond. ASEAN countries' linkages with global production networks have been further strengthened and transformed by China's emergence as a regional production centre.

In order to reap fully the benefits of their increasing integration and to rebalance their growth, ASEAN countries will need to reduce their excessive export dependence on a narrow range of electronic products (mostly parts and components) and move up the technological ladder in the value chain. ASEAN countries also need to develop more niche and specialty products in the nine priority goods sectors (PGS) in order to develop new growth areas.

# INTRODUCTION

The ten member states of the Association of Southeast Asian Nations (ASEAN) are strongly committed to deepening regional economic integration with a view to building an ASEAN Economic Community (AEC) by 2015. At the 16th ASEAN Summit meetings in Hanoi in April 2010, the member states reaffirmed their commitment to the goal of regional integration. At the same time, the ASEAN countries are actively engaged – individually and collectively – in negotiating, concluding and implementing free trade agreements (FTAs) and comprehensive economic partnership agreements (CEPA) with their major trading partners both within and outside Asia.

ASEAN has a two-pronged strategy for building the AEC: promoting the integration of ASEAN economies; and enhancing ASEAN's competitiveness in the global economy. This makes management of the AEC process a complex task, but ASEAN is well aware of the magnitude of the challenge it poses to the member governments, businesses and citizens. To address that challenge, ASEAN decided in 2003 to focus on accelerating regional integration in a limited number of priority sectors. At the same time, several member governments took the co-ordinator role for each of these priority sectors. The *AEC Roadmap* states that:

> "The sectoral approach allows the region to focus its limited resources on rapid and deep integration in these critical areas while [providing] ASEAN members the opportunity to observe and manage the impact of integration and to develop jointly a stronger sense of commitment to economic integration prior to a broader roll-out" (ASEAN, 2009).



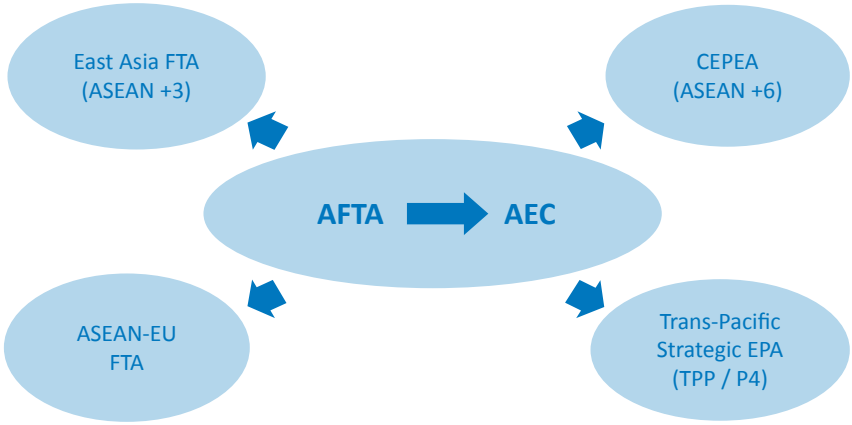
Beginning with this inaugural edition, we will present an annual review of the integration and competitiveness of the ASEAN priority sectors. Much work will be required for ASEAN countries to foster the external competitiveness of their priority sectors in a post-crisis global economy while managing the process of deeper economic integration leading up to the achievement of the AEC.

This chapter starts by discussing the dynamics of regional integration in Southeast Asia in order to understand better the challenge that AEC implementation will pose to ASEAN countries. It then goes on to look at where Southeast Asia is situated in the evolving global supply chains, based on an analysis of updated input-output and bilateral trade databases developed by the OECD Secretariat. The following section focuses on the ASEAN priority integration sectors. Such a sectoral focus will add value to the existing regional initiatives for monitoring AEC implementation. The chapter concludes by discussing the region's strategic response to the policy challenges that have emerged following the global financial crisis.

# DYNAMICS OF REGIONAL INTEGRATION IN SOUTHEAST ASIA

The regional integration landscape in Southeast Asia is characterised by two powerful forces. The centripetal force originates from the various integration initiatives adopted within the framework of the ASEAN Economic Community Blueprint for 2008-15. The centrifugal force stems from ASEAN countries' pursuit of closer integration with the global economy through bilateral and plurilateral trade agreements with major partner countries in Asia and beyond. This duality reflects the priority given to accelerating ASEAN's integration and community building while ensuring the centrality of ASEAN as the driving force in emerging regional co-operation frameworks with the rest of the world.

**Figure 3.1. Regional integration landscape in Southeast Asia: ASEAN with strategic partners**




*Notes*:
- East Asia FTA (ASEAN + 3) is proposed/under consultation.
- Comprehensive Economic Partnership for East Asia (CEPEA) is proposed /under consultation.
- ASEAN-EU FTA is under negotiation.
- TPP/P4 is the Trans-Pacific Strategic Economic Partnership Agreement between Brunei Darussalam, Chile, New Zealand and Singapore (P4) signed in 2005.

*Source:* the OECD Development Centre.

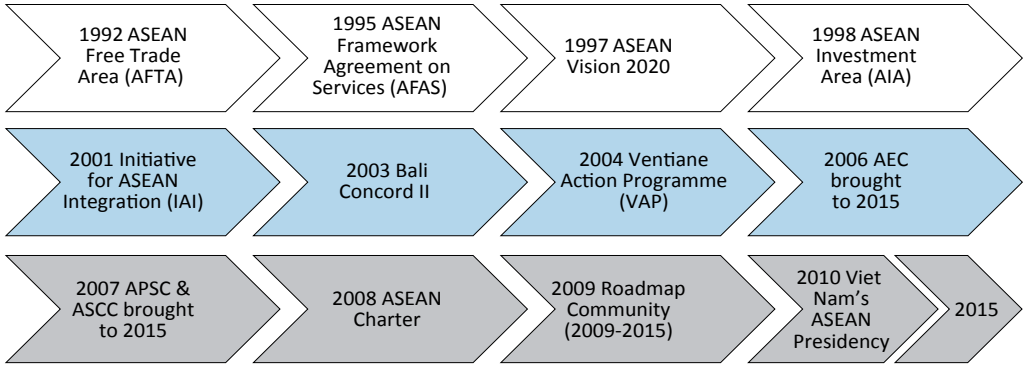


## ASEAN is moving from a free trade area toward a unified economic bloc

The centre of the dynamics of ASEAN regional integration, as illustrated in Figure 3.1, is the progressive transformation of ASEAN from a free trade area today to a single market and production base, the ASEAN Economic Community (AEC), by 2015.[1] The vision of the AEC is to "… create a highly competitive single market that promotes equitable economic development for member states, as well as facilitating their integration with the global economy" (ASEAN, 2010). To achieve this goal, ASEAN adopted in November 2007 the AEC Blueprint that outlines a strategic schedule for the concrete actions to be taken for implementation. Two observations concerning the Blueprint are worth noting.

First, the AEC is an extension of major integration initiatives ASEAN has already undertaken since the early 1990s, including the ASEAN Free Trade Area (AFTA), the ASEAN Framework Agreement on Services (AFAS) and the ASEAN Investment Area (AIA). These initiatives constitute key "building blocks" of the AEC (Hew, 2007). The original initiatives are supplemented by relevant adjustments and extensions, along with those of the 2001 Initiative for ASEAN Integration (IAI), which addresses the development divide between newer and older member countries.[2] The ratification of the ASEAN Charter and the adoption of the integrated Roadmap for an ASEAN Community (2009-15) have added further impetus to the building of the AEC (Figure 3.2).

**Figure 3.2. Key milestones of ASEAN integration**




*Source:* ASEAN Secretariat.

Second, the AEC is a single market and production base characterised by the free flow of five core elements: *i)* goods; *ii)* services; *iii)* investment; *iv)* financial capital; and *v)* skilled labour (ASEAN, 2009).[3] Although there are debates among economists as to what a "single market" means for ASEAN,[4] the AEC Blueprint stipulates the ultimate coverage of all measures that a member country is required to adopt in order to remove discrimination against another member country in goods, services and factor markets. These measures fall into three types of policy actions, namely *i)* elimination of border measures applying to imports into one member country from another member country; *ii)* full national treatment by behind-the-border measures applying to imports into one member country from another member country; and *iii)* harmonisation of domestic regulations across member countries by way of mutual recognition. To implement all the required actions within the agreed timeframe, appropriate modalities need to be put in place (*e.g.* liberalisation of services through the "ASEAN minus X" formula).[5] It is also necessary (even imperative) to provide less advanced ASEAN countries with effective and time-bound programmes of technical co-operation and capacity building for implementing the AEC Blueprint.

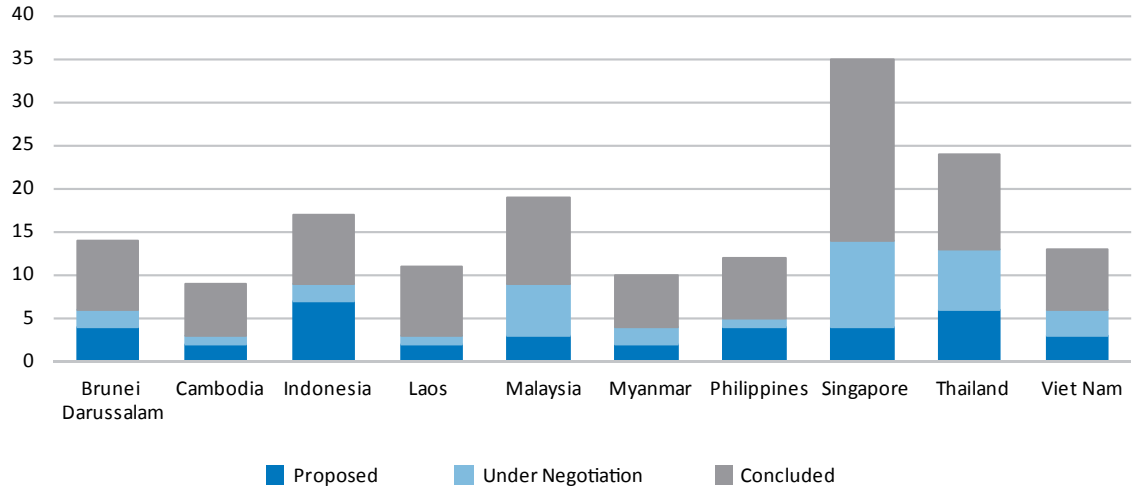


ASEAN has recognised the very great challenges that achieving the AEC will impose on the member states. Accordingly, the Blueprint allows the members to focus initial resources on the integration of a limited number of priority sectors which can serve as a catalyst for integration. Issues related to these ASEAN priority sectors will be discussed in detail in the section on integration and competitiveness of these priority sectors.

## Ties with ASEAN's strategic trading partners are also being strengthened

As stated in the Bali Concord II, the AEC will be distinguished from most other regional groupings by its outward orientation. Indeed, the member states have been actively involved in FTA/CEPA with an increasing number of countries in Asia and beyond. As of July 2010, the total number of FTA/CEPA involving ASEAN countries amounted to 164, of which 92 were either signed or in effect, 35 were under negotiation and 37 were proposed or under consultation and study. Singapore is leading the way in signing free trade agreements, followed by Thailand and Malaysia (Figure 3.3). As a consequence, ASEAN countries have developed extensive trade and investment networks with their dialogue and other strategic partners. Taking the average of 2006-08, the share of ASEAN's trade (exports and imports) with China, Japan, the EU and the US was almost evenly divided at 11-12% each, while intra-regional trade was roughly a quarter of total ASEAN trade (Figure 3.4).

**Figure 3.3. Improved market access through FTAs**
(number of agreements as of July 2010)

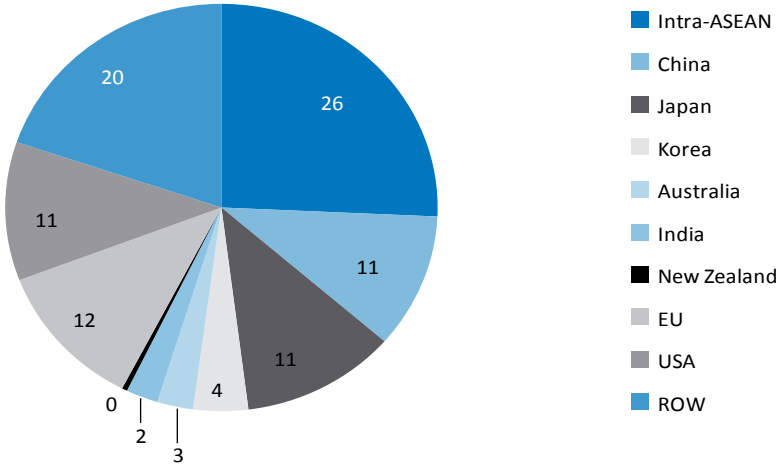



*Source*: Asian Development Bank, Asia Regional Integration Center.

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**Figure 3.4. ASEAN's trade with selected partner countries**
(2006-08 average, % share of total)

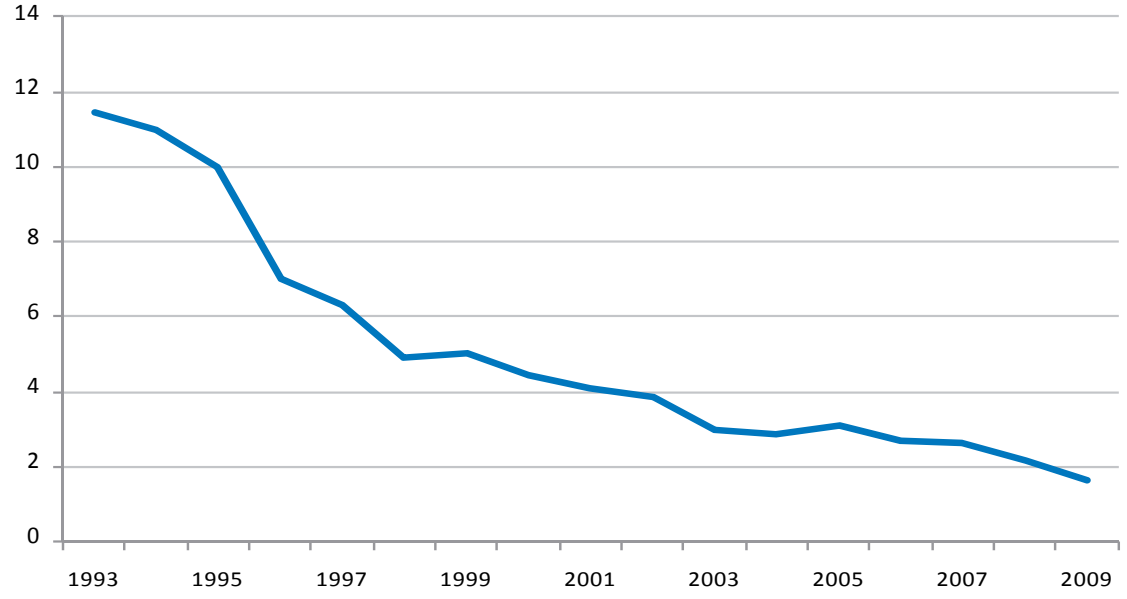



*Source*: ASEAN Secretariat.

A recent study, based on Computable General Equilibrium (CGE) model simulations, concludes that the AEC is likely to increase ASEAN real income by 5.3% or USD 69 billion relative to the baseline scenario – more than six times the estimated effect of completing the AFTA – even under conservative assumptions.[6] Putting various simulation results together, it becomes clear that if it is achieved, the AEC will likely generate significant gains in industrial efficiency and scale economies and transform the ten individual ASEAN economies into an integrated economic powerhouse of 580 million people. Considerably larger gains would be generated should the AEC be extended to include ASEAN's strategic partners in the form of an ASEAN +3 or an ASEAN +6 or through FTAs with the EU and the US.[7]

Given the complexities of the AEC coverage, its multi-speed integration and ASEAN's closer ties with its strategic trading partners, the monitoring of ASEAN integration is a huge and complex task (see Box 3.1). To illustrate this point, we look at the AFTA process. As depicted in Figure 3.5, ASEAN countries have made great strides in reducing tariff barriers among themselves. In January 1992 the member states approved the Common Effective Preferential Tariff (CEPT) aimed at creating an ASEAN Free Trade Area (AFTA) within 15 years. The CEPT scheme requires member states to reduce their tariff rates applied to intra-ASEAN trade to between 0% and 5%. In December 1998, ASEAN agreed to accelerate the establishment of AFTA by five years for six member states (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand). These ASEAN-6 states complied with the CEPT scheme starting in 2003. As regards the new members of ASEAN, Cambodia, Laos, Myanmar and Viet Nam (CLMV), Viet Nam achieved the tariff reduction targets under the CEPT scheme in 2006, Laos and Myanmar in 2008 and Cambodia in 2010. Furthermore, from January 2010, all tariffs in the CEPT Inclusion Lists of the ASEAN-6 (which represents 99% of total tariff lines) have been eliminated for intra-ASEAN trade (ASEAN, 2010). Elimination of import duties on the Inclusion List is also planned for CLMV by 2015, although compliance can be delayed until 2018 for certain "sensitive" products.

**Figure 3.5. Average CEPT rates for ASEAN**

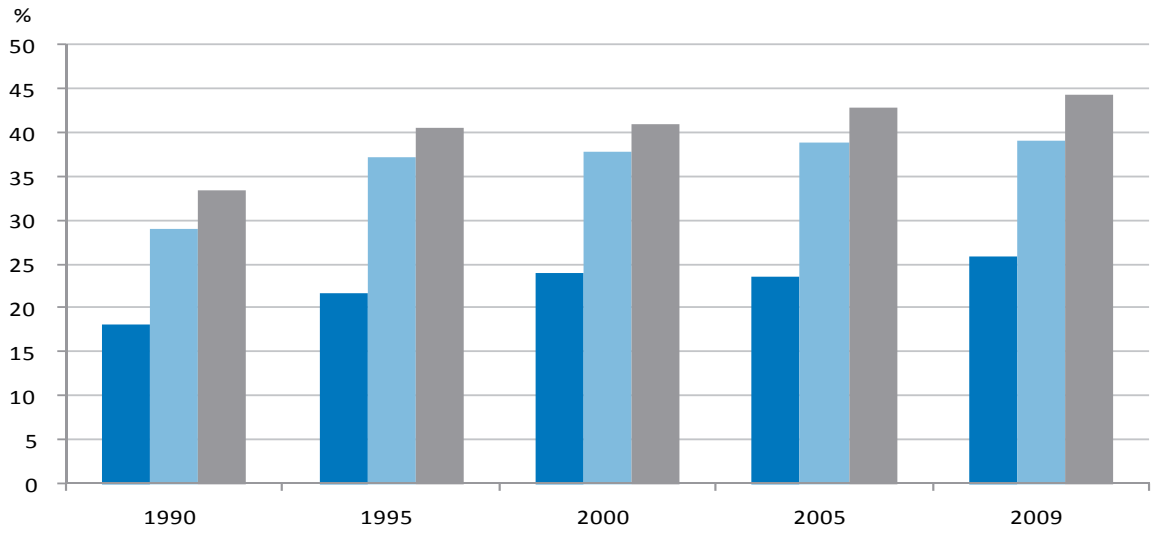



*Source:* ASEAN Secretariat.

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Despite the tariff reductions, there has been little change in the share of intra-regional trade relative to total merchandise trade for the ASEAN 10 countries as a group (Figure 3.6). This share rose from 18% in 1990 to 23% in 1995, but afterwards it remained almost unchanged until 2005. Then the share inched up to 26% in 2009. Even if we look at the ASEAN+3 or the ASEAN+6 as a group and recalculate the intra- versus inter-regional trade shares for the same years, we observe a similar trend, though the size of intra-regional trade becomes larger for ASEAN+3 (39% in 2009) and ASEAN+6 (44% in 2009) relative to that of ASEAN alone.[8]

**Figure 3.6. Share of intra-regional trade as percentage of total trade**




*Source:* IMF, Direction of Trade Statistics.

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**Box 3.1. Regional initiatives to monitor ASEAN integration**

The ASEAN Secretariat has put in place the *ASEAN Community Progress Monitoring System (APMS)*. The 2007 Report (ASEAN, 2008) identified 47 country indicators, of which 21 apply to the AEC category. Many of these indicators are designed to monitor *i)* the progressive elimination of tariffs and non-tariff measures applying to imports from ASEAN member countries and from the rest of the world; and *ii)* ASEAN's trade and investment performance. Others are more broadly concerned with ASEAN's growth and industrial performance (*e.g.* GDP, GDP per capita, sectoral value added, wages and interest rates) using 2003 as the base year.

Earlier in 2010, the ASEAN Secretariat published the first edition of the *AEC Scorecard*, covering the first two-year period from January 2008 to December 2009 (ASEAN, 2010). The scorecard mechanism has been crafted to monitor the implementation of measures listed in the AEC Blueprint agreed in 2007. According to this report, 91 out of 124 AEC legal instruments had entered into force by December 2009, representing 73% of all AEC-related legal instruments.

Two websites, *Asia Regional Integration Centre* and *UNESCAP Trade and Investment Division* Home Page,[9] are also useful to monitor the AEC and more broadly the regional integration landscape in the Asia-Pacific region.

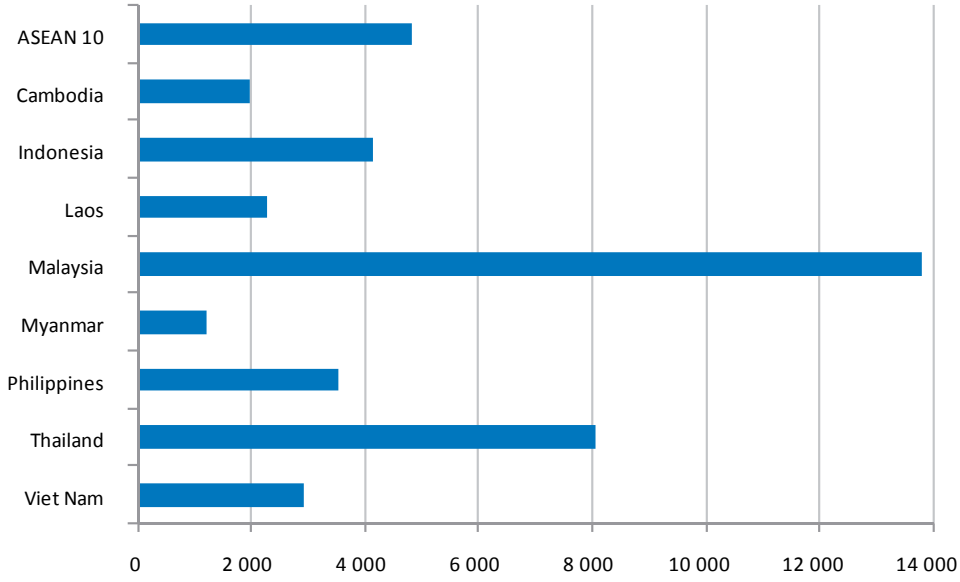
The relative stability of intra-regional trade shares over the past decade or so may well be construed as an indication of AESAN's overall trade growth based on outward (rather than inward) orientation. What then will happen to intra-regional trade shares of ASEAN in the run-up to 2015 – the year of realisation of the AEC? With the two different forces – centripetal and centrifugal – currently at play in the region, the intra-regional trade share of ASEAN 10 in 2015 may well stay at a level not so different from the current one.

This example reveals that merely monitoring intra- versus inter-regional trade shares would not tell us much about the regional integration landscape in Southeast Asia. Indeed the relative stability of intra-ASEAN trade shares masks a significant structural transformation taking place in the region's production and distribution networks. A critical question to address is therefore how these powerful forces will help transform Southeast Asia in terms of the greater competitiveness and better development outcomes envisaged in the Bali Concord II statement. In this respect there are two important issues that deserve special attention; one concerns the large income gaps within ASEAN member states; and the other concerns ASEAN's growing economic relations with China.

## The development divide needs to be addressed

In monitoring ASEAN integration, the development divide that persists in the region is important. The income gap between the member states is very wide: even if the two highest income countries (Brunei Darussalam and Singapore) are excluded, the next highest country per capita income is more than ten times that of the lowest per capita income country (Figure 3.7). The large development gaps explain why the Bali Concord II makes a specific reference to "turning the diversity that characterises the region into opportunities for business complementation making the ASEAN a more dynamic and stronger segment of the global supply chain" (ASEAN Secretariat, 2004). Through the two principal initiatives, the AEC and the IAI, ASEAN policy makers are seeking to promote regional sourcing, enhance private sector involvement and achieve the greater integration of CLMV countries. Despite these efforts, FDI flows into the CLMV countries remain limited in relative terms.[10]

**Figure 3.7. GDP per capita in 2009**
(USD valued at purchasing power parity)



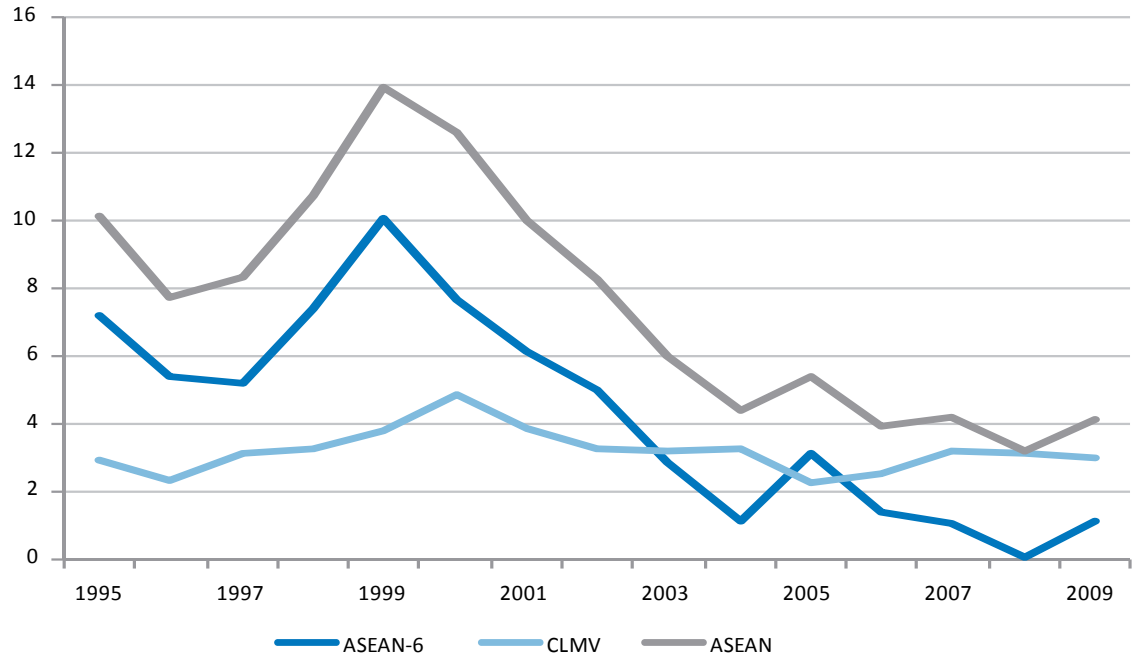

*Note*: Brunei Darussalam (USD 47 930) and Singapore (USD 50 180) are not included here.

*Source*: *IMF World Economic Outlook*, October 2010.

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Public money will therefore continue to play a critical role as a source of development finance in these countries. Measured as a percentage of total aid to all developing countries, net aid disbursement to ASEAN countries reached a peak in 1999 when large assistance to the crisis-hit ASEAN countries was provided after the Asian crisis of 1997-98. Subsequently, however, aid allocations to ASEAN countries declined steadily, as aid to ASEAN-6 fell sharply and that to CLMV stayed at 3-4% of total aid to all developing countries (Figure 3.8). Therefore, enhancing aid effectiveness is a key strategic issue for the CLMV countries in implementing the AEC Blueprint. An important challenge is to deepen ownership on the part of aid recipients in the region by promoting demand-driven approaches and engaging more actively in national consultations with private sector and other non-governmental actors on development matters.[11]

**Figure 3.8. Net aid disbursement to ASEAN**
(percentage of disbursements to all developing countries)





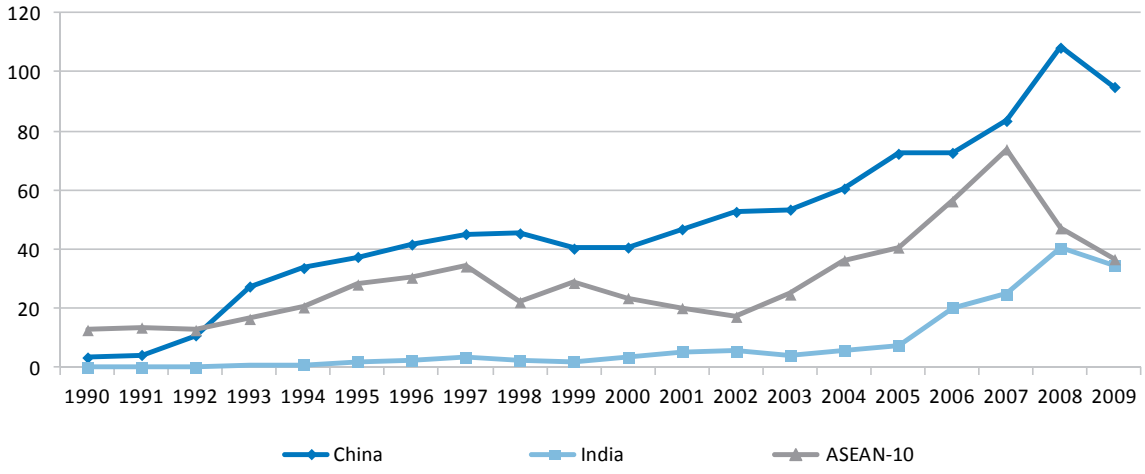

*Source*: OECD International Development Statistics online.

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## ASEAN's foreign direct investment performance has lagged that of China

ASEAN's economic ties with China have become increasingly strong and interconnected. Yet ASEAN and China are also competitors for foreign direct investment (FDI) in similar industry groups. Building the AEC is seen as a way to strengthen the ASEAN countries' competitive position in the global economy, thereby attracting FDI into the region. ASEAN's FDI performance is, however, lagging behind China's, while India's is catching up (Figure 3.9). In 2009 the value of FDI inflows to all ASEAN countries amounted to USD 37 billion, compared with USD 95 billion to China and USD 35 billion to India. More than 80% of FDI flows into ASEAN came from outside the region. Preliminary data for 2009 indicate a sharp fall in FDI inflows to Asia. For ASEAN as a group, the preliminary 2009 figure dropped by nearly 23%, though some countries (*e.g.* the Philippines and Singapore) were doing better than others. Inflows of FDI also fell 12.3% for China.

**Figure 3.9. FDI inflows to ASEAN, China and India**
(USD billion)




*Source*: UNCTAD.

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The dynamic growth of FDI flows into export-oriented manufacturing industries has been identified as a major force behind market-driven (*i.e. de facto*) economic integration among ASEAN and other Asian economies since the late 1980s.[12] The expansion of FDI flows into Asia has taken a sequential pattern over the past two decades or so. Flows to the Asian newly-industrialising economies (NIES-Chinese Taipei; Hong Kong, China; Korea; and Singapore) expanded rapidly in the second half of the 1980s, followed by rapid growth of flows to the four middle-income ASEAN countries (Indonesia, Malaysia, the Philippines and Thailand) and to China from the early 1990s onward and more recently by accelerating inflows to Viet Nam and India.

The expanded FDI flows into Asian economies reflect the increased importance of transnational corporations (TNCs) as critical agents connecting national economies, particularly those in Asia, in global supply chains. The rise of China, and to a lesser extent India, has also added competitive pressures for older ASEAN countries to move up the technological ladder in value chains. These and other issues concerning ASEAN's role in the global supply chains are examined in the next section using several globalisation indicators developed by the OECD based on the updated input-output and bilateral trade databases.

## THE ROLE OF SOUTHEAST ASIAN ECONOMIES IN GLOBAL SUPPLY CHAINS

Asian developing countries are key participants in global supply chains in which different stages of the production process occur in different countries and which give rise to extensive trade in intermediate goods and services.[13] Seen from Asia, global supply chains have undergone significant transformations since the mid-1990s.

One important transformation is revealed in Table 3.1, which shows major changes in the export shares of the leading industries of the Asia-Pacific region between 1995 and 2006. These changes stand in sharp contrast with the sectoral shares of world merchandise exports, which remained largely stable during the period at the two-digit level of the International Standard Industry Classification (ISIC).[14]

**Table 3.1. Leading export sectors in the Asia-Pacific region**
(1995 and 2006, percentage of total exports)

| Economy | ISIC Rev.3 | Sector | 1995 | 2006 |
|---|---|---|---|---|
| **Australia** | 10-14 | Mining and quarrying | 28 | 43 |
| | 15-16 | Food products, beverages and tobacco | 15 | 12 |
| | 27 | Basic metals | 22 | 18 |
| **China** | 17-19 | Textiles, textile products, leather and footwear | 34 | 17 |
| | 30 | Office, accounting and computing machinery | 4 | 15 |
| | 32 | Radio, television and communication equipment | 9 | 19 |
| | 36-37 | Manufacturing n.e.c.; recycling | 12 | 9 |
| **India** | 17-19 | Textiles, textile products, leather and footwear | 35 | 21 |
| | 23 | Coke, refined petroleum products and nuclear fuel | 2 | 9 |
| | 24 | Chemicals and chemical products | 7 | 12 |
| | 36-37 | Manufacturing n.e.c.; recycling | 20 | 15 |
| **Indonesia** | 10-14 | Mining and quarrying | 26 | 27 |
| | 15-16 | Food products, beverages and tobacco | 7 | 7 |
| | 17-19 | Textiles, textile products, leather and footwear | 18 | 10 |
| | 20 | Wood and products of wood and cork | 13 | 3 |
| **Japan** | 24 | Chemicals and chemical products | 9 | 10 |
| | 29 | Machinery and equipment, n.e.c. | 16 | 16 |
| | 32 | Radio, television and communication equipment | 19 | 15 |
| | 34 | Motor vehicles, trailers and semi-trailers | 17 | 19 |
| **Korea** | 17-19 | Textiles, textile products, leather and footwear | 16 | 3 |
| | 24 | Chemicals and chemical products | 9 | 10 |
| | 32 | Radio, television and communication equipment | 27 | 31 |
| | 34 | Motor vehicles, trailers and semi-trailers | 6 | 10 |
| **Malaysia** | 10-14 | Mining and quarrying | 5 | 8 |
| | 30 | Office, accounting and computing machinery | 12 | 19 |
| | 32 | Radio, television and communication equipment | 38 | 36 |
| **New Zealand** | 01-05 | Agriculture, hunting, forestry and fishing | 15 | 12 |
| | 10-14 | Mining and quarrying | 2 | 3 |
| | 15-16 | Food products, beverages and tobacco | 38 | 44 |
| **Philippines** | 15-16 | Food products, beverages and tobacco | 10 | 3 |
| | 17-19 | Textiles, textile products, leather and footwear | 15 | 5 |
| | 30 | Office, accounting and computing machinery | 10 | 15 |
| | 32 | Radio, television and communication equipment | 30 | 49 |
| **Singapore** | 23 | Coke, refined petroleum products and nuclear fuel | 11 | 19 |
| | 24 | Chemicals and chemical products | 6 | 17 |
| | 30 | Office, accounting and computing machinery | 32 | 15 |
| | 32 | Radio, television and communication equipment | 26 | 26 |
| **Chinese Taipei** | 17-19 | Textiles, textile products, leather and footwear | 13 | 4 |
| | 24 | Chemicals and chemical products | 9 | 11 |
| | 30 | Office, accounting and computing machinery | 16 | 8 |
| | 32 | Radio, television and communication equipment | 15 | 37 |

| | | | | |
|---|---|---|---|---|
| **Thailand** | 15-16 | Food products, beverages and tobacco | 17 | 9 |
| | 17-19 | Textiles, textile products, leather and footwear | 12 | 6 |
| | 30 | Office, accounting and computing machinery | 16 | 14 |
| | 32 | Radio, television and communication equipment | 14 | 17 |
| | | | | |
| **Viet Nam** | 01-05 | Agriculture, hunting, forestry and fishing | 19 | 7 |
| | 10-14 | Mining and quarrying | 21 | 23 |
| | 15-16 | Food products, beverages and tobacco | 17 | 10 |
| | 17-19 | Textiles, textile products, leather and footwear | 32 | 31 |
| | | | | |
| **World** | 01-05 | Agriculture, hunting, forestry and fishing | 4 | 2 |
| | 10-14 | Mining and quarrying | 6 | 11 |
| | 15-16 | Food products, beverages and tobacco | 6 | 5 |
| | 17-19 | Textiles, textile products, leather and footwear | 8 | 6 |
| | 23-26 | Chemical, rubber, plastics, fuel and other non-mineral | 16 | 18 |
| | 27-28 | Basic metals and fabricated metal products | 6 | 6 |
| | 29 | Machinery and equipment, n.e.c. | 9 | 8 |
| | 30 | Office, accounting and computing machinery | 5 | 5 |
| | 31 | Electrical machinery | 4 | 4 |
| | 32 | Radio, television and communication equipment | 8 | 10 |
| | 33 | Medical, precision and optical instruments | 3 | 3 |
| | 34-35 | Transport equipment | 12 | 11 |
| | 20-22, 36-37 | Other manufacturing | 7 | 6 |



*Note:* Export shares were calculated from import-based bilateral trade statistics.

*Source:* OECD *Bilateral Trade Database*, March 2010.

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Looking more closely at the composition of the leading export sectors, the concentration in manufacturing exports is higher than the world average for most of the Asian developing economies in major components of the machinery and equipment category, notably office, accounting and computing machinery in China, Malaysia, the Philippines and Thailand; and radio, television and communication equipment in China, Korea, Malaysia, the Philippines, Singapore, Chinese Taipei and Thailand. The share is also higher than the world average for motor vehicles in Japan and Korea. The export specialisation pattern for Indonesia and Viet Nam is different from that of the other six ASEAN countries listed in the table. On the other hand, many Asian countries (except for Viet Nam) have significantly reduced their export shares in labour-intensive products, such as textiles, leather and footwear.

## China has become a dominant supplier in export markets

The second key transformation in global supply chains is the rise of China as a dominant supplier to both regional and global markets. This is illustrated in Table 3.2, which counts the number of partner countries in which an individual supplier country accounts for more than 15% of total merchandise imports. For instance, the number of partner countries in which China's exports exceed 15% of the partner's total imports in office, accounting and computing machinery jumped from 1 in 1995 to 11 in 2006 within the Asia-Pacific region and to 34 globally. Although using a different threshold would alter the total number of partner countries listed in Table 3.2,[15] the broad picture arising from this simple exercise remains intact; China has come to the fore as Asia's dominant supplier in key manufacturing industries for both the Asia-Pacific region and the rest of the world.

**Table 3.2. Dominant suppliers and sectors in the Asia-Pacific region**
(number of partners in which the country listed accounts for more than 15% of total goods imports)

| | | | 1995 | | 2006 | |
|---|---|---|---|---|---|---|
| **Country** | **ISIC Rev.3** | **Sector** | **Asia-Pacific** | **TOTAL** | **Asia-Pacific** | **TOTAL** |
| China | 17-19 | Textiles, leather and footwear products | 7 | 11 | 12 | 35 |
| | 30 | Office, accounting & computing machinery | 1 | 1 | 11 | 34 |
| | 32 | Radio, television & communication equipment | 1 | 1 | 8 | 26 |
| | 36-37 | Manufacturing n.e.c.; recycling | 3 | 8 | 9 | 34 |
| Japan | 29 | Machinery & equipment, n.e.c. | 9 | 10 | 9 | 10 |
| | 30 | Office, accounting & computing machinery | 8 | 11 | 1 | 1 |
| | 33 | Radio, television & communication equipment | 10 | 13 | 3 | 4 |
| | 34 | Motor vehicles, trailers & semi-trailers | 11 | 16 | 11 | 18 |
| Korea | 17-19 | Textiles, leather and footwear products | 2 | 2 | 1 | 1 |
| | 32 | Radio, television & communication equipment | 1 | 2 | 2 | 5 |
| United States | 01-05 | Agriculture, hunting, forestry and fishing | 10 | 17 | 8 | 13 |
| | 24 | Chemicals | 9 | 15 | 4 | 10 |
| | 29 | Machinery & equipment, n.e.c. | 6 | 14 | 7 | 13 |
| | 33 | Medical, precision & optical instruments | 11 | 28 | 11 | 32 |
| | 35 | Other transport equipment | 9 | 29 | 9 | 32 |

*Note:* The maximum number of partner countries is 12 for the Asia-Pacific and 46 for total.

*Source*: OECD *Bilateral Trade Database*, March 2010.

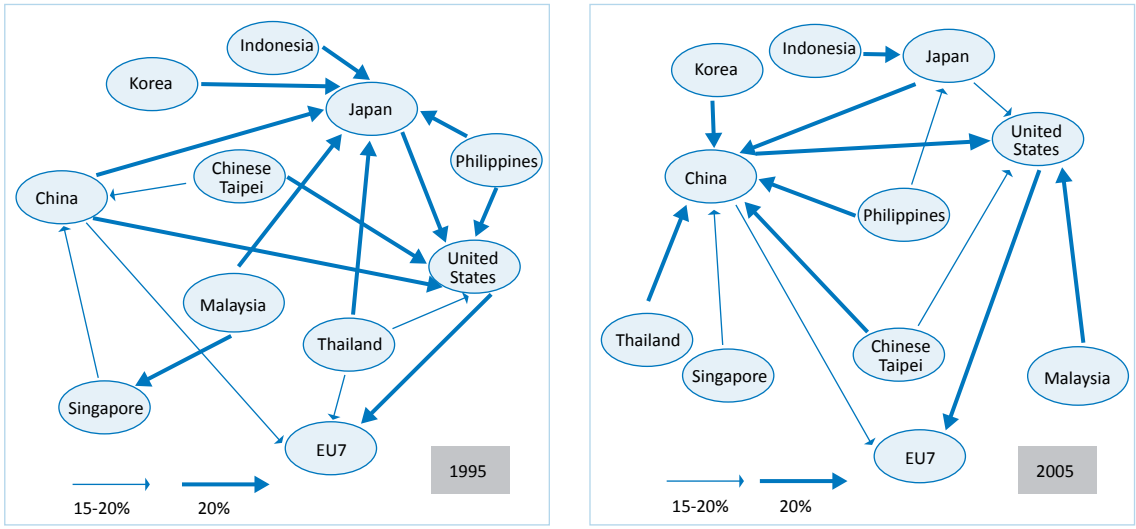
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The rapidly evolving global supply chains can be further highlighted by counting the "dominant links" of trade flows in intermediate goods and services. If a country's intermediate exports (in both goods and services) to a particular partner country exceed a given threshold percentage of that country's total intermediate exports (15% or 20% in our exercise), we consider such a trade node as a dominant link.

Examining the bilateral intermediate trade data for 46 countries across the world, China, Japan, the United States and some European countries (such as Germany and France) are clearly identified as the world's leading destination centres for intermediate goods and services. In general, larger industrialised economies are expected to be identified as dominant trade partners for smaller ones in their respective regions, as differentiation and specialisation take place around these larger economies.

Figure 3.10 illustrates major supply chains from the Asian perspective. The key development is the emergence of China as the focal point for the trade nodes of the Asian region. It is clear from this illustration that the emergence of China has significantly transformed the pattern of global production networks over the past decade. Behind this transformation is the increased export share of machinery and equipment, which requires a wide variety of goods and services as intermediate inputs.[16]

**Figure 3.10. Major trade partners for Asia's intermediate exports in goods and services**




*Notes*: EU7 is Belgium, Germany, France, Italy, the Netherlands, Spain and United Kingdom. Each arrow indicates that the partner's share of a country's total intermediate exports is equal to or greater than 15% (or 20%).

*Source*: OECD *Input-Output Database*, March 2010; IDE-JETRO *Asian International Input-Output Database* 2006; OECD *Bilateral Trade Database*, March 2010; OECD *Trade in Services*, January 2010.

In order to cast more light on the relative importance of global production networks for Asia as opposed to North America and Europe, we calculated the inter- and intra-regional shares of world trade in intermediate goods and services between 1995 and 2005. Table 3.3 presents the results of this analysis. During the decade concerned, the share of intra-Asian (including both ASEAN and East Asia) trade in intermediate goods and services increased, while the shares of intra-regional flows within North America and Europe fell. This reflects a growing importance of Asia's supply chains in the world economy as captured by intermediate trade in goods and services. In 2005, the amount of intra-Asian intermediate trade is estimated at about 15% of world intermediate trade, compared with 7.5% in North America and 28.4% in Europe. However, intra-ASEAN trade in intermediate goods and services stayed almost unchanged at 1.2%.

**Table 3.3. Inter- and intra-regional intermediate trade in goods and services, 1995 and 2005**
(percentage shares of total world intermediate trade, exports and imports)

| Origin | | Destination | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Asia-Pacific | | | | NAFTA | Europe | RoW |
| | | ASEAN | East Asia | Other Asia Pacific | Total | | | |
| ASEAN | 1995 | 1.1 | 1.9 | 0.2 | 3.2 | 0.8 | 0.8 | 0.1 |
| | 2005 | 1.2 | 2.6 | 0.3 | 4.1 | 0.9 | 0.7 | 0.2 |
| East ASIA | 1995 | 2.6 | 4.5 | 0.4 | 7.5 | 3.6 | 2.5 | 0.4 |
| | 2005 | 2.1 | 6.8 | 0.4 | 9.3 | 4.4 | 2.9 | 0.5 |
| Other Asia Pacific | 1995 | 0.4 | 1.0 | 0.2 | 1.6 | 0.2 | 0.4 | 0.1 |
| | 2005 | 0.3 | 1.2 | 0.1 | 1.6 | 0.3 | 0.4 | 0.1 |
| Total Asia | 1995 | 4.0 | 7.5 | 0.7 | 12.2 | 4.7 | 3.7 | 0.5 |
| | 2005 | 3.6 | 10.5 | 0.9 | 15.1 | 5.6 | 4.1 | 0.8 |
| NAFTA | 1995 | 1.0 | 4.2 | 0.4 | 5.7 | 9.1 | 4.9 | 1.0 |
| | 2005 | 0.7 | 2.7 | 0.3 | 3.7 | 7.5 | 3.6 | 0.5 |
| Europe | 1995 | 1.2 | 2.5 | 0.6 | 4.3 | 3.6 | 30.0 | 1.9 |
| | 2005 | 1.0 | 2.5 | 0.5 | 4.0 | 3.7 | 28.4 | 1.7 |
| RoW | 1995 | 0.8 | 3.7 | 0.5 | 4.9 | 2.4 | 9.7 | 1.4 |
| | 2005 | 0.9 | 5.3 | 0.8 | 6.9 | 4.3 | 8.8 | 1.4 |

*Notes:* Intermediate bilateral trade flows are estimated using the framework of a multi-regional input-output model. ASEAN refers to Indonesia, Malaysia, the Philippines, Singapore and Thailand; East Asia includes China, Chinese Taipei, Japan and Korea; Other Asia-Pacific includes Australia, India and New Zealand; NAFTA comprises Canada, Mexico and United States; and Europe includes 22 EU countries plus Norway and Switzerland.

*Source*: OECD *Input-Output Database* March 2010; IDE-JETRO *Asian International Input-Output Database* 2006; OECD *Bilateral Trade Database* March 2010; OECD *Trade in Services* January 2010.

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## Fragmentation of production has transformed Asian trade

The above measures of international dependence on imported intermediate goods and services indicate that significant structural changes are underway in Asia's supply chains. Fragmentation and its impact on global supply chains are further examined by calculating the widely used Hummels-Ishii-Yi indicator of vertical specialisation, which measures the total amount of imported inputs used in the production of a good that is subsequently exported (Hummels *et al*., 2001). This indicator captures an important aspect of a country's involvement in global supply chains.

Table 3.4 reports the measurement results of this indicator with respect to 12 selected Asia-Pacific economies for all products, for higher and lower technology-intensive manufactured products and for services. The imported contents' (vertical specialisation) share of the total exports increased between 1995 and 2005 in most of these economies (except for Australia and New Zealand). A significant increase was observed in Chinese Taipei, Malaysia, the Philippines and Thailand and to a lesser extent in China, Japan and Korea.

Looking at the manufacturing sector, the values show that the higher technology-intensive products contained the highest import content of exports in most countries (except for Japan, Korea and Singapore). On the other hand, the imported input shares of exports for the services sectors are smaller than for the manufacturing sectors in all countries, and substantially so in some countries. This may reflect differences in the extent of trade liberalisation in goods versus services and across economies.

In short, the 1995-2005 period witnessed a major shift in Asia's leading export sectors from labour-intensive products to machinery and equipment. This shift boosted intra-Asian trade in intermediate goods and services, because of the greater import content of final export products in these sectors. But the relative share of ASEAN-5 countries in world intermediate trade in goods and services remained small, accounting for an estimated 6% in 2005 compared with 17% for four East Asian economies (China, Chinese Taipei, Japan and Korea). During this period, the ASEAN-5 increased their share of intermediate exports to the latter group of economies, but not *vice versa*. For the ASEAN-5, *intra-regional* intermediate trade remained almost unchanged in relative terms.

The above input-output analysis of the Asian trade network reveals the emerging role of ASEAN economies as suppliers of parts and components to Asia's manufacturing industries, notably machinery and equipment, as well as the limitations of that role. In view of ASEAN integration, it is important to stress that the emergence of China as the focal point for the production of Asian manufactured exports has significantly transformed the way ASEAN economies are engaged in global supply chains. ASEAN's trade ties with China are likely to become even stronger owing to the latter's continued high growth and the entry into force of the ASEAN-China Comprehensive Economic Co-operation Agreement earlier in 2010.



**Table 3.4. Imported input share of exports by industry group, 1995 and 2005**

| | Total | | Manufacturing | | | | Services | |
|---|---|---|---|---|---|---|---|---|
| | | | Higher technology | | Lower technology | | | |
| | 1995 | 2005 | 1995 | 2005 | 1995 | 2005 | 1995 | 2005 |
| Australia | 14 | 14 | 28 | 25 | 16 | 20 | 10 | 11 |
| China | 16 | 25 | 22 | 34 | 15 | 20 | 10 | 14 |
| India | 10 | 13 | 16 | 21 | 12 | 18 | 8 | 6 |
| Indonesia | 15 | 18 | 40 | 36 | 20 | 21 | 9 | 13 |
| Japan | 8 | 15 | 9 | 16 | 12 | 22 | 4 | 7 |
| Korea | 30 | 39 | 32 | 41 | 34 | 42 | 19 | 23 |
| Malaysia | 39 | 52 | 49 | 65 | 40 | 45 | 13 | 31 |
| New Zealand | 18 | 18 | 27 | 26 | 20 | 19 | 15 | 14 |
| Philippines | 32 | 42 | 56 | 60 | 45 | 35 | 17 | 16 |
| Singapore | 56 | 59 | 69 | 71 | 68 | 78 | 24 | 30 |
| Chinese Taipei | 35 | 48 | 45 | 55 | 34 | 53 | 14 | 19 |
| Thailand | 33 | 50 | 57 | 67 | 29 | 47 | 13 | 22 |

*Notes:* Higher technology-intensive manufacturing group is defined as ISIC Rev.3 24, 29-35; lower technology-intensive manufacturing group is defined as ISIC Rev.3 15-23, 25-28, 36-37; services sector is ISIC Rev.3 50-95.

*Source*: OECD *Input-Output Database*, March 2010; IDE-JETRO *Asian International Input-Output Database*, 2005; OECD *Bilateral Trade Database*, March 2010; OECD *Trade in Services*, January 2010.

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# INTEGRATION AND COMPETITIVENESS OF ASEAN PRIORITY SECTORS

This section discusses the integration and competitiveness of ASEAN priority integration sectors (PIS). This sectoral focus allows us to monitor the development of ASEAN's key strategic sectors from both national and regional points of view.[17] Here we look at the nine priority goods sectors in six ASEAN countries (Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam).

## Key priority sectors have been designated to drive the integration process

An important vehicle for advancing the AEC Blueprint is to accelerate regional integration in a number of priority sectors (Box 3.2). The *ASEAN Framework Agreement for the Integration of Priority Sectors* and its *Sectoral Integration Protocols*, signed in November 2004, specified 11 priority sectors. A 12th sector, logistics, was added in 2006, and two other sectors were added subsequently. The PIS now comprise nine priority goods sectors (PGS) and five priority services sectors (PSS), with two sectors (information and communication technologies [ICT] and health care) containing both goods and services components.

All priority sectors, except for logistics, had their own roadmaps adopted in 2004 and amended in 2006. The comprehensive roadmap for logistics was separately signed in August 2007 to cover freight logistics (air, maritime, rail and road) and related activities (trade and customs facilitation, capacity building of ASEAN logistics service providers and multi-modal transport infrastructure and investment).[18] These roadmaps have included both horizontal and sector-specific measures necessary to realise the "progressive, expeditious and systematic integration of these sectors in ASEAN".[19] The question of implementation will be discussed later in this section.



**Box 3.2. ASEAN Priority Integration Sectors (PIS)**

**A. Nine Priority Goods Sectors (PGS)**

(1) Agro-based products
(2) Automotives
(3) ICT equipment (e-ASEAN)
(4) Electronics
(5) Fisheries
(6) Health care products
(7) Rubber-based products
(8) Textiles and apparel
(9) Wood-based products.

**B. Five Priority Services Sectors (PSS)**

(1) ICT services (e-ASEAN)
(2) Health care services
(3) Air travel
(4) Tourism
(5) Logistics.

*Source*: ASEAN Secretariat.

The nine PGS, whose product definition is specified in Annex I, comprise 117 products defined at the three-digit level of the Standard International Trade Classification (SITC Rev 3).[20] The total annual export and import value of the nine sectors in the six ASEAN countries averaged USD 464 billion and USD 318 billion, respectively, during the period 2006-08 (Table 3.5). These sectors, taken together, accounted for 55% and 42% of total merchandise exports and imports, respectively. As a matter of comparison, Table 3.5 also shows the relative export and import shares of the nine PGS for China and India. They are found to be at least as important to China as to ASEAN and much less important to India. In the trade balance, the nine PGS are strategically important to both ASEAN and China in terms of foreign exchange revenues.[21]

## The importance of the PGS differs among ASEAN countries

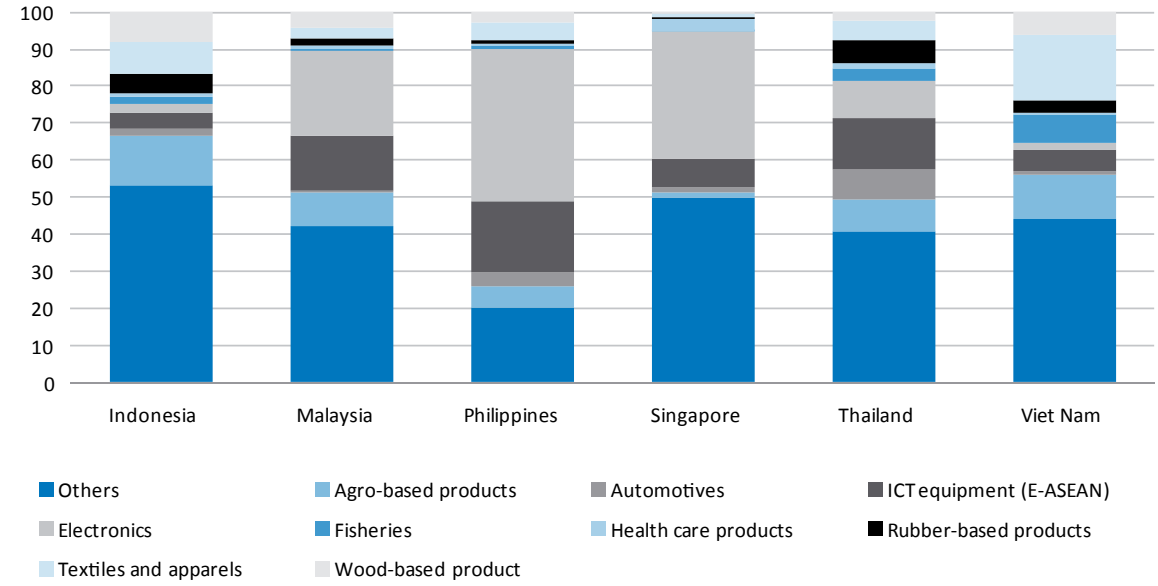
Further analysis of the nine PGS sheds light on the degree to which ASEAN economies are competing with China and India in the global market. Comparison of the export structures of ASEAN and other East Asian economies shows that most of the keenest export competition involves a cluster of economies with similar per capita incomes.[22] In East Asia, five ASEAN economies (Indonesia, Malaysia, the Philippines, Thailand and Viet Nam) display a high degree of export similarity with China.[23] As shown in Table 3.5, trade in the nine PGS is dominated by two sectors, electronics and ICT equipment, in both ASEAN and China; these two sectors taken together accounted for nearly a third of total merchandise exports in both cases.[24] Looking more closely, ASEAN countries tend to specialise in exports of parts and components to global supply chains for electronic products, while China's export specialisation lies in the downstream segments as assemblers of final products, including ICT equipment. This observation is also consistent with the input-output analysis of Asian trade networks presented in the previous section.



India's export specialisation among the nine PGS is quite different from that of ASEAN and China. In India, automotive products are predominant in the country's net exports. The export shares of ICT equipment and electronics are much smaller in India than in ASEAN and China. Empirical evidence also suggests that, contrary to the case of China, the export specialisation similarities between ASEAN countries and India are at best modest.[25]

The above overall picture, however, masks some important differences across countries in Southeast Asia. Figure 3.11 compares the export shares of six ASEAN countries by sector. The nine PGS are most important for the Philippine economy, because of its high specialisation in electronics and ICT equipment. In contrast, the aggregated export share of the nine PGS is only 47% in Indonesia, because of the country's high concentration in exports of fuel and other primary commodities (see Table 3.1). Even within the nine PGS, the export structures of ASEAN countries are very diverse; such resource-intensive sectors as agro-based products and fisheries, wood-based products and rubber-based products are important for national development in Indonesia, Malaysia, Thailand and Viet Nam. Other key industries are textiles and apparel, especially for Viet Nam, as is the case of China and India.

**Figure 3.11. Merchandise export shares of six ASEAN countries**
(percentage, 2006-08 average)




*Note:* Except for Viet Nam in which export shares refers to 2006-07 average.

*Source*: OECD Development Centre calculation based on the UN Comtrade database.



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**Table 3.5. Trade in nine Priority Goods Sectors: ASEAN, China and India**
(USD million and percentage; 2006-08 annual average[a])

| | ASEAN[b] | | | | | |
|---|---|---|---|---|---|---|
| | | Exports | | Imports | | Trade |
| | Nine Priority Goods Sectors[c] | Value | Share | Value | Share | Balance |
| 1. | Agro-based products | 57 575 | 6.8 | 35 745 | 4.7 | 21 829 |
| 2. | Automotives | 22 451 | 2.7 | 19 597 | 2.5 | 2 854 |
| 3. | ICT equipment (E-ASEAN) | 86 781 | 10.3 | 41 855 | 5.4 | 44 926 |
| 4. | Electronics | 184 648 | 21.8 | 165 145 | 21.5 | 19 503 |
| 5. | Fisheries | 13 051 | 1.5 | 3 644 | 0.5 | 9 407 |
| 6. | Health care products | 15 527 | 1.8 | 15 885 | 2.1 | -358 |
| 7. | Rubber-based products | 22 364 | 2.6 | 6 086 | 0.8 | 16 278 |
| 8. | Textiles and apparel | 35 741 | 4.2 | 18 450 | 2.4 | 17 291 |
| 9. | Wood-based product | 26 254 | 3.1 | 12 196 | 1.6 | 14 058 |
| | Total of 9 PGS | 464 392 | 54.9 | 318 605 | 41.5 | 145 788 |
| | Total | 845 506 | 100 | 768 535 | 100 | 76 971 |

| | China | | | | | |
|---|---|---|---|---|---|---|
| | | Exports | | Imports | | Trade |
| | Nine Priority Goods Sectors[c] | Value | Share | Value | Share | Balance |
| 1. | Agro-based products | 25 091 | 2.1 | 33 987 | 3.5 | -8 896 |
| 2. | Automotives | 37 899 | 3.1 | 21 951 | 2.3 | 15 947 |
| 3. | ICT equipment (E-ASEAN) | 208 341 | 17.3 | 66 713 | 6.9 | 141 628 |
| 4. | Electronics | 174 840 | 14.5 | 191 876 | 20 | -17 036 |
| 5. | Fisheries | 9 423 | 0.8 | 3 438 | 0.4 | 5 984 |
| 6. | Health care products | 15 776 | 1.3 | 12 483 | 1.3 | 3 293 |
| 7. | Rubber-based products | 9 380 | 0.8 | 9 937 | 1 | -557 |
| 8. | Textiles and apparel | 168 967 | 14 | 26 023 | 2.7 | 142 945 |
| 9. | Wood-based product | 42 359 | 3.5 | 22 144 | 2.3 | 20 215 |
| | Total of 9 PGS | 692 075 | 57.4 | 388 552 | 40.5 | 303 524 |
| | Total | 1 206 563 | 100 | 960 046 | 100 | 246 517 |
| | **India** | | | | | |
| | | Exports | | Imports | | Trade |
| | Nine Priority Goods Sectors[c] | Value | Share | Value | Share | Balance |
| 1. | Agro-based products | 8 183 | 2.3 | 22 174 | 5.7 | -13 991 |
| 2. | Automotives | 59 094 | 16.9 | 6 365 | 1.6 | 52 730 |
| 3. | ICT equipment (E-ASEAN) | 17 306 | 5 | 17 031 | 4.4 | 275 |
| 4. | Electronics | 27 379 | 7.8 | 23 255 | 6 | 4 124 |
| 5. | Fisheries | 1 683 | 0.5 | 4 694 | 1.2 | -3 011 |
| 6. | Health care products | 8 973 | 2.6 | 9 249 | 2.4 | -276 |
| 7. | Rubber-based products | 4 697 | 1.3 | 2 517 | 0.7 | 2 179 |
| 8. | Textiles and apparel | 16 780 | 4.8 | 13 126 | 3.4 | 3 654 |
| 9. | Wood-based product | 2 416 | 0.7 | 9 209 | 2.4 | -6 793 |
| | Total of 9 PGS | 146 512 | 41.9 | 107 620 | 27.8 | 38 892 |
| | Total | 349 504 | 100 | 386 464 | 100 | -36 960 |

*Notes: a)* Except for Viet Nam in which trade data refer to 2006-07;

*b)* ASEAN figures refer to Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam;

*c)* See Annex I for product definitions.

*Source:* OECD Development Centre calculation based on the UN Comtrade database.

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## Intra-industry trade helps reveal the integration and competitiveness of the nine priority goods sectors

The importance of intra-industry trade (IIT) provides insight into the current state of the nine PGS in ASEAN in terms of their regional integration and global competitiveness.

The phenomenon of intra-industry trade (IIT) is conventionally seen as the two-way trade in manufactured products between similar countries in terms of income levels and relative factor endowment. Evidence, however, suggests the prevalence of IIT in the North-South context (Box 3.3). A study by the OECD Development Centre (2010, Chapter 3) also argues that there are expanding opportunities for South-South trade. One source of such trade expansion stems from an increasing number of regional trade arrangements within the South that often leads to greater trade creation than diversion. For example, South-South trade liberalisation can make intermediate inputs cheaper and thereby stimulate South-South trade and eventually South-to-North exports. As discussed in the previous section, trade fragmentation is also beneficial to South-South trade, some of which takes the form of IIT (Box 3.4).

### Box 3.3. What causes intra-industry trade?

The bulk of trade in manufactured goods among OECD countries takes the form of intra-industry trade (IIT), that is, mutual exchanges of goods within the same product category. A classical example of IIT is trade of passenger cars of a similar class and price range between countries having similar per capita incomes and relative factor endowments (*e.g.* France and Germany). In fact, the phenomenon of IIT is very common in horizontal trade in similar products with differentiated varieties. Another example of IIT is two-way trade in vertically differentiated products distinguished by quality and price (*e.g.* Italy's exports of up-market clothing and imports of down-market varieties). The European experience in the 1980s and 1990s suggests that the share of IIT by quality increased rapidly during the period of completing the Single Market to become the most important type of intra-European trade (see Fontagné and Freudenberg, 2002). Two-way trade of this type is also important at a later stage of the product cycle in the North-South context, as developing countries tend to specialise in exports of the lower end of products (*e.g.* small-screen TV sets and plain cotton fabrics), while developed countries tend to supply the upper end of differentiated products (*e.g.* large-screen TV sets and coloured synthetic fabrics).

A third type of IIT which is also considered important in the context of globalisation of economic activities involves fragmentation of a vertically integrated supply chain into various segments that are carried out in different countries. This type of IIT is often seen within the framework of transnational corporations; vertical specialisation of production across countries may be driven by comparative advantage, for instance, to use abundant unskilled labour for assembly operations based on imported parts and components supplied from different countries. In fact, trade in intermediate goods (parts and components) has become one of the defining characteristics of international trade during the last two decades of the 20th century. As discussed in the previous section, the phenomenon of international fragmentation has increased trade in intermediate goods worldwide and especially in East Asia. A recent study shows that world trade in parts and components rose from 18.9% in 1992-93 to 22.3% in 2005-06 and that most of this growth originated from East Asia and was highly concentrated in electronics (see Athukorala and Menon, 2010). In other words, increasingly fragmented supply chains are at the heart of the rapid growth of East Asia's electronics sector.

The economic ascendancy of East Asia since the late 1980s provides important lessons as well.[26] The liberalisation of trade and investment regimes, undertaken by many economies in the region, has improved the policy environment, favouring the expansion of both trade and FDI flows. Conversely, strong trade and FDI performance has encouraged governments to sustain their trade and investment policy reform processes, thereby integrating their national economies more closely with the global economy. Arguably, East Asia's electronics sector has benefited most from the positive effect of such a trade-FDI nexus, which has led to *de facto* (or market-led) economic integration in the region.

**Box 3.4. Fragmentation and intra-industry trade**

A basic characteristic of the fragmentation process lies in the distinction between production blocks and service links. A typical case of international fragmentation occurs when production is separated into two or more production blocks that are located in different countries (to take advantage of different factor prices between countries). The blocks must be economically linked by certain types of services that involve communication, transportation and other co-ordination costs. In other words, total production costs can be decomposed into the production cost *per se* that is subject to constant returns to scale and the service link cost that is treated as a fixed cost over a range of output, thereby introducing increasing returns. As production volumes expand, an initial vertically integrated supply chain may be replaced by an increasingly fragmented one, depending upon whether the total costs with fragmentation become lower than those without fragmentation.[27]

International fragmentation of vertical integrated supply chains is likely to increase intra-industry trade relative to total trade if various segments in the supply chains are classified in the same industrial category. Two major forces have greatly stimulated the process of international fragmentation, resulting in a higher degree of intra-industry trade. The first is liberalisation and deregulation of trade and investment regimes both nationally and regionally. The second is a significant reduction in communication and transportation costs. The spatial dispersion of production across countries usually entails costs of communication, logistics and co-ordination as well as other trade costs, due to restrictive trade and investment policies and practices. However, advances in telecommunication and transportation technologies and reductions in trade and investment barriers substantially reduce the cost of service links and thus stimulate fragmentation of production processes across national borders.[28]



To provide further insight, the next set of exhibits present two widely used indicators of trade integration and global competitiveness. The first is the Grubel-Lloyd (GL) index of intra-industry trade, which measures the degree to which the trade of an individual country in a given product comprises both exports and imports (Grubel and Lloyd, 1975). The level of such two-way trade is regarded as an indicator of a country's economic integration with the global economy.[29] The GL index is 100 if all trade in the category is intra-industry; a value of zero indicates all trade is in one direction (only exports or only imports) so that there is no intra-industry trade.[30] The second index is the Balassa index of "Revealed Comparative Advantage" (RCA) of a particular country in a given sector (Balassa, 1965). This index is equal to the ratio of the sector's share of the exports of the country to the sector's share of total world exports. A value greater than one in the RCA indicates that the country's exports are more specialised in that product than is the world as a whole, which implies that the country has a relative comparative advantage in that sector.

The GL measures of IIT are presented in Figure 3.12. Panel A compares the overall level of IIT in the nine PGS of six of the ASEAN and other selected Asian economies. As a matter of comparison, the United States and EU (25) are also added to this panel. Furthermore, Panels B and C present the sectoral level of IIT with respect to the top four PGS (in terms of export value): electronics and ICT equipment (E-ASEAN) for Panel B and agro-based products and textiles and apparel for Panel C.

On average, the six ASEAN countries are integrated with the global economy as closely as other Asia-Pacific countries, though IIT in some countries is much higher than in others. Singapore's IIT was highest at 70 in the panel; the city state is the hub of Southeast Asia as an *entrepôt* economy, and much of its trade comprises re-exports.[31] Overall the average IIT index of the six ASEAN economies (46) was 8 points below that of the EU 25 (54) in 2006-08.

Overall IIT masks large differences across sectors, however. For instance, Malaysia, the Philippines, Singapore and Thailand are highly integrated with global supply chains in electronics, but the situation seems quite diverse among them in the case of ICT equipment (E-ASEAN), as seen in Panel B. This difference between electronics and ICT equipment reflects the industrial characteristic of these economies as suppliers of parts and components to global supply chains in electronic products. Turning to Panel C, much of trade in agro-food is of the inter-industry type for the ASEAN countries (except for Singapore). A similar trend can also be observed for textiles and apparel, which is rather surprising, given the involvement of transnational manufacturing and distribution activities and the

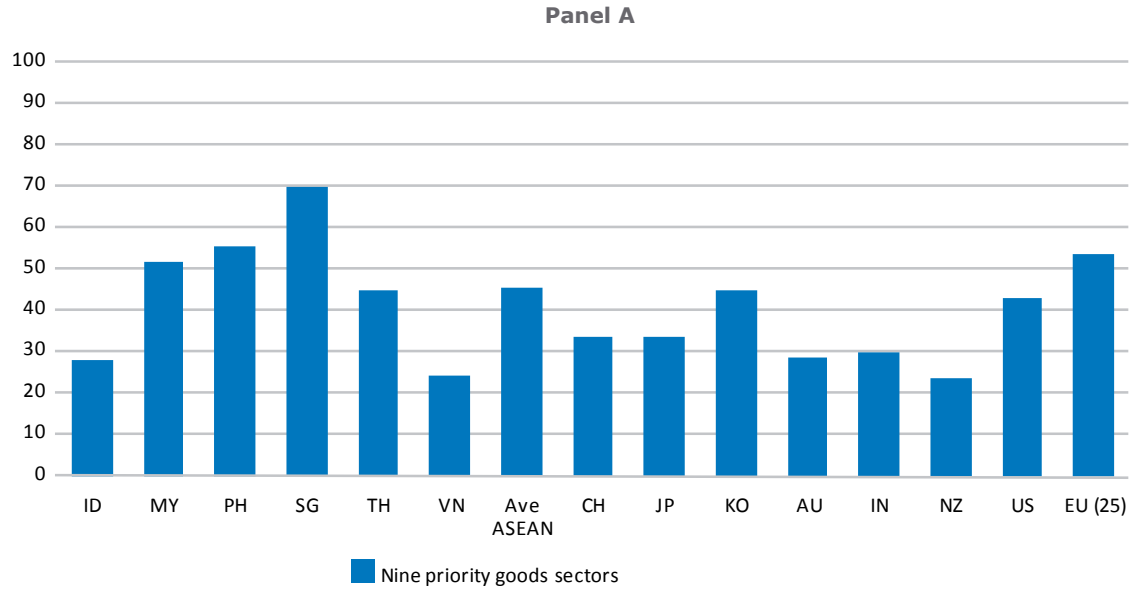
fragmentation of production processes from fibres to yarn and fabrics to apparel and other textile products. A low level of intra-industry trade in textiles and apparel may reflect the greater trade barriers facing their producers.

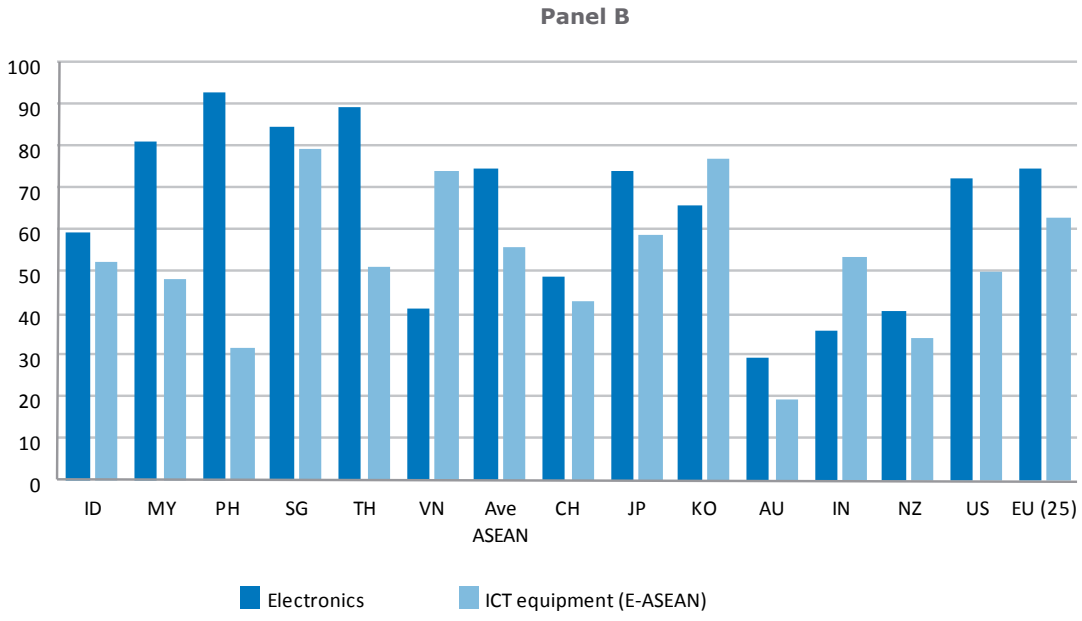
Table 3.6 divides the results of the IIT and RCA measurement for six ASEAN countries into two sector groups. One comprises four PGS whose average IIT is equal to or higher than 50 in 2006-08: electronics, ICT equipment, automotives and health care products. The other group includes the five PGS whose average IIT is lower than 50 in the same period; compared to the first group, these sectors are relatively resource-intensive. At first glance, the pattern of IIT and RCA is very different across sectors in the first group of PGS (Panel A). Some observations are worth noting:

- In electronics, IIT was already as high as 80 on average in 1994-96 and four ASEAN countries (Malaysia, the Philippines, Thailand and Singapore) recorded RCA higher than 1. The Philippines and Singapore are the two most prominent cases in which RCA increased strongly between 1994-96 and 2006-08.
- All six ASEAN countries showed RCA higher than 1 for ICT equipment in 2006-08. At the same time, average IIT tends to rise between 1994-96 and 2006-08 except for the Philippines and Thailand. For these two countries, RCA increased strongly, reflecting the dynamic export growth of office machines and automated data processing machines during the period concerned.
- In automotives, the pattern of RCA is very different from that of electronics and ICT equipment. Four ASEAN countries (Indonesia, Malaysia, Singapore and Viet Nam) had RCA smaller than 1 in 2006-08. Only in Thailand did both IIT and RCA tend to rise between 1994-96 and 2006-08. In the case of the Philippines, a high RCA (2.6) in 2006-08 reflects the strong export performance of automotive parts and accessories.
- Health care products constitute a key strategic sector for older ASEAN member states, as they provide new areas of specialisation and differentiation from traditional exports. The case in point is perfume and cosmetic products for Thailand and medical and pharmaceutical products for Singapore.

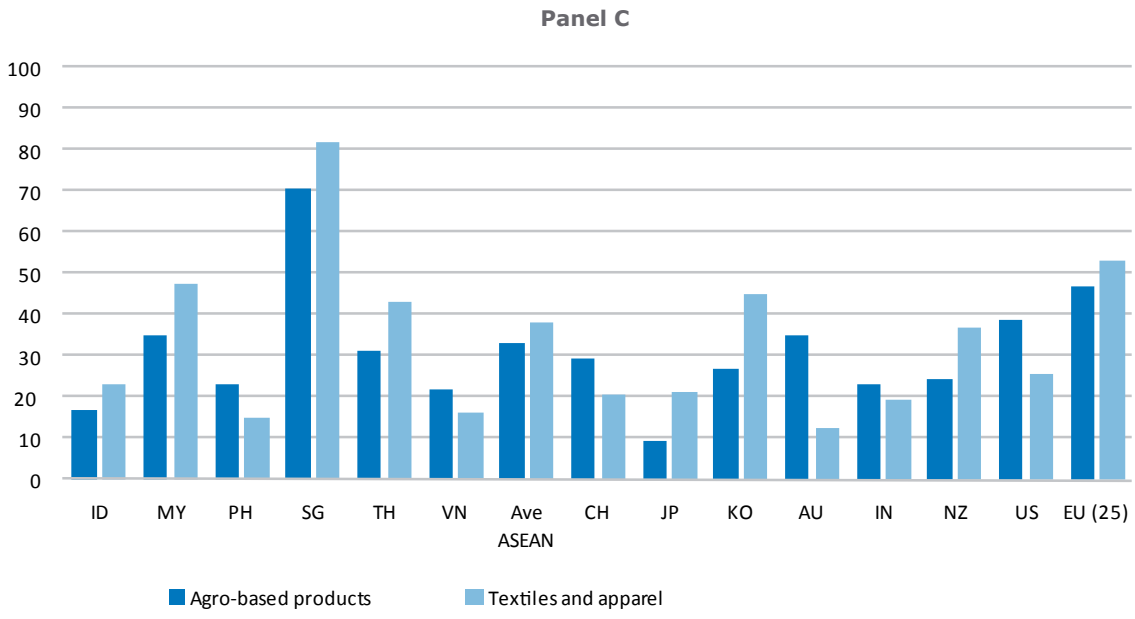


**Figure 3.12. Intra-industry trade index, 2006-08 average[a]**








*Note: a)* Except for Viet Nam for which the IIT index refers to the 2006-07 average.

*Source:* OECD Development Centre calculation based on the UN Comtrade database.

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## Table 3.6. Integration and competitiveness of ASEAN priority sectors

**Panel A: Higher IIT sectors: average GL equal to or greater than 50**

| | Intra-Industry Trade (IIT) | | | Revealed Comparative Advantage (RCA) | | |
|---|---|---|---|---|---|---|
| **Sector/Country** | **1994-96** | **1999-2001** | **2006-08** | **1994-96** | **1999-2001** | **2006-08** |
| **Electronics** | | | | | | |
| Philippines | 82.7 | 80.4 | 92.9 | 3.6 | 8.5 | 14.6 |
| Thailand | 82.8 | 74.2 | 89.6 | 1.7 | 2.6 | 2.3 |
| Singapore | 91.2 | 93.9 | 84.7 | 3.7 | 4.2 | 9.2 |
| Malaysia | 88.1 | 76.5 | 81.4 | 4.0 | 4.0 | 5.3 |
| Indonesia | 57.6 | 24.3 | 59.6 | 0.3 | 0.6 | 0.5 |
| Viet Nam | n.a. | 32.1 | 41.1 | n.a. | 1.1 | 0.4 |
| Simple average | 80.5 | 63.6 | 74.9 | | | |
| **ICT equipment (E-ASEAN)** | | | | | | |
| Singapore | 60.7 | 63.0 | 79.2 | 4.9 | 3.8 | 2.2 |
| Viet Nam | n.a. | 54.3 | 74.3 | n.a. | 0.9 | 2.0 |
| Indonesia | 30.4 | 32.1 | 52.4 | 2.2 | 1.5 | 1.7 |
| Thailand | 54.1 | 67.6 | 51.0 | 2.1 | 1.6 | 4.4 |
| Malaysia | 35.1 | 43.2 | 48.3 | 6.2 | 3.7 | 5.3 |
| Philippines | 62.4 | 37.2 | 31.5 | 2.5 | 3.1 | 8.3 |
| Simple average | 48.5 | 49.6 | 56.1 | | | |
| **Automotives** | | | | | | |
| Indonesia | 21.4 | 47.7 | 73.6 | 1.0 | 0.5 | 0.6 |
| Singapore | 58.2 | 54.5 | 73.4 | 0.4 | 0.3 | 0.5 |
| Viet Nam | n.a. | 17.6 | 54.8 | n.a. | 1.5 | 0.9 |
| Malaysia | 28.3 | 35.8 | 48.2 | 0.3 | 0.2 | 0.5 |
| Thailand | 25.4 | 36.8 | 45.1 | 1.0 | 1.4 | 2.9 |
| Philippines | 28.6 | 39.7 | 27.6 | 0.5 | 0.6 | 2.6 |
| Simple average | 32.4 | 38.7 | 53.8 | | | |
| **Health care products** | | | | | | |
| Singapore | 88.1 | 79.6 | 69.7 | 0.7 | 0.9 | 1.2 |
| Malaysia | 55.2 | 62.4 | 68.8 | 0.5 | 0.5 | 1.0 |
| Indonesia | 34.6 | 48.9 | 58.8 | 0.5 | 0.8 | 1.5 |
| Thailand | 56.8 | 43.2 | 51.2 | 0.6 | 0.5 | 1.5 |
| Philippines | 21.9 | 20.4 | 34.0 | 0.3 | 0.1 | 0.6 |
| Viet Nam | n.a. | 18.0 | 20.8 | n.a. | 0.6 | 0.5 |
| Simple average | 51.3 | 45.4 | 50.6 | | | |

**Panel B: Lower IIT sectors: average GL below 50**

| | Intra-Industry Trade (IIT) | | | Revealed Comparative Advantage (RCA) | | |
|---|---|---|---|---|---|---|
| **Sector/Country** | **1994-96** | **1999-2001** | **2006-08** | **1994-96** | **1999-2001** | **2006-08** |
| **Rubber-based products** | | | | | | |
| Singapore | 76.2 | 82.5 | 93.6 | 2.4 | 1.2 | 0.9 |
| Philippines | 17.2 | 56.4 | 57.1 | 0.6 | 0.4 | 1.5 |
| Malaysia | 36.0 | 61.9 | 50.0 | 10.9 | 7.1 | 11.1 |
| Viet Nam | n.a. | 27.4 | 46.7 | n.a. | 16.0 | 27.4 |
| Thailand | 16.6 | 27.2 | 19.7 | 24.4 | 22.8 | 31.5 |
| Indonesia | 9.5 | 23.9 | 15.7 | 23.3 | 17.9 | 43.7 |
| Simple average | 31.1 | 46.6 | 47.1 | | | |
| **Wood-based products** | | | | | | |
| Singapore | 72.8 | 66.1 | 67.7 | 0.3 | 0.2 | 0.3 |
| Thailand | 24.3 | 48.1 | 58.6 | 1.2 | 1.0 | 1.3 |
| Indonesia | 17.3 | 22.1 | 36.1 | 14.9 | 6.4 | 5.1 |
| Philippines | 26.0 | 31.2 | 29.8 | 2.0 | 1.0 | 9.0 |
| Malaysia | 14.4 | 20.1 | 25.9 | 5.2 | 3.2 | 4.3 |
| Viet Nam | n.a. | 21.4 | 18.7 | n.a. | 2.2 | 6.8 |
| Simple average | 31.0 | 34.8 | 39.5 | | | |
| **Textiles and apparel** | | | | | | |
| Singapore | 84.0 | 84.2 | 82.0 | 0.5 | 0.5 | 0.4 |
| Malaysia | 45.9 | 41.7 | 47.3 | 2.0 | 1.8 | 4.2 |
| Thailand | 32.3 | 38.3 | 43.1 | 2.4 | 1.8 | 2.4 |
| Indonesia | 21.9 | 20.6 | 23.1 | 2.6 | 2.9 | 4.0 |
| Viet Nam | n.a. | 16.9 | 16.4 | n.a. | 5.0 | 8.4 |
| Philippines | 18.0 | 13.7 | 15.3 | 2.9 | 2.2 | 3.4 |
| Simple average | 40.4 | 35.9 | 37.9 | | | |
| **Agro-based products** | | | | | | |
| Singapore | 73.9 | 70.6 | 70.9 | 1.4 | 1.3 | 1.1 |
| Malaysia | 25.0 | 30.0 | 34.9 | 20.9 | 17.3 | 30.4 |
| Thailand | 22.8 | 25.9 | 31.5 | 9.7 | 8.4 | 14.9 |
| Philippines | 22.8 | 21.6 | 23.3 | 11.0 | 4.3 | 6.5 |
| Viet Nam | n.a. | 24.3 | 22.0 | n.a. | 23.0 | 26.0 |
| Indonesia | 23.0 | 21.7 | 16.9 | 8.2 | 11.9 | 46.3 |
| Simple average | 33.5 | 32.4 | 33.2 | | | |
| **Fisheries** | | | | | | |
| Singapore | 89.1 | 78.7 | 63.5 | 0.6 | 0.4 | 0.3 |
| Malaysia | 51.6 | 45.1 | 61.3 | 0.7 | 0.6 | 1.8 |
| Philippines | 25.3 | 30.9 | 33.4 | 4.2 | 1.6 | 3.8 |
| Thailand | 22.5 | 25.5 | 22.1 | 13.0 | 13.6 | 18.3 |
| Viet Nam | n.a. | 3.9 | 11.9 | n.a. | 25.2 | 24.1 |
| Indonesia | 2.1 | 3.9 | 6.2 | 5.3 | 5.0 | 6.7 |
| Simple average | 38.1 | 31.3 | 33.1 | | | |

*Notes*: n.a. – not available; for Viet Nam, the number refers to 2006-07 average.

*Source*: OECD Development Centre calculation based on the UN Comtrade database.

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Turning to the group of PGS with lower IIT (Panel B), strong export specialisation (RCA >1) is found in these resource-intensive sectors for all ASEAN economies except for Singapore. On average the pattern of IIT displays a mixed trend between 1994-96 and 2006-08: a rising trend in IIT for rubber- and wood-based products, and no clear pattern for agro-based products and fisheries. The textiles and apparel (T&A) sector also shows no consistent trend in IIT.

**Box 3.5. Order of RCA in lower IIT Sectors: ASEAN, China and India**
(from high to low)

| | |
|---|---|
| Indonesia | Agro (13), Rubber (5), Fish (2), Wood (8), T&A (9) |
| Malaysia | Agro (9), Rubber (2), Wood (4), T&A (3), Fish (*) |
| Philippines | Wood (3), Agro (5), Fish (1), T&A (5), Rubber (1) |
| Thailand | Rubber (6), Fish (4), Agro (9), T&A (5), Wood (2) |
| Viet Nam | Rubber (3), Agro (12), Fish (8), T&A (18), Wood (6) |
| China | T&A (14), Wood (4), Fish (1), Rubber (1), Agro (2) |
| India | Agro (2), T&A (5), Fish (*), Rubber (1), Wood (1) |

*Note:* the number in brackets indicates the sectoral export share of an individual country in 2006-08, except for Viet Nam where 2006-07 data are used; (*) indicates a share less than 0.5%.

*Source:* the OECD Development Centre.



Looking at the sectoral pattern of RCA, three pictures emerge (Box 3.5). First, ASEAN countries have strong RCA in the agro-food sector (including fisheries), which account for 10% to 20% of total merchandise exports (except for the Philippines). This is in sharp contrast to the sector pattern of RCA in China in which agro-based products are found in the weakest segment of the country's RCA ranking. Second, the ASEAN countries have relatively weak RCA in textiles and apparel, despite the fact that they are among the region's major export sectors, especially in lower-income ASEAN countries. On the other hand, textiles and apparel is one of the strongest RCA sectors among the nine PGS for China and India. Finally, the pattern of RCA in rubber- and wood-based products is quite different across countries.

A simulation study by Dimaranan *et al.* (2009) on the global impact of growth in China and India suggests that the improved growth performance of China and India will likely intensify competition in global markets for manufactured goods.[32] While overall welfare consequences for other developing countries are relatively small, ASEAN countries are especially likely to feel greater competitive pressures from China and India. This means that they will need to raise the quality of their exports in textiles and apparel, as well as in electronics and more generally machinery and equipment. On the other hand, the relative decline in wood and other processing industries in China will leave space for expansion in other developing countries.[33] This will potentially benefit the resource-rich ASEAN countries. However, they will have to address the challenge of sustainable development in these resource-intensive sectors, such as the depletion of natural resources and environmental degradation and their long-term impact on regional and sub-regional economies.

## Implementing the PGS roadmaps will require reduction in trade costs

The results of the trade analysis presented above indicate that ASEAN countries are more closely integrated with the global economy than other Asia-Pacific countries largely because of the dominant role played by their electronics sector in global supply chains. The level of integration, as measured by the intra-industry trade index, differs widely across sectors. Further national and regional efforts are required to facilitate the integration of the ASEAN PGS, especially those sectors with lower IIT, while at the same time improving their supply-side conditions and addressing the challenge of sustainability in resource-intensive sectors.

These efforts are also needed to reduce the often high costs of trading in the region, which differ considerably across its countries. According to the World Bank's Doing Business data on the ease of trading across borders, Singapore and Malaysia are ranked as the top two economies in the Asia-Pacific region in terms of having the lowest average cost associated with all procedures required to export and import goods (Annex IV). On the other hand, Laos, as a land-locked economy, is most costly in trading across borders. Between the two extremes, the cost of exporting and importing is higher in other ASEAN countries than in China. For example, the time to export and import takes 21-22 days in Viet Nam, which is more or less the same as that of China (21-24 days). Yet the cost to export and import is on average some 60% higher in Viet Nam (USD 848 per container) than in China (USD 523 per container).

In fact, ASEAN has developed individual roadmaps to realise the "progressive, expeditious and systematic integration" of the nine PGS. These roadmaps have indentified both horizontal and sector-specific measures to achieve this goal. Annex II summaries 15 horizontal measures that are commonly applied to all these sectors. In addition, the roadmaps have also identified an extensive list of sector-specific measures for individual PGS, which is summarised in Annex III. In what follows, we briefly discuss some of major issues related to reducing trade costs.

Now that the elimination of remaining tariffs is on schedule, a major challenge for ASEAN countries is to identify and eliminate non-tariff barriers (NTBs) on all products included in the nine PGS. Under the AEC, five ASEAN countries (Brunei Darussalam, Indonesia, Malaysia, Thailand and Singapore) will eliminate NTBs by 2010; the Philippines by 2012; and the CLMV countries (Cambodia, Laos, Myanmar and Viet Nam by 2015 (by 2018 for certain "sensitive" products). According to a recent study, a wide variety of non-tariff measures (NTMs) is present in all nine PGS[34] and is widespread in many ASEAN countries. The estimated *ad valorem* equivalents of NTMs suggest that NTMs could be binding constraints to the expansion of intra-ASEAN trade, as they could raise import prices significantly, by from 12.6% (for apparel) to 60.5% (for processed food).[35] The most important non-tariff barriers in key sectors include the following (see Annex III):



- Sanitary and phytosanitary measures for agro-based products and fisheries;
- Safety and other technical standards for automotive products, ICT equipment, electronics, health care products and rubber-based products; and
- Security and environmental measures for wood-based products.

Rules of origin (Ro0) constitute another important area of trade reforms that are critical to taking full advantage of FTA/CEPA and facilitating the active participation of newer ASEAN members into global supply chains. The CEPT rules of origin in AFTA are considered relatively less complex than the RoO in Europe and the Americas, because AFTA is based on an across-the-board value content rule in which the regional value content is set at 40% (see Estevadeordal and Suominen, 2006). ASEAN also adopted in 2003 "substantial transformation" as a general alternative rule for conferring origin status and has applied a "Change in Tariff Heading" (CTH) criterion for an increasing number of products. Nonetheless there remain several reform issues, including: *i)* the criteria for determining the maximum use of a partner country's parts and components allowed for the final product to have preferential status; *ii)* the degree of restrictiveness and selectivity of product-specific RoO; and *iii)* certification procedures. Under the PGS roadmaps, ASEAN countries are required to move towards "more transparent, predictable, standardised and trade-facilitating" rules.

Simplified and harmonised customs procedures are also essential to build a single market and production base envisioned in the AEC. An important milestone in this direction came in 2002 when all member states agreed to adopt, for intra-ASEAN trade, a common system of tariff classification defined at the 8-digit level of the Harmonised System (HS), known as the ASEAN Harmonised Tariff Nomenclature (AHTN). The AHTN has now been extended to extra-ASEAN trade as well. Another milestone was passed in 2005 when the A*SEAN Single Window Agreement* was signed to adopt the electronic processing of trade documents at the national and regional levels and to interconnect national single windows for customs procedures (see Chapter 5 for further discussion). Implementation of the ASEAN Single Window was envisaged for ASEAN-6 countries by 2008 and the CLMV countries by 2012.

The problem of high trade cost (as opposed to tariff barriers) is not just limited to customs procedures. As will be discussed in the next two chapters, it is also caused by poor transport and logistics services within the country when goods are moved from the factory gate to the ship for export.[36] A recent study suggests that on average each additional day of delay in delivery tends to reduce trade by at least 1%.[37] Such trade costs act as additional obstacles to the export of time-sensitive agricultural and manufactured products from ASEAN countries (*e.g.* perishable agro- and sea-food, up-market apparel and electronic products). This is particularly detrimental to the greater integration of CLMV countries with the global economy.[38] ASEAN members are fully cognisant that local capability building and supply chain formation will require them to expedite the development of integrated transport and logistics services, develop areas of specialisation and niche markets and promote outsourcing arrangements within the region. Otherwise it would be difficult to take advantage of trade preferences granted under the ASEAN Integration System of Preferences (ASIP). Older ASEAN members should also make the ASIP more user-friendly, by simplifying the procedures and expanding the product coverage in the nine PGS.

There are other horizontal measures already identified for the integration of the nine PGS whose primary goal is to make the region more business friendly for investment and the movement of skilled labour. Key sector-specific measures include Research and Development (R&D) investment and human resource development to promote innovation and empower small and medium-sized enterprises (SMEs) in the respective PGS.

The success of the AEC process will depend eventually on implementation of these and other policy reforms that have been identified in the PGS roadmaps. According to the AEC Blueprint, ASEAN countries are required to:

- Conduct a bi-annual review to monitor the status, progress and effectiveness of PIS roadmaps to ensure their timely implementation; and
- Identify sector-specific projects or initiatives through regular dialogues or consultation with stakeholders, particularly the private sector.



These actions are expected to continue throughout the period up to 2015. Future issues of this *Outlook* will review progress on the PGS roadmaps in order to complement the monitoring efforts by ASEAN countries and to facilitate their co-operation with OECD dialogue partners.

## CONCLUSIONS

As Chapter 1 has documented, Southeast Asia has emerged strongly from the global financial crisis. The region's most export-oriented economies, such as Malaysia, Singapore and Thailand, have benefited considerably from China's early rebound due to their trade linkages. However, the close integration of ASEAN with China and with the global economy also carries an important downside risk. Given uncertainties in the world economy in 2011 and beyond, Southeast Asian countries need to rebalance the pattern of growth and put their economies on a sounder footing. The region's pursuit of a single market and production base should be seen from this perspective.

The results of the empirical analysis presented in the previous sections have important implications for rebalancing growth in Southeast Asia while advancing the AEC process.[39] First, ASEAN countries should take a fresh look at their economic ties with China. Fragmentation and trade in intermediate goods and services have come to play an increasingly important role for Asia's trade growth, from which Southeast Asian economies have benefited over the past two decades. At the same time, the rise of China as a dominant supplier of manufactured goods has significantly transformed the way ASEAN economies are engaged in global supply chains; they have become major suppliers of parts and components to Asia's manufacturing industries. ASEAN-China economic relations are likely to become even stronger and deeper owing to the latter's continued high growth and the implementation of the ASEAN-China Comprehensive Economic Co-operation Agreement that entered into force early in 2010. A major challenge for ASEAN countries is to reduce their excessive export

dependence on a narrow range of electronic products (mostly parts and components) and to move up the technological ladder in the value chain.

The recent decision of the Chinese authorities to make the renminbi more flexible can be seen as an important step forward toward rebalancing growth in the Asian context. It can help improve China's own macroeconomic stability, which will be critical to the sustained growth of Southeast Asian economies. But it can also act as a catalyst to facilitate the further integration of ASEAN priority sectors by promoting region-wide industrial restructuring.

Second, ASEAN countries should develop more niche and specialty products in the nine PGS. These priority goods sectors are politically and economically important to AEC implementation, politically because they have been chosen to serve as front runners of deeper economic integration, and economically because the nine PGS taken together account for more than half of total ASEAN merchandise exports. The idea of rebalancing growth, therefore, is not just to move away from exports to domestic demand (*e.g*. through stimulating private consumption) but also involves reallocating public investable resources to new growth areas. For example, diversification into health care product markets will provide a new source of trade growth for ASEAN countries. Other examples include the further development of regional supply chains by integrating concerns over resource management and environmental protection into the development of processing and other downstream activities. This is envisaged in the PGS roadmap for the wood-based sector, involving forest plantation, wood processing and furniture manufacturing. The development of regional supply chains is also important for the rubber-based sectors, by combining rubber plantation in CLMV countries and the promotion of natural rubber products.



As summarised in Annex IV, ASEAN policy makers have identified a number of sector-specific measures (*e.g.* through R&D investment and capacity building) necessary to enhance the external competitiveness of the nine PGS, in addition to those aimed at facilitating regional integration. Further work will be required to monitor the progress of existing sector-specific measures and to identify new measures, where necessary, through regular consultation with all stakeholders, including ASEAN dialogue partners.

# ANNEX I. PRIORITY INTEGRATION SECTOR PRODUCT DEFINITION

| | Priority Goods Sectors | | SITC Rev.3 product group |
|---|---|---|---|
| **1** | **Agro-based products** | | **0 + 1 + 4 + 21 + 22 + 29 - 03** |
| | 1.1 | Agro-food products | 0 + 1 + 4 + 22 - 03 |
| | 1.2 | Other agro-based products | 21 + 29 |
| **2** | **Automotives** | | **78** |
| | 2.1 | Motor cars | 781 + 782 + 783 |
| | 2.2 | Parts and accessories | 784 |
| | 2.3 | Motor cycles and cycles, motorised and non-motorised | 785 |
| | 2.4 | Trailers and semi-trailers, others | 786 |
| **3** | **E-ASEAN (ICT equipment)** | | **751 + 752 + 761 + 762 + 763 + 771 + 772 + 773** |
| | 3.1 | Office machines and automatic data processing machines | 751 + 752 |
| | 3.2 | Telecom and sound-recording equipment | 761 + 762 + 763 |
| | 3.3 | Electrical machinery and equipment | 771 + 772 + 773 |
| **4** | **Electronics** | | **759 + 764 + 776** |
| | 4.1 | Parts and components for electronic data processing | 759 |
| | 4.2 | Parts and components for telecom equipment | 764 |
| | 4.3 | ICs & electronic components | 776 |
| **5** | **Fisheries** | | **03** |
| **6** | **Health care products** | | **53 + 54 + 553 + 554 + 774 + 872** |
| | 6.1 | Dyeing, tanning and colouring materials | 53 |
| | 6.2 | Medical and pharmaceutical products | 54 |
| | 6.3 | Perfumery, cosmetic or toilet preparations (excluding soaps) | 553 |
| | 6.4 | Soap, cleansing and polishing preparations | 554 |
| | 6.5 | Electrodiagnostic apparatus for medical, surgical and dental purposes | 774 |
| | 6.6 | Instruments and appliances for medical, surgical and dental purposes | 872 |
| **7** | **Rubber-based products** | | **23 + 62** |
| | 7.1 | Crude rubber (inc. synthetic) | 23 |
| | 7.2 | Rubber manufactures | 62 |
| **8** | **Textiles and apparel** | | **26 + 65 + 84** |
| | 8.1 | Textile fibres (other than wool tops and other combed wool) and their wastes (not manufactured into yarn or fabric) | 26 |
| | 8.2 | Textiles | |
| | 8.3 | Clothing | |
| **9** | **Wood-based products** | | **24 + 25 + 63 + 64 + 82** |
| | 9.1 | Cork and wood | 24 |
| | 9.2 | Pulp and waste paper | 25 |
| | 9.3 | Cork and wood manufactures (exc. Furniture) | 63 |
| | 9.4 | Paper, paperboard and articles thereof | 64 |
| | 9.5 | Furniture and parts thereof | 82 |

*Source*: Compiled based on *ASEAN Framework Agreement for the Integration of Priority Sectors* (November 2004, amended December 2006).

# ANNEX II. HORIZONTAL MEASURES FOR THE INTEGRATION OF NINE PRIORITY GOODS SECTORS: SUMMARY

| | Common issues for goods sectors | Horizontal measures |
|---|---|---|
| I. | Tariff elimination | Eliminate CEPT-AFTA tariffs on all identified products |
| II. | Non-tariff measures (NTMs) | Identify and eliminate non-tariff barriers (NTBs) on all identified products |
| III. | Rules of Origin | Improve the CEPT Rules of Origin |
| IV. | Customs procedures | Implement AHTN for extra-ASEAN trade and the ASEAN Single Window |
| V. | Standards and conformance | Develop, harmonise and implement sectoral mutual recognition agreements (MRA) as appropriate |
| VI. | Logistics services | Expedite the development of integrated transport logistics services |
| VII. | Outsourcing and industrial complementation | Develop areas of specialisation and promote outsourcing arrangements |
| VIII. | ASEAN Integration System of Preferences | Simplify the procedures and expand the coverage of AISP |
| IX. | Investments | Eliminate progressively restrictive investment measures |
| X. | Trade and investment promotion | Undertake more effective joint ASEAN promotion measures |
| XI. | Intra-ASEAN Trade and Investment Statistics | Develop an effective system to monitor intra-ASEAN trade and investment |
| XII. | Intellectual property rights (IPRs) | Expand the scope of ASEAN IPRs co-operation |
| XIII. | Movement of business persons, experts, skilled labour, talents and professionals | Develop an ASEAN agreement and other mechanisms to facilitate free movement |
| XIV. | Facilitation of travel in ASEAN | Harmonise the visa procedure and exemption |
| XV. | Human resource development | Develop and upgrade skills and capacity building |

*Notes:* AFTA - ASEAN Free Trade Area; AHTN - ASEAN Harmonised Tariff Nomenclature; CEPT - Common Effective Preferential Tariff; AISP – ASEAN Integration System of Preferences.

*Source:* Compiled from the ASEAN Secretariat website.

# ANNEX III. SECTOR-SPECIFIC MEASURES FOR THE INTEGRATION OF NINE PRIORITY GOODS SECTORS

| | Sector-specific issues | Measures |
|---|---|---|
| **1** | **Agro-based products** | |
| 1.1 | Sanitary & phyto-sanitary (SPS) and technical barriers to trade (TBT) measures | General requirements for food hygiene and safety in ASEAN; Harmonisation and compliance of SPS and TBT; Strengthening testing facilities |
| 1.2 | R & D and human resource development | Initiate collaborative research programmes and empower small-scale farmers |
| 1.3 | Information | Establish an ASEAN Early Warning System on Hazards and Outbreaks |
| **2** | **Automotive products** | |
| 2.1 | Overall strategy of ASEAN automotive industry | Develop a regional strategy in the Asian and global market context |
| 2.2 | Effective implementation of the ASEAN Industrial Co-operation (AICO) and CEPT schemes | Increase intra-ASEAN trade and investment |
| 2.3 | Standards and conformance | Harmonise ASEAN practices on safety and other technical standards |
| 2.4 | Future investment | Promote cross-border investment within ASEAN for components industries |
| 2.5 | Improvement of logistics services | Recommend measures on logistics and infrastructure for the automotive industry |
| 2.6 | ASEAN automotive industry capability | Enhance ASEAN automotive industry's technological capabilities |
| 2.7 | Training and skill certification | Improve human resources capability |
| **3** | **E-ASEAN (ICT)** | |
| 3.1 | Trade in services (WTO Basic Telecommunications Reference Paper) | Eliminate in stages limitations on market access and national treatment for computer related and telecommunications services |
| 3.2 | Movement of business persons, experts, skilled labour, talents and professionals related to ICT | Promote networking of ICT skills development entities; include cyber security skills in the network; facilitate MRAs for qualification in IT skills |
| 3.3 | Standards and conformity related to telecom and cyber-security | Accelerate implementation of MRAs for telecom equipment; put in place minimum performance guidelines for national CERT |
| 3.3 | ASEAN information infrastructure (AII) | Develop convergence guidelines and best practices |
| 3.4 | Capacity building | Promote an "e-society" to assist in bridging the digital divide |
| 3.5 | E-Government | Encourage adoption and implementation of e-government services |
| 3.6 | E-Commerce | Enact national legislation and facilitate cross-border e-transactions |
| **4** | **Electronics** | |
| 4.1 | Customs procedures | Implement the use of electronic processing in customs services |

| | | |
|---|---|---|
| 4.2 | Investment | Intensify regional investment promotion activities |
| 4.3 | Market and production base integration | Promote intra-ASEAN trade and increase outsourcing for electronics |
| 4.4 | Standards and mutual recognition arrangements | Harmonise technical regulations for electrical and electronic equipment |
| 4.5 | Capacity building | Develop and promote ASEAN centres of excellence |
| **5** | **Fisheries** | |
| 5.1 | Sanitary & phyto-sanitary (SPS) and technical barrier to trade (TBT) measures related to fisheries | Develop fisheries quality and safety management systems; achieve compliance with international good practices and standards; institute MRAs in selected products |
| 5.2 | R&D in the field of aquaculture, capture fisheries, post-harvest technology and inland water management | Develop and strengthen co-operation among ASEAN member states in R&D programmes and share technical knowhow |
| 5.3 | Human resource development | Establish short- and long-term training programmes for workers |
| 5.4 | Information | Establish an ASEAN early warning system on hazards and outbreaks of disease |
| **6** | **Health care** | |
| 6.1 | Investments | Set up "one-stop centre" in each ASEAN country to facilitate investments |
| 6.2 | Standards and conformity (pharmaceutical products, cosmetics, medical devices and equipment, traditional medicines and health supplements) | Establish and harmonise specific regulatory requirements for health care products and medical devices and equipment |
| 6.3 | Capacity building | Strengthen co-operation in regulation and human resource development |
| 6.4 | Movement of patients | Minimise visa requirements for intra-ASEAN travel by ASEAN nationals |
| 6.5 | R & D | Initiate collaborative research programmes in areas of mutual interest |
| **7** | **Rubber-based products** | |
| 7.1 | Testing facilities for rubber products in ASEAN | Encourage rubber manufacturers to use available accredited facilities |
| 7.2 | Harmonisation of standards and technical regulations | Adopt one common set of standards based on international standards |
| 7.3 | Promote the usage of natural rubber products | Undertake joint market promotional efforts in international markets |
| 7.4 | R & D | Promote joint R&D efforts |
| 7.5 | Development of rubber plantations in CLMV countries | ASEAN 6 to enhance co-operation with CLMV countries |
| **8** | **Textiles and apparel** | |
| 8.1 | ASEAN cumulation (for FTA partners and GSP) | Engage major importing countries to address issues of concern to ASEAN |
| 8.2 | Co-ordination of outsourcing activities among ASEAN countries | Facilitate outsourcing among ASEAN companies through simplified and harmonised customs procedures and other measures |

| | | |
|---|---|---|
| 8.3 | Original Design Manufacturers (ODMs) and Own Brand Manufacturers (OBMs) | Promote development of original designs and brands among ASEAN manufacturers |
| 8.4 | Co-operation of ASEAN private sector | Develop and expand the ASEAN textile and apparel website |
| 8.5 | Study on the impact of multi-fibre agreement (MFA) expiry on the ASEAN textile industry | ASEAN Secretariat to undertake the study |
| 8.6 | Study on China's export of textile and apparel products in Asia and its impact on ASEAN | ASEAN Secretariat to undertake the study |
| **9** | **Wood-based products** | |
| 9.1 | Enhancing co-operation in timber products | Develop certification of timber products to ensure sustainability and legality |
| 9.2 | Joint marketing and image-building | Undertake ASEAN public relation campaign and showcase ASEAN products |
| 9.3 | Investment in forest plantation and wood-based Industry | Facilitate joint trade and investment promotion; Encourage the use of raw materials from timber plantations for investments in wood-processing sector |
| 9.4 | Human Resource Development | Upgrade skills in design, wood processing and furniture manufacturing |



*Note*: CERT: Computer Emergency Response Teams.
MRA: Mutual Recognition Agreements.

*Source:* Compiled from the ASEAN Secretariat website.

# ANNEX IV: EASE OF TRADING ACROSS BORDERS IN THE ASIA-PACIFIC

| Economy | Documents to export (number) | Time to export (days) | Cost to export (USD per container) | Documents to import (number) | Time to import (days) | Cost to import (USD per container) |
|---|---|---|---|---|---|---|
| Singapore | 4 | 5 | 456 | 4 | 3 | 439 |
| Malaysia | 7 | 18 | 450 | 7 | 14 | 450 |
| China | 7 | 21 | 500 | 5 | 24 | 545 |
| Hong Kong, China | 4 | 6 | 625 | 4 | 5 | 583 |
| Brunei Darussalam | 6 | 28 | 630 | 6 | 19 | 708 |
| Indonesia | 5 | 21 | 704 | 6 | 27 | 660 |
| Thailand | 4 | 14 | 625 | 3 | 13 | 795 |
| Chinese Taipei | 7 | 13 | 720 | 7 | 12 | 732 |
| Korea | 3 | 8 | 742 | 3 | 8 | 742 |
| Cambodia | 11 | 22 | 732 | 11 | 30 | 872 |
| Philippines | 8 | 16 | 816 | 8 | 16 | 819 |
| Viet Nam | 6 | 22 | 756 | 8 | 21 | 940 |
| New Zealand | 7 | 10 | 868 | 5 | 9 | 850 |
| India | 8 | 17 | 945 | 9 | 20 | 960 |
| Japan | 4 | 10 | 989 | 5 | 11 | 1 047 |
| Australia | 6 | 9 | 1 060 | 5 | 8 | 1 119 |
| Laos | 9 | 50 | 1 860 | 10 | 50 | 2 040 |

*Notes:*

Documents to export/import - Number of all documents required to export/import goods;

Time to export/import - Time necessary to comply with all procedures required to export/import goods;

Cost to export/import - Cost associated with all the procedures required to export/import goods.

The order of economy is sorted according to the average cost to export and import.

*Source:* World Bank (www.doingbusiness.org/ExploreTopics/TradingAcrossBorders/; accessed on 22 June 2010) .

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# NOTES

1. The concept of an ASEAN Economic Community encompassing a "single market and production base" as the end goal of economic integration was outlined in 1997 in the landmark "ASEAN Vision 2020" statement. The Declaration of ASEAN Concord II (Bali Concord II) in 2003 reaffirmed that ASEAN is committed to deepening and broadening its internal economic integration and linkages with the world economy to realise this end goal. In the following year, ASEAN leaders adopted the Vientiane Action Programme (VAP) – a six-year plan to deepen and broaden economic integration while reducing large disparities among member states.

2. See Fukasaku (2008) for a further discussion on the integration of newer members of ASEAN.

3. In addition, it also includes important sectoral components, namely the priority integration sectors, and food, agriculture and forestry industries.

4. Lloyd (2007) provides an excellent discussion in this regard.

5. The "ASEAN minus X" formula allows for flexible participation when it comes to the implementation of economic commitments (when there is a consensus to do so) by allowing members ("X") who are not quite ready for participation to opt out. Theoretically, this formula could facilitate the achievement of the goals of the AEC among those who are willing.

6. The estimated net income effect of the AEC takes into account three scenarios: *i)* the removal of all remaining tariffs among ASEAN countries (*i.e.* completion of AFTA); *ii)* scenario *(i)* plus the removal of NTBs, leading to a 5% reduction in trade costs (as a percentage of trade values); and *iii)* scenario *(ii)* plus the AEC-induced changes in FDI. Scenario *iii)* corresponds to the "value added" of the AEC. For details of the simulation results, see Rashid *et al.* (2009).



7. ASEAN plus Three (ASEAN+3) means the ASEAN 10 countries plus China, Japan and Korea. ASEAN plus Six (ASEAN+6) refers to ASEAN+3 plus Australia, India and New Zealand.

8. See Asian Development Bank (2008) and Capannelli *et al.* (2009) for efforts to measure the progress of regional economic integration in a broader Asian context.

9. These can be found respectively at the following: http://aric.adb.org/; www.unescap.org/tid/

10. With USD 5.5 billion in 2009, CLMV countries taken together accounted for some 15% of total FDI inflows to ASEAN. See Chia (2005) and Fukasaku (2008) for further discussion.

11. Viet Nam, as a member of the OECD Development Assistance Committee (DAC) Working Party on Aid Effectiveness, is actively involved in the international initiative to prepare the 4th High Level Forum on Aid Effectiveness in Seoul 2011.

12. See, for example, Urata (2005) and Hiratsuka (ed.) (2006) for further discussions.

13. See, for example, Kimura and Ando (2005) and Fukasaku *et al.*, 2010 (forthcoming).

14. This section consistently uses the import statistics of the OECD bilateral trade database to deal with the statistical shortcomings arising from re-exports and unclassified export items (see Guo *et al.*, 2009).

15. The number of partner countries in which China's exports of office, accounting and computing machinery exceed 20% of the partner's total merchandise imports increased from 1 in 1995 to 31 in 2006.

16. See Gangnes and Van Assche (2010) for the increased importance of Asia's trade in electronic parts and components between 1992 and 2004. They argue that business-cycle shocks in 2008-09 were rapidly transmitted across major Asian economies through global production networks in electronic products.

17. Soesastro (2007) emphasises the importance of fast-track integration of these priority sectors in implementing the ASEAN Economic Community (AEC) Blueprint.

18. See *ASEAN Sectoral Integration Protocol for the Logistics Services Sector* (August, 2007).

19. See Article 1 of the ASEAN Framework Agreement for the Integration of Priority Sectors, Vientiane, 29 November 2004.

20. In this definition, "e-ASEAN (ICT equipment)" is divided into three sub-categories of final products, namely: *i)* office machines and automatic data processing machines; *ii)* telecom and sound-recording equipment; and *iii)* electrical machinery and equipment. On the other hand, the definition of "electronics" involves three sub-categories of parts and components alone. In this way, the demarcation of these two sectors is clearly made. Furthermore, "health care products" are defined to include six sub-categories covering: *i)* dyeing, tanning and colouring materials; *ii)* medical and pharmaceutical products; *iii)* perfumery, cosmetic or toilet preparations (excluding soaps); *iv)* soap, cleansing and polishing preparations; *v)* electro-diagnostic apparatus for medical, surgical and dental purposes; and *vi)* instruments and appliances for medical, surgical and dental purposes. The product definition of other PGS is rather straightforward in standard trade analysis.

21. In earlier studies, PGS products are defined as those listed at either the 2-digit chapter level or the 4-digit heading level of the Harmonised Commodity Description and Coding System (HS). However, the earlier studies encountered difficulty in demarcating "e-ASEAN (ICT equipment") and "electronics". Austria (2004), for instance, defined "e-ASEAN" as HS 84-85, 90 and 3818 (but excluding those included in "Electronics"). But, HS 84-85 includes many non-ICT products even at the 4-digit heading level of the HS. Another problem is related to the definition of "health care products", which involves a large variety of different products. The PIS product definition and its sub-categories as described in Annex II can make PGS monitoring more transparent and operational. See also Oktaviani *et al.* (2007) and Wattanapruttipaisan (2008).



22. See Petri (2009, Table 6-1).

23. The correlation of export shares with those of China exceeds 30% for all five ASEAN countries (see Petri *ibid.*).

24. This number reached 45% when ASEAN economies enjoyed a high-tech boom a decade ago.

25. Among ASEAN economies, only Cambodia shows a higher degree of export similarity with India (see Petri *ibid.*).

26. See Fukasaku *et al.* (2005, Chapter 1).

27. See Kimura and Ando (2005) for a detailed exposition of fragmentation and its application to East Asia.

28. See Jones *et al.* (2002) for further discussion.

29. See Austria (2004) and Oktaviani *et al.* (2007) for the use of IIT in a regional context. See also Ecochard *et al.* (2006) for the relationship between intra-industry trade and economic integration.

30. The Grubel-Lloyd index for a product i of a given country (GLi) is derived from the formula: GLi/100 = 1 – Abs{Xi - Mi}/(Xi + Mi) where Xi and Mi are exports and imports of product i, respectively, and Abs{Xi – Mi} is the absolute value of their difference. The index is 100 when exports and imports of the product are equal and zero when either exports or imports are zero (so that trade is entirely one-way).

31. Re-exports accounted for 48% of Singapore's total merchandise exports in 2008 (WTO, 2009).

32. Using a modified version of the standard Global Trade Analysis Project (GTAP) model, this study examines the global implications of strong growth outcomes in China and India in the context of world economic expansion over the period 2005-20. A baseline scenario includes an additional 2.1 percentage point annual growth in China and 1.9 percentage point annual growth in India during the period concerned. The analysis also looks at the impact of lowering protection and implementing more effective systems of duty exemptions or drawbacks for inputs used for export production in India.

33. Both GL and RCA indices for China and India are available upon request.

34. See de Dios (2007). NTMs include: *i)* tariff quota duties; *ii)* additional taxes and charges; *iii)* administrative pricing; *iv)* import licensing; *v)* quotas; *vi)* import prohibitions; *vii)* selective approval of importers; *viii)* selective or sole channel for imports; *ix)* technical regulations (product characteristics, marking, labelling, packaging and testing and inspection requirements); and *x)* reshipment inspection.

35. *Ibid.* p.101.

36. Improving rail and road connections to ports is indeed critical to realising greater regional trade and investment flows for inland areas and landlocked countries. Asian Development Bank (2009, Chapter 2) argues that correcting weaknesses in regional infrastructure would do more to lower the cost and increase the volume of trade than would eliminating any remaining tariffs and non-tariff barriers.

37. See Djankov *et al.* (2010).

38. See Bonaglia (2006) for the importance of supply chain management in the development of the Mekong sub-region.

39. See Prasad (2009) for a succinct discussion of rebalancing growth in Asia from the macroeconomic policy perspective.

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PART TWO

# Thematic Focus

## CHAPTER FOUR
**Transport Infrastructure Development and ASEAN Integration**

## CHAPTER FIVE
**Transport Infrastructure and Integration in Indonesia**

## CHAPTER SIX
**Financing Transport Infrastructure Development**

CHAPTER FOUR

# Transport Infrastructure Development and ASEAN Integration

## ABSTRACT

Transport infrastructure development is central to ASEAN's goal of achieving a single market and production base while reducing economic gaps among and within its member states. Transport infrastructure development involves not only investment in physical facilities but also improvements in "soft" infrastructure comprising transport policies, regulations and procedures and multilateral initiatives and agreements.

Transport infrastructure is most developed in Singapore followed by the other ASEAN-6 countries and is significantly less developed in the CMLV countries of Cambodia, Myanmar, Laos and Viet Nam. ASEAN's distinctive geographical features and rapid economic growth have created a number of challenges that are shared to varying degrees by its members. These include excessively high costs, urban congestion and inadequate competition and efficiency in air transport.

ASEAN and its member countries are undertaking a wide range of initiatives to improve transport infrastructure. To be fully successful, these efforts will need to overcome collective action problems and improve planning and co-ordination among the countries involved.

# INTRODUCTION

ASEAN was founded on 8 August 1967 in Thailand by representatives from Indonesia, Malaysia, the Philippines, Singapore and Thailand to promote regional co-operation in the economic, social and cultural areas. Its membership has since expanded to ten countries, beginning with the accession of Brunei Darussalam in 1984, followed by the four CLMV countries – Cambodia, Laos, Myanmar and Viet Nam – in the latter half of the 1990s. Over the past four decades, ASEAN has developed into the most influential regional forum for problem-solving and confidence building in Southeast Asia and has developed numerous co-operation programmes among its members. The organisation has evolved a distinctive approach to co-operation and integration – the ASEAN way – that relies on informal means, rather than formal binding rules and regulations, and the pooling of sovereignty to promote regional co-operation.

From the late 1980s onwards, in response to greater global competition, ASEAN started to pay increasing attention to regional economic co-operation. This effort began with the agreement to form an ASEAN Free Trade Area (AFTA) in 1992 and was followed by a commitment in 1997 to move toward a fully integrated ASEAN economic area. As Chapter 3 discusses in more detail, the ultimate objective is to create an ASEAN Economic Community with a free flow of goods, services, investments and fewer restrictions on capital while promoting more equitable economic development among ASEAN members and reducing poverty and socio-economic disparities.

Regional transport infrastructure integration is seen as vital to the development of the ASEAN Economic Community (AEC). The region is home to nearly 600 million people, half of them living on islands that depend on air and sea transport for access to key urban areas. The Philippines and Indonesia are vast archipelagic countries, comprising more than 7 000 and 17 000 islands each. Brunei and East Malaysia are on the island of Borneo. The seven remaining countries are located on the Indochina-Malayan Peninsula. The unique geography of the peninsula precludes the creation of extensive road and rail networks, increasing the reliance of its countries on seaborne freight and inland waterway transport. Integrated, co-ordinated and multimodal transport systems are needed to facilitate trade and connect the less developed countries and areas to the economic centres of the region. Thus transport is critical both to regional integration and to the reduction of the substantial regional inequalities that now exist.



This chapter examines the development of transport infrastructure in the ASEAN region and the policies that have been adopted to promote that development. The analysis considers the physical structures ("hard components") that make transport possible as well as the equally important "soft" infrastructure derived from ASEAN countries' policy and regulatory regimes, particularly policies concerning anti-competitive and protectionist practices, and multilateral agreements to facilitate an efficient and integrated transport system.

# TRANSPORT IN ASEAN COUNTRIES

Transport infrastructure comprises not only the physical structures that are the outcomes of investment by either governments or private enterprises, such as railway lines, roads, ports and airports. It also includes "soft" elements comprising national policy and regulatory provisions affecting transport (including environmental policies), multilateral agreements and other institutional arrangements. Physical structures are most important for land-based transport where vehicles are often owned by individuals and movement is controlled by the extent of the road or rail network, as well as across state boundaries by customs checkpoints. The "soft" components of transport infrastructure are especially important for maritime and air transport, which are primarily inter-state means of transport and involve strategic national interests.

## Transport infrastructure development varies considerably among ASEAN members

The ASEAN-6 (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand) are at a more advanced level of transport infrastructure development than the CLMV. Nevertheless, within the ASEAN-6 significant differences exist.

These differences are illustrated by the transport rankings of ASEAN countries in the latest Global Competitiveness Report published by the World Economic Forum (Table 4.1). A simple arithmetic mean of the rankings of the individual modes of transport provides an idea of the level of transport infrastructure development in each country. Singapore's transport infrastructure is the most advanced in ASEAN and is comparable to that of the United States and Japan. Among the other ASEAN-6, transport infrastructure is most developed in Malaysia followed by Brunei Darussalam, Thailand, Indonesia and lastly the Philippines. There is a positive relationship between development of transport infrastructure and GDP per capita.

**Table 4.1. Comparative world rankings by mode of transport: ASEAN-6**

| | Brunei | Indonesia | Malaysia | Philippines | Singapore | Thailand | Cambodia | Viet Nam |
|---|---|---|---|---|---|---|---|---|
| Roads | 29 | 94 | 24 | 104 | 1 | 35 | 77 | 102 |
| Railroad | n.a. | 60 | 19 | 92 | 9 | 52 | 94 | 58 |
| Port | 42 | 95 | 19 | 112 | 1 | 47 | 89 | 99 |
| Air | 47 | 68 | 27 | 100 | 1 | 26 | 88 | 84 |
| Mean | 39.3 | 79.25 | 22.25 | 102 | 3 | 40 | 87 | 85 |
| GDP per capita (USD) | 47 930 | 4 151 | 13 800 | 3 156 | 50 180 | 8 051 | 1 933 | 2 942 |



*Notes:* GDP per-capita is calculated using purchasing-power-parity (PPP) exchange rates. Data on competiveness are not available for Laos and Myanmar. Rankings are made out of 133 countries.

*Source: IMF World Economic Outlook*, October 2010; Schwab, K., Sala-i-Martin, X., & Greenhill, R. (2009). *The Global Competitiveness Report 2009-2010.* Geneva: World Economic Forum.

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In general, transport infrastructure development in the CLMV countries lags behind that of the ASEAN-6. Road links between rural areas and urban or economic centres are limited, exacerbating regional inequalities and creating development bottlenecks. Among the CLMV countries, Viet Nam leads in terms of both general economic indicators and transport infrastructure development. Viet Nam also ranks ahead of the Philippines in terms of transport infrastructure development.

There are also important qualitative differences between transport in the CLMV countries and the ASEAN-6. First, the Mekong and other rivers and their tributaries criss-cross the terrain of the Greater Mekong Sub-Region (GMS), providing an important substitute for road and rail transport in moving passengers and freight. Second, any highway or rail link connecting China to the rest of Southeast Asia must pass through the Mekong sub-region. This creates pressure for collective action on the part of the CLMV governments as well as on ASEAN to co-ordinate such cross-border projects.

Transport development in the CLMV countries has been hampered by many difficulties. Infrastructure improvement in the various transport modes shows little integration with general trade and development policy, much less with each other. Policy and transport infrastructure has until recently evolved largely independently. These problems highlight the importance of frameworks for policy and institutional action as well as for effective implementation. The Asian Development Bank (ADB)

initiated the GMS Program in 1992 to promote economic development in the GMS, which consists of the CLMV, Thailand and two provinces of the People's Republic of China (Yunnan and Guangxi). The experience with this ongoing endeavour illustrates some broader points to bear in mind with respect to development projects in the CLMV (Box 4.1).

**Box 4.1. Economic Co-operation in the Greater Mekong Sub-Region**

In 1992, with the assistance and leadership of the ADB, the four CMLV countries together with the People's Republic of China and Thailand launched the GMS Economic Co-operation Program (GMS Program) to promote economic co-operation in the sub-region. The programme channels resources into various sectors, namely transport, energy, telecommunications, the environment, human resource development, tourism, trade, private sector investment and agriculture. As of end 2008, 41 GMS projects had been implemented, costing an estimated USD 11 billion (Asian Development Bank, 2010).

Since its implementation, the GMS Program has helped develop hard infrastructure and also has reduced poverty in the GMS countries. In terms of soft infrastructure, however, the GMS Program has been less successful. The development of hard infrastructure has had effects that soft infrastructure has been unable to keep pace with. For example, improved connectivity and mobility of people and goods has increased transmission of communicable diseases and caused environmental degradation. Better hard infrastructure can improve livelihoods and reduce poverty more effectively if complementary measures are put into place.

The midterm review of the GMS Strategic Framework for 2002-12 highlighted the importance of soft infrastructure, in particular issues relating to the environment, investment promotion and trade facilitation, skill development, labour migration, the trafficking of women and children and the surveillance and control of communicable diseases (Asian Development Bank, 2007).

The way forward for the GMS Program requires the recognition of different levels of development among GMS countries, with special attention being paid to the less advanced members. Greater ownership and participation in the GMS Program by local communities, civil society and the private sector needs to be encouraged. Resources need to be mobilised more effectively and alternative sources should be considered. Closer links should be established with other sub-regional and regional initiatives and the organisational effectiveness of the GMS Program needs to be strengthened.



ASEAN recognises the need for collaboration and unity among its member states in pursuit of regional transport integration. The key initiatives that follow from this recognition are described in the next section. The case studies for Singapore and Malaysia given in Boxes 4.2 and 4.3 show how transport infrastructure has played a crucial role in the development of these two economies and illustrate the opportunities available to the CLMV and the less developed ASEAN-6 nations.

### Box 4.2. Enabling Trade: Transport Infrastructure in Singapore

Transport infrastructure development, particularly links with the rest of the world, has been of particular significance for Singapore. Because of its small size and lack of natural resources, the island republic is critically dependent on trade and capital and labour flows for its continued prosperity. Transport infrastructure is not just important to its economic progress but vital to its survival as an independent country.

Since its separation from Malaysia in 1965, Singapore has pursued an export-driven industrialisation policy, reduced barriers to its international trade and welcomed foreign investments. Singapore's total merchandise trade is almost a third of the ASEAN total. It ranks 14th in the world in terms of merchandise exports and 15th in imports (WTO, 2010). This high trade volume is facilitated by excellent port and airport infrastructure. The Port of Singapore connects the island to over 600 other ports in 123 countries spread over six continents. Efficient, reliable and strategically located, the Port has developed into a major trans-shipment hub. It handles about one-fifth of the world's total container trans-shipment throughput and 6% of global container throughput and generates substantial revenue for the small city-state (PSA Singapore, 2010). Similarly, Singapore's main airport, Changi International Airport, has developed into a major aviation hub in Southeast Asia. It serves 185 cities in 58 countries and is capable of handling 64 million passengers a year. Since its opening in 1981, the airport has won over 340 awards for its safety, efficiency and excellent service (Changi Airport Singapore, 2010).

Almost as significant as Singapore's reliance on trade is its reliance on foreign capital and labour. In this respect, transport infrastructure has made important contributions. In order to attract and retain mobile capital and labour, Singapore has invested heavily in infrastructure along with other public services and housing while maintaining political and social stability.

In particular, the rail infrastructure has contributed significantly to the development of the financial and business sectors in Singapore. A good land transportation network has been integral to improving the accessibility of the Central Business District, allowing it to support a large workforce and to attract high value-added investments.

### Box 4.3. Promoting development and income equality: transport infrastructure in Malaysia



Transport infrastructure development has also had profound positive effects for Malaysia. In particular, it has helped Malaysia fulfil two goals: providing the infrastructure needed for economic development; and reducing income inequalities.

Like Singapore, Malaysia is economically dependent on domestic and external trade. It ranks 21st in the world in terms of merchandise exports and 28th in terms of imports (WTO, 2010). The development of transport infrastructure links both internally and with the rest of the world has been of paramount importance in facilitating trade.

Apart from the development of port and airport infrastructure, Special Economic Zones (SEZs) are a distinctive feature of Malaysia's infrastructure development. Malaysia is a large country and to develop the entire country homogeneously would mean spreading its limited capital too thinly. The SEZs are intended to be oases of world-class infrastructure and offer further incentives for exports in the form of tariff exemptions and streamlined administrative procedures. Examples of SEZs are Iskandar Malaysia in Johor, the Northern Corridor Economic Region in north Peninsular Malaysia and the East Coast Economic Region in the east. These SEZs involve substantial investment in infrastructure, both by the government and by private corporations. For instance in the 9th Malaysia Plan, RM 10 billion was set aside by the government for the Iskandar Malaysia project. Iskandar Malaysia has attracted investments despite global uncertainties. Up to December 2009, it had received RM 55.56 billion, of which 60% came from foreign direct investments. This figure surpassed the RM 44.75 billion targeted for 2009. Also, some 44 000 jobs have been created since the launch of this SEZ (*The Star*, 2010). This example illustrates the potential economic gains to other countries from transport infrastructure development in particular zones, and could be especially relevant to the CLMV owing to their large land areas.

The second goal of Malaysia's infrastructure development is the reduction of income inequality. Malaysia has large regional income inequalities, especially between the West Coast states in Peninsular Malaysia and Sarawak and Sabah in East Malaysia. Inland transportation networks promote economic growth in less developed areas of the country. The government is taking steps, such as the Rural Roads Programme, to bridge the gap between Peninsular and East Malaysia. On 28 January 2010, the Malaysian government launched the Government Transformation Programme (GTP) Roadmap. This roadmap dedicates a chapter to improving rural basic infrastructure. It aims to spread the benefits of economic development from urban to rural areas. The target is to construct, by 2012, more than 7 000 kilometres of new and upgraded roads, 1 900 kilometres of these in Sabah and Sarawak. This expanded network will connect an estimated additional 800 000 people in East Malaysia to the road network (Government Transformation Programme, 2010). The project will cost the government RM 17.4 billion (Bernama, 2010).

## Development of ports has been key to ASEAN's integration into global production chains

ASEAN's transport infrastructure development has been greatly influenced by its commitment to international trade and integration with regional and global production networks. This commitment has greatly stimulated the development of ports in the region, especially in Malaysia and Singapore.

Under British colonial rule, both Malaysia and Singapore established themselves as key ports thanks to their location along the Malaccan and Johor Straits. The ports of Penang and Malacca in Malaysia received ships from South Asia and Europe as they navigated the Straits of Malacca, while Singapore became a centre of *entrepôt* trade, proving itself an important hub for the trade in spices, textiles and other commodities that were exchanged in the region.

While Singapore's international trade is handled by the Port of Singapore, Malaysia, with a long coastline, has a total of 105 landing facilities ranging from major ports to landing jetties. There are 17 major ports in total; the largest ones are Port Klang and the Port of Tanjong Pelepas. Port Klang ranked as the world's 15th busiest container port in 2009 (Port of Hamburg, 2010).



While shipping in the region is dominated by Malaysia and Singapore, other countries have their fair share of key ports. The archipelagic geography of countries such as Indonesia and the Philippines has created the need for local ports to facilitate the ferrying of goods between islands.

Indonesia has some 300 public ports scattered over the archipelago. Of these, 43 are international liner service ports; the rest are feeder and specialised ports serving inter-island routes. Sea transport is essential for economic integration and for domestic and foreign trade and each major island has at least one significant port city. Jakarta (Tanjung Priok), Surabaya, Belawan and Ujung Pandang, the four largest ports, handle most of Indonesia's export and import cargoes. Much of the domestic traffic originates in or is destined for these four ports. Inter-island shipping is the prevailing means for distributing goods through the ports in Indonesia. The cargo volume carried by inter-island shipping services exceeds 300 million tonnes annually, far greater than the volume of Indonesia's international trade.

The shipping industry in the CLMV is led by Viet Nam, which benefited from a developmental head start of a decade or so. It has an established port and shipping industry, with 80 sea ports. Large ports are developed by the Viet Nam Maritime Administration (Vinamarine), an arm of the government and then turned over to the Viet Nam National Shipping Lines (Vinalines) for management and operation. In addition, local governments manage 20 ports of their own. Between 1998 and 2003, annual throughput doubled to 114 million tonnes. Ports in the southern Focal Economic Zone were the main contributors to this dramatic increase, accounting for 66% of total throughput. Foreign ownership of port facilities is allowed; for example, the Viet Nam International Container Terminal in Ho Chi Minh City is 90% foreign-owned, while the Interflour grain port in Vung Tau is 100% foreign-owned. However, port and shipping services within the ports can only be provided through a joint venture with a local company, with the foreign partner owning no more than 49%. Port efficiency has improved in recent years, leading to lower operating costs. Viet Nam's future transport development plans are heavily shaped by its trade and economic development objectives (Box 4.4).

Shipping in Cambodia, Laos and Myanmar is still in its infancy. Cambodia, though, is expanding its main deepwater sea port located at Sihanoukville. The port has benefited from improved road links with the rest of Cambodia, especially with Phnom Penh. Phnom Penh's own port, situated on the Mekong, can only be accessed through the Mekong Delta in Viet Nam via Ho Chi Minh City. Koh Kong, Cambodia's third port, is situated near the Thai border and can only accommodate smaller vessels.

As Laos has no direct access to the sea, it uses ports in Viet Nam and Thailand, depending on them for its international trade and transport services. The upper section of the Mekong is dominated by international traffic from China, Myanmar and Thailand. An agreement on the commercial navigation of the Lanxang-Mekong River between Laos, China, Myanmar and Thailand has been signed. Domestically, Laos has 21 port facilities on the Lao side of the Mekong, 20 of which are run by provincial governments. The remaining, Kaolia, is operated privately.

**Box 4.4. Transport development plans in Viet Nam**

According to Viet Nam's Ministry of Transport and Communications (VMTC), a record USD 1.3 billion was disbursed for six transport infrastructure projects in 2009 (Viet Nam Plus, 2010). Four of these projects were for the building and upgrading of highways. They were funded by the VMTC and the private sector through the Viet Nam Expressways Corporation (VEC), which raised more than USD 2 billion and the Bank for investment and Development of Viet Nam (BIDV), which raised USD 833 million. The USD 3.6 billion needed for the Van Phong international trans-shipment port in the central province of Khanh Hoa was funded by Vinalines, while the Nhat Tan Bridge was funded by the government of Japan (USD 757 million). The ministry has further announced that USD 810 million will be spent on similar infrastructure projects in 2010, in anticipation of future demand growth (Viet Nam News Association, 2010).

The need to meet future demands on Viet Nam's transport infrastructure is underscored by a recently completed study by the Japan International Co-operation Agency (JICA), which projected traffic and transport demand in Viet Nam until 2030 (TBKT, 2010). The study projects that combined passenger and freight demand in 2030 will be seven to eight times that of 2008 levels. To meet this demand, Viet Nam's expanded road network will be concentrated in the economic development zones in the northern, central, southern and coastal regions. Short-term developmental programmes (2011-15) have been drawn up, while feasibility studies for a North-South high speed railroad have been undertaken. JICA estimated in 2008 that the required capital investment for the building and upgrading of infrastructure would amount to USD 166.7 billion for the 396 projects needed.



## Infrastructure connecting the core with the periphery is critical to improving rural living standards

A common feature of economic development in any country is rural-urban migration. Good core-periphery connectivity plays a dual role in this process: it facilitates the movement of people from poorer rural areas to the urban and economic centres while allowing for the decentralisation of economic activity from city centres. More importantly, efficient transportation networks expand the access of the rural population to services such as health care and education. While urbanisation can exacerbate income inequality in the short term, increasing the access of rural areas to opportunities for jobs and incomes can help in the longer term to narrow the rural-urban development gap.

Many Southeast Asian countries recognise this positive aspect of rural transport infrastructure development. For example, the Malaysian government has sought to improve rural transportation through projects such as the Rural Roads Programme. The aim of the projects is to link rural parts of the country to the main network of inter-urban highways, thereby encouraging development and reducing income inequality. The Department of Highways in Thailand continues to improve and expand the nation's roadways, while the Ministry of Transport's Department of Rural Roads is working on projects to pave thousands of miles of unpaved rural roads.

Improvement in road connectivity has been marked in Viet Nam. More than 97% of Viet Nam's 10 602 rural communities have access to district centres and 84% of national roads in Viet Nam are paved, a significant improvement from 61% in 1997. Roads deemed to be in good condition form 66% of

the road network, an improvement due largely to new construction rather than the rehabilitation of existing roadways. Local, rural and provincial roads are not as well maintained, despite their being connected to the national road network. However, the proportion of the rural population with access to all-weather roads has been rising steadily since the 1990s.

Despite improvement in rural transport, progress in the region has not been uniform. The experience in Laos is an example. It has one of the lowest population densities (23 people/square km) and one of the largest shares of populations living in rural areas (65%). Transport infrastructure development is vital to connecting remote areas and quickening socio-economic development. About 40% of villages throughout Laos have no access to roads. Rural incomes are higher in villages with road access (USD 97 per capita) compared to those without (USD 28 per capita). Distance from main arteries matter – roads can be anywhere from a half hour's walking to an hour's drive. Some villages are also serviced by rivers and tributaries. Since the late 1990s, the government has given priority to the rehabilitation of the road network. Spending on road infrastructure and maintenance, through initiatives such as the Road Maintenance Fund and the Road Fund Advisory Board set up in April 2001, have taken the largest share of overall public expenditures. As of 2004, 61% of all national roads were still classified as being in poor or bad condition. Two-thirds of all provincial roads are classified as poor, with many sections passable only in the dry season.

## Urbanisation is placing increasing strain on transport in the metropolitan areas

Transport in the metropolitan areas of Southeast Asia (Singapore excepted) is characterised by inefficient and relatively expensive public transport services and networks, making urban residents choose private vehicles as their primary means of transportation. This has led to problems of congestion and road safety in the burgeoning cities in the region.

Urban public transport systems in Southeast Asia range from the very well developed in Singapore to virtually non-existent, as is the case in Cambodia, whose urban transport infrastructure was destroyed by military conflict and civil strife. However, public transport systems in most of the region have failed to keep pace with increased transport demand from rapid urbanisation, growth in economic activity and increased affluence, leading to widespread congestion problems. Even Malaysia's capital city, Kuala Lumpur, has not been spared crippling traffic jams, despite its relatively developed public transport system. That system, consisting of rail, bus and taxi services, is not effectively utilised. Very often in ASEAN countries, the public transport system is supplemented (or sometimes substituted for) by privately owned taxi services comprising taxicabs and a variety of motorised trishaws (called tuk-tuks in Laos and Thailand and jeepneys in the Philippines).



Motorcycles are often the primary mode of transport in urban areas. This is the case in Viet Nam, where they constitute 60-65% of trips. Bicycles constitute 25% of trips, buses about 7% and cars less than 5%, though this last figure is rapidly rising. The transport networks in Viet Nam's cities are limited and the potential for increased capacity in urban areas is greatly constrained. As a result, rising vehicle ownership due to economic growth is leading to road congestion. Public transport in the form of buses and a new urban rail system has been planned. This picture is similar in most other ASEAN cities.

## External shocks have hampered transport development in some countries

While political and economic issues have been the primary influence on transport infrastructure development in Southeast Asia, external events have also adversely affected that development in some cases. Two countries, Cambodia and Myanmar, are cases in point. Transport infrastructure in post-conflict Cambodia has been adversely affected by intermittent military turmoil and has only recently begun to be rebuilt and expanded. The present state of transport infrastructure is a constraint on economic growth and greater income equality.

Myanmar, on the other hand, was ravaged by Cyclone Nargis in May 2008, causing 140 000 fatalities and destroying buildings and other infrastructure, especially in the Ayeyarwady Division, the country's most populous region. Because of the uncertain political system in Myanmar and the authorities' lukewarm attitude to the activities of foreign organisations, foreign governments and international organisations, transport data for the country are hard to come by. This makes it difficult for external organisations to offer aid and to participate in joint ventures to improve transport facilities in the country.

# REGIONAL INITIATIVES FOR TRANSPORT INTEGRATION

ASEAN member states need to co-ordinate their plans for transport infrastructure development to maximise the benefits for themselves as well as for the region. Transport infrastructure is not an end in itself, but a key component of the building of an ASEAN Economic Community. Land and rail transport forms an important part of this infrastructure development strategy. In addition, ASEAN has produced roadmaps for maritime and air transport. ASEAN has four main infrastructure projects: the ASEAN Highway Network; the Singapore-Kunming Rail Link; the ASEAN Single Aviation Market; and the ASEAN Single Shipping Market.

## An extensive ASEAN highway network is under development

The ASEAN Highway Network (AHN) is an integrated ASEAN road network, comprising 23 routes and covering 38 400 kilometres, linking all ten member states. Large sections of the ASEAN Highway Network are also part of the Asian Highway Network (AH), an initiative by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) to link Asian states. The AHN is an important infrastructure and logistics component for achieving ASEAN's goal of closer economic integration, especially in providing physical interconnectivity for the efficient facilitation of transit and inter-state services in ASEAN and in the integration of the Mekong Basin countries.

The idea of an integrated ASEAN transportation network was first suggested in the Manila Declaration, signed on 15 December 1987. This idea was reiterated in the ASEAN Vision 2020 adopted in Kuala Lumpur, Malaysia on 15 December 1997, and formalised in the Hanoi Plan of Action adopted on 15 December 1998. Finally, a Ministerial Understanding on the Development of the ASEAN Highway Network Project was signed on 15 September 1999 during the Fifth ASEAN Transport Ministers Meeting in Hanoi, Viet Nam (ASEAN, 1999a). In this Ministerial Understanding, the strategic route configuration was formalised and uniform technical design standards were set out. A phased development timeframe was also put into place (Table 4.2)



**Table 4.2. Development phases of the ASEAN highway network**

| Phase | Tentative Completion Year | Technical Requirement |
|---|---|---|
| Stage 1 | 2000 | Network configuration and designation of national routes to be completed. |
| Stage 2 | 2004 | Road signs for all designated national routes to be installed. All designated national routes upgraded to at least Class III standards (based on Asian Highway Standards promulgated by ESCAP). All missing links to be constructed. All designated cross-border points to be operational. |
| Stage 3 | 2020 | All designated national routes upgraded to at least Class I or Primary Road standards. For low traffic volume non-arterial routes, the Class II standards are acceptable. |

*Source:* ASEAN Secretariat (1999b), "Figure 1 from Annex A, Ministerial Understanding on the Development of the ASEAN Highway Network Project", Jakarta.

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**Figure 4.1. The ASEAN highway network**




*Source:* ASEAN Secretariat (1999a), "Figure 1 from Annex A, *Ministerial Understanding on the Development of the ASEAN Highway Network Project",* Jakarta.

The ASEAN Highway Network is featured in numerous plans, such as the Hanoi Plan of Action's Transport Action Agenda, as well as its Successor Plan of Action 1999-2004; the ASEAN Transport Action Plan (ATAP) 2005-10; the Vientiane Action Programme (VAP) 2004-10; and the ASEAN Economic Community Blueprint 2007. Progress has been reviewed at the annual ASEAN Transport Ministers (ATM) meetings.

By the sixth ATM in 2000, the ASEAN Highway Infrastructure Development Plan had been prepared and the route numbering for the ASEAN Highway's 23 designated routes had been finalised. By the midterm review of the Hanoi Plan of Action during the seventh ASEAN summit in 2001, it was reported that the outline plan for a pan-ASEAN transport network was in place.

The missing links of the ASEAN Highway were planned to be completed by 2004 but this target date was not achieved. The ASEAN Transport Sectoral Action Plan 2005-10 identified priority road infrastructure projects to address the missing links in the Mawlamyizine-Thanbyuzayat section in

Myanmar, the Attapeu-Phia Fai section in Laos and the Quang Ngai-Kon Tum section in Viet Nam. In addition, work remains to be completed on implementing the route numbering system as well as on harmonising the road signage system.

National routes were not upgraded to Class III standards by 2004 as specified in Stage 2. In particular, Myanmar still had 3 163 km of highway below Class III standards in 2007. It also had over 200 km in the incomplete sections of the ASEAN highway (*People's Daily*, 2007).

## The Singapore-Kunming rail link has made good progress since 2000

The Singapore-Kunming Rail Link (SKRL) runs from Singapore through Malaysia, Thailand, Cambodia, Myanmar, Laos and Viet Nam to the Chinese city of Kunming, with a total rail length of 5 382 kilometres. Designed to be an economical and efficient mode of cross-border cargo transportation, the SKRL forms part of the Trans-Asian Railway, a project initiated by ESCAP. The SKRL is the core project under the ASEAN Mekong Basin Development Co-operation initiative (ASEAN, 2007).

The rail link was first proposed at the Fifth ASEAN Summit in Bangkok in December 1995. During the First Ministerial Meeting on the ASEAN-Mekong Basin Development Co-operation (AMBDC) in June 1996, Malaysia was appointed to chair a Special Working Group tasked to carry out the project. Malaysia provided an initial RM 2 million of funding to begin a feasibility study of the project. This study evaluated six alternative routes linking Singapore to Kunming in terms of their technical, economic and financial feasibility and their environmental impact. It also prioritised routes based on specified criteria, financing options and the appropriate implementation schedule. The study was completed in August 1999 and the first route was selected. This route was identified as having 431 kilometres of missing links, and estimated to cost USD 1.8 billion to complete. The route recommendations were endorsed at the Sixth ATM Meeting in 2000 and the Twenty-Second ASEAN Railways General Managers' Conference in October 2000.

As with the ASEAN Highway Network, the Singapore-Kunming Rail Link featured in the Hanoi Plan of Action's Transport Action Agenda, its Successor Plan of Action 1999-2004, the ASEAN Transport Action Plan (ATAP) 2005-10, the Vientiane Action Programme (VAP) 2004-10 and the ASEAN Economic Community Blueprint 2007. It is also reviewed annually at the Ministerial Meetings on the ASEAN-Mekong Basin Development Co-operation. Further, the Special Working Group meets annually to discuss progress on the SKRL. Unlike the ASEAN Highway Network, there is no official deadline or fixed timetable for the completion of the SKRL, though in 2007 then ASEAN Secretary General Ong Keng Yong expressed the hope that it could be completed by 2015 (*Reuters*, 2007).



Since 2000, the SKRL has seen steady progress. Member countries have rehabilitated national rail tracks, constructed new rails and conducted feasibility studies for missing sections as well as spur lines. Funding has also been secured from the Asian Development Bank and various countries such as Malaysia, Thailand, Viet Nam, Korea and the People's Republic of China.

In the ASEAN Transport Action Plan 2005-10, missing links were identified as follows: Poipet-Sisophon Railway Link Project (Cambodia); Ho Chi Minh City – Loc Ninh Railway Link Project (Viet Nam); spur lines between Three Pagoda Pass and Thanbyuzayat (Myanmar); and the Vientiane – Mu Gia – Tan Ap – Vung Ang route (Laos/Viet Nam). These were also mentioned in the Vientiane Action Programme, which targeted 2010 as the year of completion of the missing links. By 9 April 2010, only two missing links remained (Lee, 2010).

**Figure 4.2. The Singapore-Kunming Rail Link**




*Source:* ASEAN (2007), the Singapore-Kunming Rail Link - Fact Sheet.

## The ASEAN Single Aviation Market should significantly benefit regional air transport

The ASEAN-wide Single Aviation Market (ASAM) refers to an open-sky arrangement in the ASEAN region. Envisioned in the ASEAN Economic Community Blueprint of 2007, it is targeted to come into effect by 2015. Under this arrangement, air travel between member states will be fully liberalised. In technical terms, up to the fifth freedom of the air will be granted to all ASEAN states, allowing airlines flying between Country A and Country B to pick up passengers at an intermediate stop in Country C. For example, a Singapore Airlines flight originating in Singapore and ending in Hanoi will be able to pick up passengers in Bangkok if Bangkok is an intermediate stop for that flight. Fifth freedom rights increase competition between the national airlines and foreign carriers.

When realised, ASAM will make intra-ASEAN routes more competitive, with beneficial effects on operational cost for airlines and airfares for passengers. An "open skies" regime will reduce barriers to the flow of goods and services between member states and allow member countries to take advantage of the global growth in air traffic.

The idea of liberalising ASEAN's air transport network was mooted as early as 1995 during the ASEAN leaders' summit in Bangkok, Thailand. It was taken up at the First ASEAN Transport Ministers Meeting in 1996. However, at that time the adoption of an open sky policy was seen as a long-term goal. The initial focus was on sub-regional liberalisation followed by air freight services. A Memorandum of Understanding on Air Freight Services signed in 2002 allowed designated airlines of each member country to operate all-cargo services between designated points in ASEAN countries. In 2003, the Transport Ministers endorsed the Roadmap for ASEAN Competitive Air Services Policy, which aims to liberalise regional air cargo and passenger services.

It was only in 2004, after the conclusion of the Plan of Action in Transport 1999-2004 in support of the six-year Hanoi Plan of Action that ASEAN began formally to think of a "Single Aviation Market". Plans for the ASAM were first put forth in the Action Plan for ASEAN Air Transport Integration and Liberalisation 2005-15. The Roadmap for Integration of Air Travel Sector (RIATS) envisaged the liberalisation of scheduled passenger services. In 2007, the plan for an ASEAN-wide Single Aviation Market was included in the ASEAN Economic Community Blueprint.

According to the RIATS, scheduled passenger services in designated ASEAN sub-regions would have unlimited third and fourth freedom rights in 2005 and in 2006 would acquire unlimited fifth freedom rights.[1] This freedom would be extended in 2008 to cover in each country at least two designated points between the sub-regions. By December 2008, there would be no limitations on third and fourth freedom air traffic rights between capital cities. By December 2010, fifth freedom traffic rights would be granted by all ASEAN countries to ASEAN carriers for the sub-regions and capital cities. As for air freight services, significant liberalisation has been achieved (ASEAN, 2004a). After the goals of RIATS are met, the challenge for ASEAN is to develop a Single Aviation Market by 2015, when all ASEAN carriers are scheduled to acquire fifth freedom rights to all ASEAN cities.



The ASEAN countries signed in 2009 the ASEAN Multilateral Agreement on Air Services. This Agreement permits the airlines of member countries to fly across each other's airspaces without landing, as well as to make stops in each other's territory for non-traffic purposes. The Agreement consists of six Implementing Protocols which are consistent with the objectives of RIATS. Member countries also signed in 2009 the ASEAN Multilateral Agreement on the full liberalisation of Air Freight Services. The two protocols of the Agreement together specify third, fourth and fifth freedom rights between designated points in ASEAN, including all regional airports. These agreements serve to implement the RIATS.

Liberalisation has made good progress, with countries such as Singapore, Malaysia, Thailand and Brunei Darussalam opening selected routes in recent years. In some cases, this was done at an earlier than required date; for example, flights between Singapore and Kuala Lumpur were fully liberalised in December 2008. There are now more carriers, including Air Asia and Tiger Airways, operating scheduled flights between the two cities.

However, despite the agreements they have signed, some ASEAN governments have not kept to the agreed schedules for liberalisation. Restrictions remain on flights to capital cities such as Jakarta and Manila. Foreign low-cost carriers still do not have unlimited rights to fly to Jakarta. In May 2010, Indonesia's Transport Ministry's Director of Air Transportation said that Indonesia is not prepared to meet the 2015 deadline and would only open five key airports to ASEAN member carriers (Kaur, 2010).

## Domestic maritime transport is particularly important to ASEAN's archipelagic countries

In the context of increasing globalisation, maritime transport deserves special mention. Although road, rail and air transport contribute to the movement of freight, the bulk of goods are transported by ship. With Indonesia, Brunei Darussalam and the Philippines separated from other ASEAN states by water, and with the development of important trading relationships with other nations in the Asia-Pacific region, especially China, an efficient maritime transport system is critical to ASEAN integration. Hence, the development of maritime transport infrastructure has particularly profound and far-reaching implications on the region's economic progress.

### Box 4.5. Declining water levels in the Mekong River: the regional implications

Water levels in parts of the Mekong river have fallen to their lowest in almost 50 years. The water itself has become increasingly salty and nutrient levels have also declined. Falling water levels have impeded the growth of the major cargo route between the southern Chinese city of Jinghong and the northern Thai city of Chiang Saen, the site of a new river port now under construction.

Governments and environmental groups have blamed the falling water levels on the hydroelectric dams on the upper reaches of the Mekong and on the insular water management policies of the Chinese government. The Chinese authorities, however, have attributed the low water levels to the unusually severe drought conditions afflicting the area. On 3 March 2010, The Mekong River Commission (MRC) sent its first letter of complaint to China through the United Nations, urging greater Chinese co-operation and information sharing on the issue.

Whatever the cause, the situation has led to shortages of irrigation and drinking water in many cities, including Luang Prabang, Laos's historic capital. Fisheries on the Mekong have also suffered. Most significantly, however, there have been reports of stranded cargo in sections of the river bordering Myanmar and Laos. In mid-February 2010, 20 Chinese vessels had to be pulled to higher waters or into Thai ports. The customs department in Chiang Saen (Thailand) estimated that USD 4.6 million worth of cargo was left stranded on the river. The situation threatens the livelihoods of the 60 million people in Thailand, Cambodia, Laos and Viet Nam who depend on the Mekong for sustenance and also affects inland trade, especially that in landlocked Laos. The costs from the low water levels may increase further since the Jinghong-Chiang Saen route will become more important following the implementation of the China-ASEAN Free Trade Area in January 2010 (McCartan, 2010).

The Chinese government's plans to build eight dams on the upper reaches of the Mekong began to engender concerns about fisheries and endangered species as early as 1993, when the first of the eight dams was completed. To date, a total of four dams have been constructed. Floods in Laos and Thailand in 2008 were blamed on the dams. The Chinese authorities have maintained that environmental circumstances are the root cause of the wide fluctuations in the flow of the Mekong. The new dams, it has claimed, could help regulate the flow downstream, increasing water levels by as much as 30-40% in the dry season.

**Figure 4.3. The Mekong begins in China as the Lancang River before entering the Mekong sub-region and passing through the CLMV countries and Thailand**




*Source:* Japan Focus (2010), *Mekong Map.*

There is scepticism about the Chinese claims as their authorities have not provided detailed information about the government's water management policies, which the authorities deem a matter of national security. China is also not part of the MRC, preferring instead to remain a "dialogue partner" like Myanmar. As a result, the MRC cannot function effectively as a dispute resolution platform. The Commission members, Thailand, Laos, Cambodia and Viet Nam, have often found it necessary to negotiate with China through the UN and other channels. (Sarnsamak, 2010).

The recently concluded MRC Summit in April 2010 marked a turning point in negotiations over the Mekong River region. Thailand and China agreed that joint discussions should be held by the six countries along the river before any further projects on the river are implemented. Thailand's Foreign Minister, Kasit Piromya, expressed optimism over China and Myanmar joining the MRC, adding that the World Bank and the ADB have been approached to provide financial resources to develop a common water management framework for MRC members.

In addition to facilitating international trade, maritime transport is important for the transport of commodities and goods within some ASEAN countries. Domestic shipping by water varies significantly in importance depending on the geography of each country. It is not important in the small states of Singapore and Brunei Darussalam and is restricted to inland waterways for landlocked Laos (Box 4.5). On the other hand, domestic water shipping is vital to Malaysia and the archipelagic countries of Indonesia and the Philippines.

Domestic water shipping in Malaysia is important because western peninsular Malaysia is separated by water from East Malaysia, and because of the unfavourable terrain dividing the east and west coasts of peninsular Malaysia. In 2002, the Ministry of Transport reported that about 200 000 twenty-foot equivalent units (TEUs) of cargo were shipped between Malaysian ports in 2000, the bulk of it being transfers from Port Klang in West Malaysia to the provinces of Sabah and Sarawak in East Malaysia. The relaxation of cabotage rules has led to the possibility of non-Malaysian flagged ships moving cargo between Port Klang and Penang, making the former a hub for other Malaysian ports.

In the Philippines, the key domestic shipping routes link the capital Manila to the cities of Cebu, Davao, Zamboanga and General Santos, and Cebu to Davao city and Zamboanga. Manila plays the role of shipping hub for international trade in the Philippine archipelago. In 2000, about 550 000 TEUs were shipped between Philippine ports, together with an undisclosed volume of non-containerised cargo. Cabotage rules remain strict, with inter-island cargo carried only by domestically flagged ships. Consequently, freight rates within the Philippines remain comparatively high.

Inter-island container shipping is very important in Indonesia. While much of this trade is made up of international cargo received at the main ports, there is also a substantial volume of domestically originated inter-island container trade. Estimates for 2005 put this figure at about 300 000 to 350 000 TEU annually, constituting half of total domestic container movements (including trans-shipments of internationally traded goods). Break-bulk cargo movements are known to be significant, though the volume is not known.

## Significant obstacles must be overcome to achieve a single ASEAN shipping market

Shipping markets within ASEAN have been liberalised in recent years. Once protectionist, nationalistic and unco-ordinated, regulations have been relaxed. Private and public investment in infrastructure has increased, with positive impact on ship operations and network structures (see the 2005 study commissioned by ASEAN — PDP Australia Pty Ltd and Meyrick and Associates, 2005). Compared to equivalent short-sea shipping services in Europe, freight rates in ASEAN have become more internationally competitive. However, inefficiencies remain in domestic shipping because of cabotage and other restrictive rules.



The development of a single market for intra-ASEAN shipping requires progress on a number of fronts. First, the unequal development of the shipping and port sectors among member states means that there are gaps in hard infrastructure. Port infrastructure is inadequate to meet the demands of trade expansion, especially the expansion of intra-regional trade. While there has been much progress in developing ports to handle containers in ASEAN countries, the shipping fleet handling intra-ASEAN trade comprises mostly old break-bulk and general cargo ships.

Second, the institutional framework to reinforce efficiency gains in the shipping markets needs improvement. Data on intra-ASEAN cargo flow are inadequate, especially for the minor ports. Consequently, national authorities cannot effectively tackle issues such as port productivity and a lack of transparency in port operations. Little is known about the informal rate structures that increase shipping costs and reduce operational efficiency.

Third, key activities and resources closely associated with regional shipping need to be complemented by investments in support activities. For example, there is a shortage of qualified seafarers in some ASEAN countries, which suggests the need for a common standard and certification process for seafarers in the region. Ship financing services are inadequate or difficult to access for smaller operators, who are less able than larger operators to deal with market risks and volatility. Inadequate financing prevents smaller operators from upgrading their fleets to improve their efficiency and competitiveness. Logistical co-ordination between customers, transport providers and the government also needs to be improved, especially in the poorer ASEAN countries. Finally, piracy is estimated to cost the region USD 25 billion annually (Rosenberg, 2009). However, little is done to combat piracy at the level of ship-owners because of the potential increases in operating costs (Box 4.6). Regional governments must therefore deal with the problem.

Finally, while they recognise the need for co-operation and collaboration among the stakeholders in shipping markets, ASEAN governments have been reluctant to decentralise planning and decision-making processes. In part, the internationalisation of the shipping industry has reinforced this reluctance, which reflects strong nationalistic and protectionist sentiments. The transparency and co-ordination required to realise a Single Shipping Market remains elusive (PDP Australia Pty Ltd and Meyrick and Associates, 2005).

## A roadmap has been formulated to address the obstacles

To address these problems, a Roadmap towards an Integrated and Competitive Maritime Transport was adopted at the Thirteenth Annual Meeting of the ATM on 1 November 2007. The roadmap outlines five broad strategies:

1. The development of a single ASEAN voice on issues of common interest to member countries;
2. Infrastructure development to support intra-ASEAN shipping services;
3. Progressive integration towards an ASEAN Single Shipping Market;
4. The harmonisation of regulations and practices to ensure a fair and equitable playing field for member countries;
5. The development of human resources and improvements in management and port operation practices and technology.

Measures being taken to implement the strategies include the development of databases on the capabilities of and facilities in ASEAN ports and a database on maritime trade movements in and out of ASEAN and within the region. Better and more complete data will facilitate the co-ordinated development of port services between countries and thereby make it easier to upgrade port infrastructure efficiently. Nevertheless, achievement of the goals of a Single Shipping Market by December 2011 and a single market for ASEAN seafarers by 2013 may be jeopardised if the various transport committees do not make significant progress quickly.

The Maritime Transport Working Group (MTWG) is responsible for co-ordination and the technical oversight of individual projects while the Senior Transport Officials Meetings (STOM) provide guidance, assessment and approval for the measures. The ATM oversees areas of mutual interest and concern among members. The strategies are to be implemented using the "ASEAN minus X" formula. Under this formula, two or more countries can proceed and follow through on agreed measures in the roadmap. Other countries can join when they are ready.



### Box 4.6. Maritime transport security in Southeast Asia: the threat of piracy

The seas in Southeast Asia have recorded some of the highest rates of piracy in the world. In 2004, pirates in the region held hostage 43 crew members, 36 of whom were kidnapped in the Straits of Malacca alone. Indonesia reported 93 instances of piracy in 2004, 37 of which took place in the Malacca Straits. Piracy in the region is estimated to cost as much as USD 25 billion, a high cost which increases insurance and shipping rates.

Maritime law defines such behaviour as piracy only if it takes place in international waters. Most pirates operate in territorial waters and so are deemed to be armed robbers instead. However, the International Maritime Bureau has broadened the definition of piracy to include incidents that take place within the boundaries of countries. Piracy takes many forms, broadly categorised as follows.

Attacks while ships are anchored or in harbour. This is the most common type of attack; criminals board the ship in the early hours of the morning, often without detection, making off with valuables. Reports of selective opening of high value cargo holds suggest that pirates have information provided by employees of the ship or by port operators.

Robbery at sea. Pirates board ships, again in the early hours of the morning, with grappling hooks and take cash and other valuable objects and equipment from the ship and its crew.

Hijacking of vessels at sea. This is the least common form of piracy in the Southeast Asian region, but it is the most serious. Ships are seized for several days and their goods unloaded at ports chosen by the pirates. Oil-carrying ships have been a prime target for this type of piracy, especially in the late 1990s.

Kidnapping of ship crew for ransom. This type of piracy was first encountered only in 2001. In 2004, there were 14 reported cases in the Malacca and Singapore Straits (Raymond, 2005).

As piracy requires planning and often inside information, it is the work of organised networks. Pirates bribe officials to give them vital information or to overlook their activities. Like many other crimes, piracy has many causes. The rise of shipping traffic in and through the region creates opportunities. For many jobless young people, piracy can be a lucrative as well as an exciting way to earn a living. Poorly paid port officials can be easily bribed by those who control the pirates.

Most private operators find it too costly to implement security measures against pirates, as they deem the risk to be low. For countries, though, piracy and the associated threat of maritime terrorism is a significant transnational security problem. Recognising the threat piracy poses to their collective well-being, ASEAN has taken its own steps and is working with its dialogue partners in the ASEAN Regional Forum to find ways to address the piracy issue (Rosenberg, 2009).

## Regional efforts are underway to develop soft transport infrastructure

As they have sought to improve the various modes of transport – road, rail, air and shipping – at a regional level, ASEAN authorities have recognised that the full benefits cannot be realised without harmonising the various regulatory frameworks in ASEAN member states. Two recent ASEAN initiatives seek to promote this harmonisation.

The first is the ASEAN Framework Agreement on Multimodal Transport (FAMT) signed in November 2004. The Framework Agreement is a timely one given the growth in intra-ASEAN trade. To support this growth, transport infrastructure must be expanded. Logistics services also need to be more integrated into the transport infrastructure. However, this integration has been hindered by national protectionist policies affecting logistics companies, many of which are state-owned. The formation of the AEC and the single air and shipping markets will face logistics companies with greater competition from operators outside the region.



The FAMT stipulates certain norms for the contracts of multimodal transport providers. It addresses the balance between the competitive behaviour of international multimodal transport operators and regional users of the services. Participation in the agreement follows the ASEAN minus X principle (ASEAN, 2004b).

The FAMT was followed by the adoption in December 2009 of the ASEAN regional Framework Agreement on the Facilitation of Interstate Transport (FAFAIT) providing for the free movement of goods between states. This framework sets regulatory norms for multimodal and unimodal operators. It simplifies the customs and trade regulations of each country and so cuts the administrative cost of interstate transport. As it is guided by the most favoured nation principle (MFN), there is no preferential treatment of certain member states by others within ASEAN. This MFN clause will help to accelerate the creation of an ASEAN single market and free trade area (ASEAN, 2009a).

## Co-operation among ASEAN states on transport infrastructure is improving

ASEAN has not evolved a supranational body to which it has devolved executive powers. Implementation of agreements is left to member states. As member states vary greatly in their financial and implementation capacities and have different ideas on the right balance between preserving national sovereignty and allowing foreign competition, the co-ordination of transport infrastructure development has progressed at a slower pace than some members would like to see.

But progress there has been. Thailand and the CLMV countries have co-operated and made significant investments in hard transport infrastructure such as road and rail infrastructure. More sections of the Trans-Asian Highway route AH3 and the Singapore-Kunming Railway Link have seen completed. Thailand, the most developed country in the Mekong region, has played a critical role in co-ordinating transport infrastructure projects in the region.

The improvement of rail links between Thailand and Cambodia has become a multilateral collaborative effort. The Australian rail company Toll Holdings was involved in building the link between Sisophon in Cambodia and Poipet in Thailand in 2008 (*Railway Gazette International,* 2009a). Another link between Aranyaprathet in Thailand to Sisophon was planned in 2006 as part of the Trans-Asian Railway. Malaysia has donated both rails and sleepers to complete broken links between Malaysia and Thailand. The section of the Singapore-Kunming Rail Link spanning the two countries scheduled for completion in 2010 has received USD 80 million from the ADB and from the Organisation of Petroleum Exporting Countries (OPEC). Toll Holdings is involved in building direct rail services between Phnom Penh and Bangkok in 2013 (*Railway Gazette International,* 2009b).

There has also been close co-operation between Thailand and Laos in improving road and rail links. These links are centred round a series of Thai-Lao "Friendship Bridges". The first of these, to connect Nong Khai in Thailand to the Laos capital Vientiane, was completed in 1994 with development aid from Australia. In March 2009, the State Railway of Thailand network was extended across this First Thai-Lao Friendship Bridge to encompass a passenger and freight terminal in Laos. This extension provides a crucial link for trade for landlocked Laos. Surveys to extend the network by 12 kilometres to include Vientiane are being undertaken (Suksamran, 2009).

Several other Friendship Bridge projects between the two countries have been completed or planned. The second of these projects, linking Mukdahan Province in Thailand to Savannakhet in Laos, was opened in December 2006 (*People's Daily* online, 2006). The Japanese government provided USD 70 million for the bridge (*International Herald Tribune*, 2006). Work on a third bridge connecting the Thai Nakhom Panom Province to Thakek, Khammouane in Laos began in March 2009 and will be completed in September 2011. The Fourth Thai-Lao Friendship Bridge connecting Chiang Rai Province in Thailand to Ban Houayxay in Laos is also scheduled for completion in 2011. The estimated cost of THB 1 900 million will be split between Thailand and China. The project forms an important part of the expressway linking Bangkok in Thailand to Kunming in China.



Co-operative projects are also being undertaken with ASEAN neighbours. On 3 April 2008, the governments of Myanmar and India signed a landmark deal for a USD 120 million transport corridor project to develop multimodal connections over the Kaladan River that forms the international border between the two countries. When completed, the links will allow access to north-eastern Indian ports, bypassing Bangladesh. Other projects include the upgrading of the Burmese Sittwe port and the Kaladan waterway and the construction of a road connecting Setpyitpyin in Myanmar to the Indian border. India will provide USD 110 million for the project and Myanmar will contribute USD 10 million plus land. Both countries see the partnership as strategic. India needs access to more energy sources such as coal and gas, which Myanmar has in abundance. For its part, Myanmar needs the revenue as well as more international friends to balance its friendship and dependence on China.

# LESSONS FOR ASEAN INTEGRATION FROM THE EU

It is instructive to look at how transport infrastructure integration has progressed in other regions, especially the European Union (EU) which has considerable experience in this area. Salazar and Das (2007) point out three ways in which ASEAN can learn from the EU integration experience. First, effective integration takes time and political commitment. It can only proceed as quickly as members want it to. The interests of member states, however, can change with experience in co-operation.

Second, short, medium and long term goals must be clearly defined. Vague declarations of good intentions are not productive. Salazar and Das argue that the current ASEAN roadmaps and action plans must be more granular, that is more detailed, if they are to be useful guides for collective efforts. A side issue is the monitoring of progress. If detailed goals and timelines are put in place, how should progress be monitored effectively? For example, road and rail length are easily measured but softer aspects such as road maintenance are less easily quantified. The third and final suggestion by Salazar and Das is to construct clear rules and to develop stronger institutions, though not necessarily of the kind the European Union has evolved in half a century of ever closer co-operation. The ASEAN Charter, they believe, is a step in the right direction.

## ASEAN's conditions and imperatives differ from those of the EU

While the EU is regarded as the most successful example of regional integration, it is important to remember that its initial conditions and imperatives are quite different from those of ASEAN. Salazar and Das note three factors that make the EU quite dissimilar to ASEAN. First, ASEAN faces an institutional environment quite different from the one the European Economic Community confronted in the 1950s. The EEC evolved out of the European Coal and Steel Community, which was established to integrate the coal and steel industries in member countries. For Europe, the driving force for integration was political, namely to create a peaceful Europe, but the means were to be economic. ASEAN, in contrast, was designed to promote economic, social and cultural co-operation. Anxieties about regional developments including the threat of communism and the Vietnamese occupation of Cambodia compelled it to focus on political co-operation beginning in the late 1970s.



Second, the ASEAN Economic Community has to respond to a much more globalised world of intense competition than the EEC did half a century ago. It cannot be internally oriented but must engage the rest of the world in a way the EEC did not have to contend with in the 1960s.

Third, with ten members at very different levels of development, ASEAN as a group is unlike the EEC at its founding, when there were only six members, all of whom were at about the same level of development. The consequence is that ASEAN has to pay much greater attention to issues arising from the uneven development of its members. Finding common ground for co-operation among members at different stages of development is much harder.

The imperatives driving the EU have led to limited pooling of sovereignty involving the ceding of certain powers by member governments to supranational bodies such as the European Commission and the European Parliament – but ASEAN is unlikely to follow its example. For ASEAN, the EU, in the words of Rosario Manalo, head of the High-level Task Force on the ASEAN Charter, "…is only a reference and an inspiration, but not a model" (Salazar and Das, 2007). For the foreseeable future, it is most unlikely that ASEAN will create supranational bodies. Inter-governmental decision making by officials with occasional high-level political commitment will remain the preferred approach to greater regional integration.

# THE WAY FORWARD

National issues will usually take precedence over ASEAN-level initiatives. But ASEAN countries also recognise the need for collective action to realise outcomes that members individually cannot achieve. External funding for regional projects, for example, is easier to secure when there is strong political commitment among the involved countries. For all its seeming inefficiency, the ASEAN way of informal dialogue and co-operation has created a stable region that is increasingly receptive to foreign investments and ideas. In the area of transport infrastructure development, individual actions and collective initiatives should complement rather than work against each other to reduce regional disparities.

## Collective action problems can be reduced in a number of ways

ASEAN member states understand the need for co-operation to achieve joint long-term goals for transport infrastructure and other priorities. On occasion, though, some countries may pursue their own short-term goals, as the examples given earlier of failures to implement agreements liberalising air travel illustrate. Other illustrations are Malaysia's refusal to implement tariff reductions on auto-related products to which it had agreed in the ASEAN Free Trade Agreement; and the dispute between Singapore and the Philippines over tariff reductions on the latter's petrochemical exports. Co-ordination problems have slowed ASEAN's regionalisation process. A good example concerns differing product standards, especially those for consumer goods and information and communication technology (ICT). The use of product standards as trade barriers makes an ASEAN free trade area harder to bring about

Nevertheless, a country's interests need not necessarily run contrary to those of the region; an ideal situation would be where the interests are harmonised so that problems related to lack of political will and local ownership are eliminated. Co-ordination problems can be reduced in a number of ways. Yoshimatsu (2006) cites the example of standards harmonisation as an important factor in facilitating European integration. Mutual recognition of standards set by each country's regulatory agencies was also crucial, but it required greater co-ordination and familiarisation among regulatory bodies. In the same way, ASEAN leaders agreed in 1998 to harmonise standards of 20 priority product groups. This process was finally completed in 2003, three years after the original deadline.



Although ASEAN has not chosen to create supranational bodies to carry out collective action, it has developed "feasible enforcement mechanisms by intensifying the centralised nature of the regional organisation" to resolve collaborative problems (Yoshimatsu, 2006). An example of this type of response was taken at the 36th ASEAN Economic Ministers' Meeting (AEM) in September 2004 when ministers agreed to set up a legal unit within the ASEAN Secretariat and also the ASEAN Compliance Body (ACB) to handle disputes in much the same way as is used by the Textile Monitoring Body of the World Trade Organization (WTO). These measures were strengthened in November 2004 when the ASEAN Protocol on an Enhanced Dispute Settlement Mechanism replaced its less detailed predecessor. The ASEAN Charter of 2007 grants the ASEAN Summit adjudication power over serious breaches in the Charter. It also reaffirmed consultation and consensus as fundamental to decision making and acting within the enshrined principle of non-interference.

## Partnerships with other governments enhance ASEAN co-operation

Working together, ASEAN member states can develop more effective and sustainable partnerships with foreign governments and international organisations. Foreign partners can supplement ASEAN funding and help finance programmes and feasibility studies as well as develop joint ventures in transport infrastructure development. An example is the involvement of the Australian rail company Toll Holdings in several rail operations between Thailand and Laos. The funding provided by the ADB and OPEC for the Singapore-Kunming Rail Link mentioned earlier is one example. Other examples are the funding of the construction of the Thai-Lao Friendship Bridges by the Australian government

(whose construction included Australian companies as participants); and the donation by the Japanese government of USD 70 million for the second Friendship Bridge.

Foreign partners not only provide funds but also transfer technology and skills and strengthen institutional and technical capacity. The use of planning tools such as poverty maps can illuminate issues that need the most attention (see Box 4.7). Partnerships with academic institutions and international organisations with such capabilities can inform the planning of physical transport infrastructure networks.

Another area where ASEAN could benefit from foreign partners is in the greater use of green technologies in transport infrastructure projects. OECD countries have technology and expertise in this area and ASEAN transport infrastructure development could benefit from the environmentally friendly technologies that OECD countries have pioneered. The issue of climate change has come to the fore in recent years and it is important to ensure that transport infrastructure projects do not harm the environment. At the same time, the effect of climate change on transport infrastructure plans should be closely examined and projects adapted to these changes.

ASEAN can also draw on the expertise of its Dialogue Partners. ASEAN presently has ten Dialogue Partners: Australia, Canada, China, the EU, India, Japan, New Zealand, Korea, Russia and the United States. Pertinent to transport infrastructure development is the involvement of China, India, Japan and Korea in the Initiative for ASEAN Integration (IAI), as well as their active participation in sub-regional co-operation in the Mekong Basin region.

While partnerships with outside actors can be helpful, ASEAN must recognise that its members acting individually and collectively ultimately are in charge of their own economic destiny. Creating a business climate that is transparent and rewards efficiency will go a long way toward maximising the economic and social impact of transport infrastructure projects.

## Transport infrastructure projects need to be prioritised

Infrastructure projects should be prioritised before resources are devoted to their completion. Ideally, this should happen at all levels, from provincial governments to national and international decision-making bodies and should involve some form of cost-benefit analysis. Agreeing upon a method of selection among competing infrastructure development projects can be advantageous in several ways. First, it allows common interests to be aligned more easily by reconciling differences at the outset, avoiding the need to negotiate over every project. This helps to consolidate political will at various levels behind the project, which is often found to be lacking in development projects in the region. Next, being able to demonstrate that one project should be undertaken instead of another demonstrates greater commitment to accountability. This makes it easier for regional governments and ASEAN as a whole to collaborate with aid agencies and international organisations that are vital sources of financial resources and technical expertise.



## ASEAN capacity building is essential to reducing development gaps

A primary motivation of the IAI is to close developmental gaps between ASEAN's member states, especially those between the ASEAN-6 nations and the CLMV countries, Cambodia, Laos, Myanmar and Viet Nam. These disparities are stumbling blocks to the effective implementation of the measures under the IAI in the ASEAN-6 as well as in the CLMV countries.

The CLMV nations welcome programmes to deepen their integration into the ASEAN region. Such programmes can vary in quality and relevance to the aim of the IAI. There have been co-ordination problems arising in part from the lack of participation on the part of the CLMV countries as well as inadequate implementation and insufficient transfers of skills and knowledge. For the CLMV countries to benefit more fully from transport infrastructure development, they will need to pay more attention to the soft aspects of transport infrastructure, particularly the management and maintenance of ongoing and completed transport projects.

Building institutional capacity must be a priority area. This capacity should include the training of private and public sector workers and the development of regulatory and policy frameworks to manage transport infrastructure projects. As indicated in Box 4.7, projects that are properly planned and managed can have a huge impact on the access of the poorer parts of the region to the new economic opportunities that a more cohesive and integrated ASEAN is committed to creating.

### Box 4.7. Planning transport infrastructure for market access: the use of poverty maps

Expanding the road network and upgrading existing networks can have positive effects on the rural poor. Roads facilitate the transport of people and goods from rural areas to local economic centres. In the Philippines, for example, fishing communities benefited both directly from road improvement and indirectly through technology transfer, greater investment flows into the area and a bigger market for local produce (Olsson, 2009).

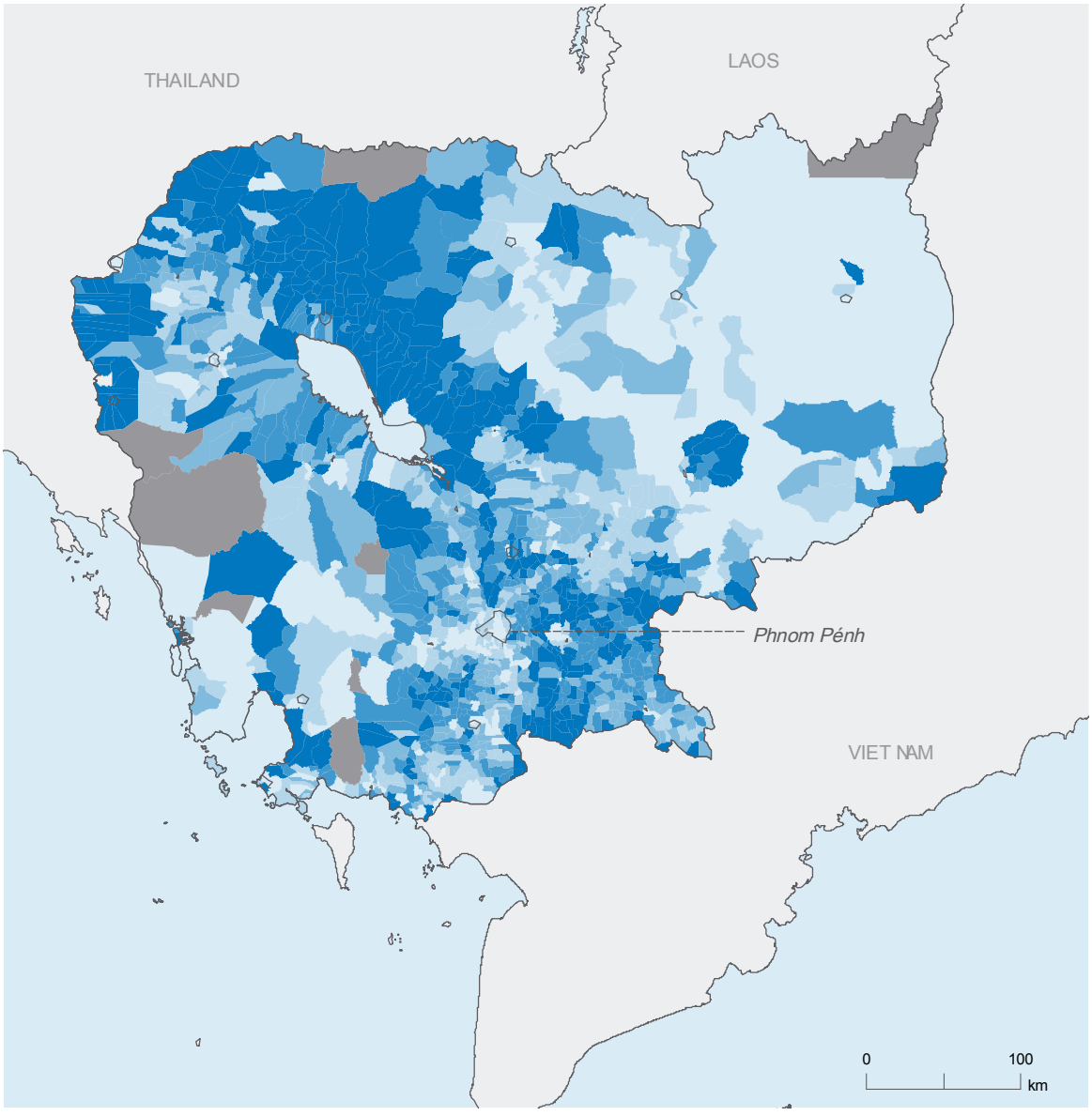
A study of local market development in Viet Nam reported similar findings (Ren & van de Walle, 2007). The benefits of infrastructure upgrading only surfaced two years after project completion. The poorest communities were less able to take advantage of upgraded roads. Poorer communities do benefit from rural road improvement although the benefits are limited by institutional weaknesses.

There is therefore great potential for transport infrastructure improvement to alleviate inequality within countries. As quality road networks – which are public goods – are often under-produced, central governments, aided by provincial governments and local authorities, have a key role to play in facilitating rural road upgrading.

Poverty maps can help in the planning of transport networks to reduce poverty and inequality. They can highlight areas where investments in road improvement are likely to have the greatest impact. An example of a poverty map is shown in Figure 4.4.

**Figure 4.4. Poverty map of Cambodia, using the Headcount Index (FGT-0) measure of poverty**

This measures the proportion of the population below the poverty line. The darker areas indicate communities with larger proportions of people living below the poverty line.




*Source:* Centre for International Earth Science Information Network 2005, Columbia University. Small area estimates of poverty and inequality; maps and further documentation are available at: http://www.ciesin.columbia.edu/povmap.

# CONCLUSIONS

Viewed in a dynamic perspective, ASEAN has made significant progress, especially in the last two decades, in the development of a more integrated transport infrastructure. The expansion of the road network within ASEAN member states together with the building of more road links between ASEAN countries has spurred internal and regional trade growth. More areas and people have benefited from greater access to the economic opportunities created by the expanding road links in the region. Considerable progress also has been made in improving maritime and air transport. The general improvement in transport infrastructure – road, rail and air – has boosted regional economic growth. Growth in turn has provided resources for greater investments in transport infrastructure.

ASEAN as an inter-governmental institution has played a vital role in quickening regional transport integration. Without the ASEAN initiatives in providing roadmaps for regional co-operation, it is likely regional integration would have progressed at a slower pace. Further transport infrastructure integration will help ASEAN realise its dream of a single economic community. Experience suggests that, appropriately used, external support and funding can also help quicken regional transport integration.

It is difficult to evaluate the direct and indirect impact of transport infrastructure integration on national and regional income inequalities. It is possible that, in some ASEAN countries, transport infrastructure provision may in the early stages exacerbate domestic inequalities. But it is also clear that more transport infrastructure provision together with more transparent rules on competition will create many new income and employment opportunities for people in the region. As with growth in general, there will be winners and losers from transport infrastructure integration. But judging from the ASEAN record in developing transport infrastructure so far, the outlook appears to be promising.

# ANNEX I: ROADMAP FOR AN ASEAN COMMUNITY (2009-15): INFRASTRUCTURE DEVELOPMENT

| Strategic Approach | Priority Actions | | | |
|---|---|---|---|---|
| | 2008-09 | 2010-11 | 2012-13 | 2014-15 |
| **B4. Infrastructure Development** | | | | |
| • Transport Action Plan<br>- Singapore-Kunming Rail Link (SKRL) | • Completion of Poipet-Sisophon Rail Link (2009) | | | |
| - Road Safety Requirements | | • Implementation of the ASEAN 5-year Regional Road Safety Action Plan | • Member countries to develop ASEAN standard measures for road safety | |
| • ASEAN Framework Agreement on Multimodal Transport | • Member countries have enacted necessary domestic logistrations to put into effect the ASEAN Framework Agreement on Multimodal Transport (*i.e.* to allow Multimodal Transport Operators from other AMCs to operate in their respective territory) | • At least two member countries implementing the ASEAN Framework Agreement on Multimodal Transport | • ASEAN-wide implementation of the ASEAN Framework Agreement on Multimodal Transport | |
| • ASEAN Framework Agreement on the Facilitation of Goods in Transit (AFAFGIT) | • Implement the ASEAN Framework Agreement on the Facilitation of Goods in Transit (AFAFGIT) for Road Transport Operation contingent on the speedy conclusion of Protocol 2 (Frontier Ports) and Protocol 7 (Customs Transit) | • Conclude and sign Protocol 6 (Railway Border and Interchange Stations) of the ASEAN FAGIT | | • Full implementation of the ASEAN Framework Agreement on the Facilitation of Goods in Transit (for Road and Rail Transport Operations) |
| | • Completion of road construction/ improvement of below Class III road sections of the designated Transit Transport Routes of Protocol 1 of the ASEAN Highway Network, *i.e.* Poipet – Sisophon (48 km) and Kratie Stung Treng (198 km) | • Installation of the harmonised Route Numbering signs in the designated Transit Transport Routes (TTRs) under Protocol 1 of the ASEAN Framework Agreement on Facilitation of Goods in Transit | | |

| Strategic Approach | Priority Actions | | | |
|---|---|---|---|---|
| | 2008-09 | 2010-11 | 2012-13 | 2014-15 |
| • ASEAN Framework Agreement on the Facilitation of Inter-State Transport (FAIST) | • Conclude and adopt final text of the ASEAN Framework Agreement on the Facilitation of Inter-State Transport (FAIST) | • Start implementation of the ASEAN Framework Agreement on the Facilitation of Inter-State Transport (2010) | | • Full implementation of the ASEAN Framework Agreement on the Facilitation of Inter-State Transport |
| | • Conclude and sign the ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services (2008) | • Implemenation of ASEAN Multilateral Agreement on the Full Liberalisation Air Freight Services (in accordance with the Air Travel Roadmap) | | |
| • Roadmaps for Integration of Air Travel Sector (RIATS) | • Implement the ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services (2008) | | | |
| | • Conclude and sign ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services (2008) | | | |
| | • Implement the ASEAN Multilateral Agreement on Air Services (in accordance with the Air Travel Roadmap) | • Implement the ASEAN Multilateral Agreement on Air Services (in accordance with the Air Travel Roadmap) | • ASEAN-wide implementation of the ASEAN Multilateral Agreement on Air Services (in accordance with the Air Travel Roadmap) | |
| | • Adopt concept and enabling framework for ASEAN Single Aviation Market to pave way for the regional open-sky arrangement (2008) | • Finalise the implementation arrangement / agreement on the ASEAN Single Aviation Market by 2015 | • Implement the ASEAN Single Aviation "agreement / arrangement" | |
| | • Develop the implementation arrangement / agreement on the ASEAN Single Aviation Market (which will be implemented by 2015) | | | • ASEAN-wide Implementation of the ASEAN Single Aviation "agreement / arrangement" |
| • Roadmap towards an Integrated and Competitive Maritime Transport in ASEAN which promotes and strengthens intra-ASEAN shipping market and services | • Develop strategies for a ASEAN Single Shipping Market | • Implement the Maritime Transport Roadmap | • Implement the Maritime Transport Roadmap | • Review the Maritime Transport Roadmap for the next 3-5 years |

*Source:* (ASEAN, 2009b).

# NOTES

1. The sub-regions include the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA), Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), Indonesia-Malaysia-Singapore Growth Triangle (IMS-GT) and CLMV. The third and fourth freedoms refer, respectively, to the right of a carrier to fly from its home country to another country and to the right of a carrier to fly from another country to its home country.

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CHAPTER FIVE

# Transport Infrastructure and Integration in Indonesia

## ABSTRACT

Indonesia's transport infrastructure significantly lags behind that of its ASEAN neighbours in extent and quality. Weaknesses in transport infrastructure have contributed to a low level of international competitiveness. They have also hindered Indonesia's integration into regional production chains and its internal economic integration and development.

The problems in transport can be attributed to a combination of inadequacies in roads, ports and other physical infrastructure together with weaknesses in regulatory policies, customs procedures, planning and other elements of soft infrastructure. These have resulted in considerably higher logistics costs in Indonesia compared to most other ASEAN countries.

Indonesia's authorities have taken a number of important steps to promote more effective infrastructure development. These include regulatory reforms to encourage and better utilise private-sector participation in infrastructure and a thorough overhaul of customs procedures to improve their efficiency, reduce delays and combat corruption.

# INTRODUCTION

Indonesia has a huge potential to improve its economic performance in order to increase job creation and to reduce poverty. This can be achieved by upgrading productivity across sectors. One important impediment, however, is Indonesia's relatively high transport costs.

Transportation costs are broadly defined as all the costs incurred in transporting goods from one place to another. They are affected by the availability and the quality of roads, ports and airports, as well as transportation services.

This chapter discusses transport costs in relation to Indonesia's current economic development. In particular, it shows that problems in Indonesia's transport infrastructure significantly contribute to the low competitiveness of Indonesian products in international markets. This low productivity is becoming increasingly important now that Indonesia has started to join the Asian region's production networks.

The analysis begins with a brief summary of recent Indonesian economic performance, focusing on the reasons for its comparatively low level of trade in relation to GDP and the implications for Indonesia's economic integration. This is followed by a review of the comparatively "high logistics costs" in Indonesia, much of which can be attributed to infrastructure deficiencies. The last section discusses efforts by the Indonesian government to improve infrastructure policy and suggests areas where these policies could be improved.

## Indonesia's limited transport infrastructure and its economic consequences

Indonesia managed to weather the global financial crisis that began in 2007 remarkably well compared to most other ASEAN countries. The economy grew by 4.5%, in 2009, compared to for example, Malaysia and Thailand, whose real GDP contracted by 1.7% and 2.2%, respectively. In marked contrast to the 1997 Asian financial crisis, Indonesia's financial markets and institutions have remained sound despite the severe strains in international financial markets resulting from the Global Financial Crisis. This financial resiliency is a reflection of the considerable improvement in its macroeconomic and financial fundamentals since the Asian Financial Crisis. The government debt-to-GDP ratio had been reduced from 99% in 2000 to 36% in 2007 – a good performance even by OECD standards (Basri and Patunru, 2008); the external debt ratio had fallen to 28% and, in contrast to the situation before the Asian financial crisis, the current account was in substantial surplus (see Table 1.1). These improvements were the result of the macroeconomic and other policy reforms prompted by the Asian Financial Crisis and further stimulated by the onset of the Global Financial Crisis (Patunru and von Luebke, 2010; Patunru and Zetha, 2010).



Nevertheless, Indonesia's favourable macroeconomic and financial fundamentals cannot explain why its aggregate real growth suffered less in the wake of the global financial crisis than those of its neighbours – notably Malaysia, Thailand and Singapore – whose fundamentals were equally favourable. Rather, the key factor behind Indonesia's ability to sustain growth after the global financial crisis is its lower dependence on exports, which amount to 30% of its GDP, compared to 80%, 60% and 160% of GDP for Malaysia, Thailand and Singapore, respectively. Together with expansionary fiscal policy and accommodative monetary policy, Indonesia's more limited exposure to external demand for its exports helped contain the effects of the global financial crisis on its economy and allowed it to avoid the more severe downturns experienced by those countries that were more dependent on trade.

It would, however, be a mistake to conclude that Indonesia's low export ratio represents a benefit to the economy, especially in the longer term. Indonesia's low export ratio reflects supply constraints that have lowered the efficiency of the economy and hindered its integration with the international economy (Thee, 2010). This fact is of particular importance for policy since Indonesia has started to link with regional production networks, albeit as a newcomer.

## Indonesia's economy is poorly integrated both externally and internally

As Chapter 3 documents in detail, there has been a remarkable expansion over the past two decades of the international trade in parts and components. This expansion has been driven by the dispersion of production stages across borders and the resulting creation of global production chains (see Chapter 3 and Athukorala, 2006). Most of this fragmentation of production has been mediated by transnational corporations headquartered in OECD economies.

East Asian economies, especially several in ASEAN, have become leading participants in global production chains (GPC) and are among their chief beneficiaries. Their participation has been facilitated by numerous multilateral and bilateral trade liberalisation agreements, including, most recently, the ASEAN-China Free Trade Agreement (ACFTA) (Patunru and von Luebke, 2010).

However, there are substantial differences in the degree to which ASEAN countries have become integrated with the GPC. Indonesia is noticeably less strongly linked to these chains than Singapore, Malaysia and Thailand. In much of East Asia, as in the world as a whole, growth in international trade over the past decade has been driven more by intermediate goods and parts than by final goods (Table 5.1). In the case of Indonesia, however, the growth of intermediate goods imports has been lower than that of final goods imports, even though the reverse is true for the export side. This is also consistent with Basri (2010) who shows that Indonesia's share of intra-Asian trade in parts and components in 2004-07 was relatively low at 11.2%, well below the ratios for China, Malaysia, the Philippines and Thailand and only slightly above that of Viet Nam (Table 5.2).

As discussed in the remainder of this section, Indonesia's limited transport infrastructure has been an important factor behind its lagging performance in integrating into global production chains. The weakness in infrastructure is further reflected in the limited internal integration of Indonesia's economy, especially its "inter-island connectivity".

**Table 5.1. Average growth of trade, 1998-2007**
(percentages)

| | Imports | | | Exports | | |
|---|---|---|---|---|---|---|
| | **Total** | **Intermediate goods** | **Final goods** | **Total** | **Intermediate goods** | **Final goods** |
| Asia | 12.4 | 13.6 | 10.2 | 12.7 | 13.3 | 12.0 |
| East Asia | 13.7 | 14.4 | 12.1 | 14.8 | 15.5 | 14.2 |
| China | 22.1 | 21.6 | 23.5 | 24.1 | 26.8 | 22.6 |
| Hong Kong, China | 8.1 | 10.6 | 5.1 | 8.3 | 11.9 | 4.8 |
| Indonesia | 10.7 | 10.3 | 11.6 | 11.9 | 13.3 | 9.2 |
| Japan | 8.0 | 10.2 | 5.8 | 7.1 | 7.9 | 6.1 |
| Korea | 16.2 | 14.6 | 21.1 | 12.4 | 12.0 | 13.1 |
| Malaysia | 10.5 | 10.8 | 10.0 | 9.8 | 10.3 | 9.2 |
| Philippines | 2.4 | 2.1 | 4.7 | 1.8 | 1.6 | 2.8 |
| Singapore | 9.8 | 11.2 | 7.2 | 10.8 | 14.1 | 4.9 |
| Thailand | 13.5 | 14.2 | 12.1 | 12.2 | 13.7 | 11.0 |
| EU15 | 8.9 | 9.0 | 8.8 | 8.7 | 8.8 | 8.5 |
| North America | 7.4 | 6.8 | 7.9 | 6.0 | 6.0 | 5.9 |
| Others | 11.5 | 11.3 | 11.8 | 12.2 | 13.2 | 11.1 |
| World | 9.8 | 10.1 | 9.4 | 9.9 | 10.3 | 9.5 |

*Source:* Fung *et al.* (2010).

StatLink http://dx.doi.org/10.1787/888932350600

### Table 5.2. Export profile of Indonesia and other emerging economies

| | Indonesia | China | Malaysia | Philippines | Thailand | Viet Nam |
|---|---|---|---|---|---|---|
| Average growth in non-oil exports (2004-07, %) | 17.0 | 28.2 | 10.5 | 7.8 | 16.5 | 23.9 |
| Contributors to export growth | | | | | | |
| Manufactures (%) | 38.9 | 94.9 | 75.1 | 73.3 | 80.7 | 69.1 |
| Agriculture, forestry, fishery (%) | 35.9 | 2.2 | 18.7 | 6.9 | 14.7 | 28.6 |
| Mining & minerals (%) | 23.7 | 2.6 | 3.6 | 18.2 | 3.0 | 1.0 |
| Share of parts and components in intra-Asia trade (%) | 11.2 | 20.1 | 22.5 | 29.0 | 18.5 | 10.8 |

*Source:* Basri (2010).

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This limited integration is reflected in the stark imbalance between the economies of Indonesia's western and eastern provinces. Eight out of the ten poorest provinces are located in the eastern part of Indonesia (World Bank, 2006). Also, economic activity is highly concentrated on a few islands only. For example, 60% of the country's economic activity is concentrated in Java and Bali, 30% in Kalimantan and Sumatra and only 10% in the remaining islands. Poor infrastructure in remote areas worsens this situation. As a result, there can be huge price differences between remote regions and the rest of the country, even for basic goods. As Table 5.3 illustrates, the prices in remote places such as Merauke, Nabire and Paniai are far higher than those in other places in Indonesia. For example, the price of one kilogram of rice in Paniai, a remote village in Papua, is more than double that in East Java.

### Table 5.3. Prices of basic goods in separate markets in Indonesia (prices in IDR)

| | Rice | Wheat flour | Sugar | Cooking oil | Salt | Cement |
|---|---|---|---|---|---|---|
| East Java | 4 250 | 3 800 | 6 000 | 4 450 | 1 600 | 38 000 |
| West Kalimantan | 4 400 | 4 000 | 5 800 | 4 500 | 2 400 | 37 500 |
| East Kalimantan | 4 500 | 4 000 | 6 500 | 4 500 | 2 000 | 30 000 |
| South Sulawesi | 4 400 | 3 500 | 5 800 | 4 500 | 2 000 | 30 500 |
| East NusaTenggara | 4 200 | 4 500 | 7 000 | 6 300 | 2 000 | 31 000 |
| Merauke | 5 000 | 7 000 | 7 000 | 6 670 | 3 000 | 62 000 |
| Nabire | 6 000 | 10 000 | 11 000 | 11 000 | 4 000 | 23 000 |
| Paniai | 10 000 | 7 500 | 8 000 | 7 000 | 8 000 | 60 000 |

*Source:* Basri (2010).

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In retrospect, it is rather unfortunate that Indonesia has failed to capitalise on its geographical nature. As Howard Dick pointed out, archipelagic geography is supposed to be an advantage when land transportation is costly (Dick, 2010). Unfortunately, this is not the case for Indonesia, whose governments, while greatly concerned about secessionist politics, have failed to adequately address the transport and other logistical requirements needed to link its islands.

The efficiency of Indonesia's maritime transport has been seriously limited by several factors (Carana Corporation, 2004):

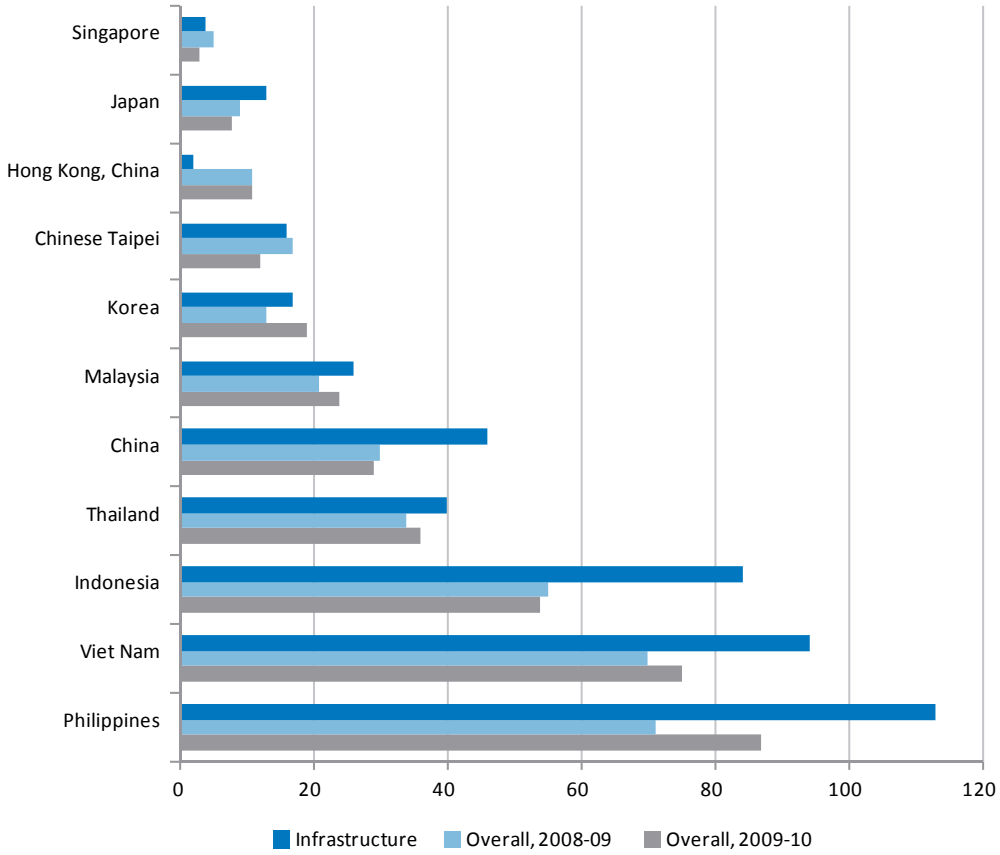
- *Numerous multi-purpose ports.* These ports support a wide variety of needs ranging from bulk goods, containers and passengers. Moreover, there are few that specialise in the efficient handling of international container cargo.

- *Decentralised administration.* Authorities administering ports are largely decentralised. Investment and fiscal priorities are based on regional requirements.
- *Low maritime productivity.* Smaller vessels and ports suffer from numerous problems such as poor infrastructure, inefficient internal processes and labour management practices, antiquated equipment and poor service capabilities.

## Transport infrastructure deficiencies have led to reduced competitiveness

Recent reports have shown that Indonesia's competitiveness is low, even in the Southeast Asian region. For example, the World Economic Forum shows that Indonesia is still behind Malaysia and Thailand in terms of overall competitiveness (Figure 5.1).

**Figure 5.1. Indonesia's competitiveness**




*Note:* Figures are based on the ranking of 133 countries.

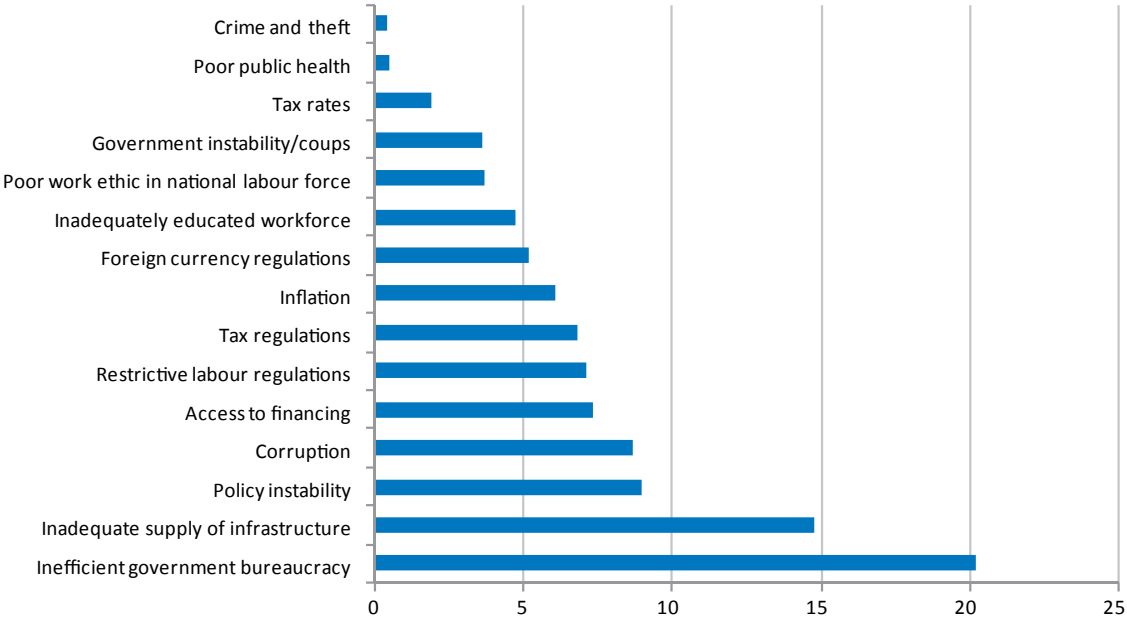
*Source:* World Economic Forum (2009).

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Figure 5.1 also indicates that infrastructure is one of the most severe obstacles to improving Indonesia's competitiveness. According to the *Global Competitiveness Report* published by the World Economic Forum (2009), Indonesia ranked 84th out of the 133 countries surveyed in terms of infrastructure in 2009-10. This assessment is also consistent with surveys of business perceptions presented in

the report (Figure 5.2). While inefficient government bureaucracy still seems the most important hurdle to doing business in Indonesia, infrastructure is reported as the second most important. Almost 15% of respondents cited poor infrastructure as an important obstacle to competitiveness.

**Figure 5.2. The most problematic factors in doing business in Indonesia**
(percentage of responses)




*Notes:* Based on respondents' ranking of the 5 most important of 15 factors between 1 (most problematic) and 5 (least problematic). The values shown by the bars are the responses weighted according to their rankings.

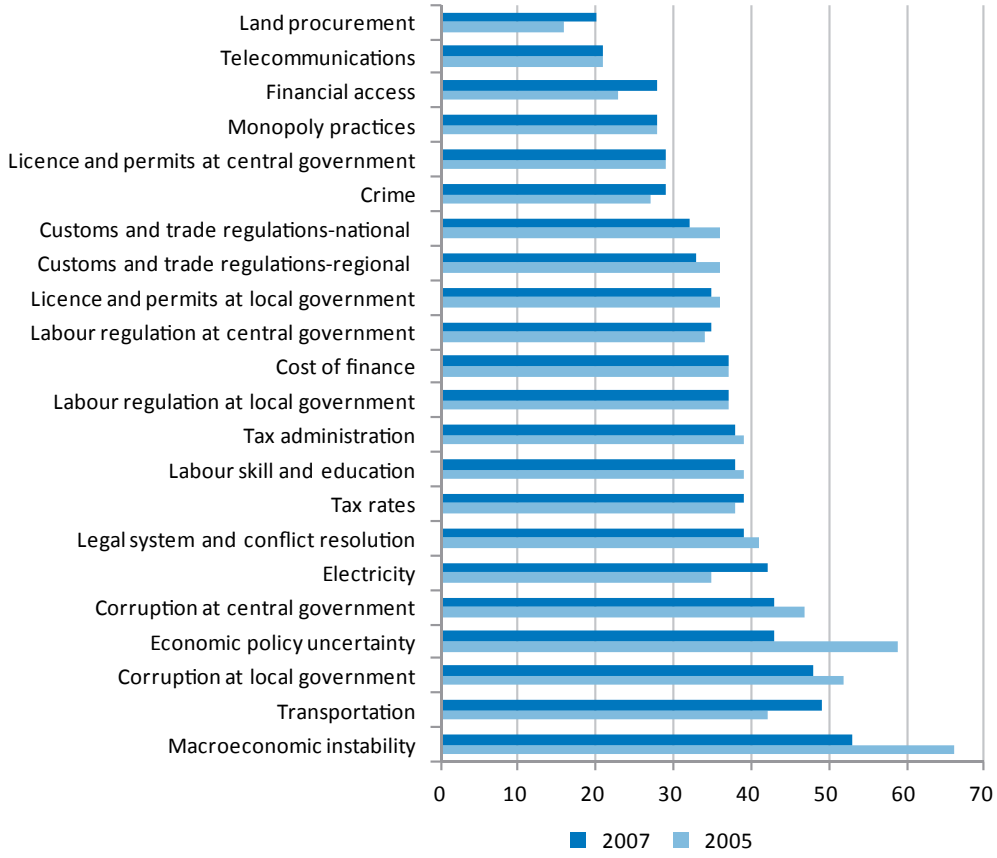
*Source:* World Economic Forum (2009).

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A study conducted by the Indonesian Institute for Economic and Social Research (LPEM-FEUI, 2008a) further highlights the adverse impacts of the country's transportation infrastructure deficiencies. Based on surveys of almost 600 respondents in 2005 and 2007, the study reports that these deficiencies have become increasingly important impediments to the investment climate (Figure 5.3). In 2005, transport weakness was cited as the fifth most important obstacle to investment, after macroeconomic instability, economic policy uncertainty and corruption (both local and central government). In the 2007 survey, the same group of respondents reported that transportation had become the second most problematic factor in the investment climate in Indonesia.

Table 5.4 compares Indonesia's infrastructure quality with that of some other Southeast Asian countries, as well as China. Overall, Indonesia scores only better than Viet Nam; it scored better than China in 2008, but worse in 2009. In fact, there has been a severe drop in Indonesia's relative rank, from 46 out of 134 countries surveyed in 2008 to 96 out of 133 in 2009. This large drop is an indication that Indonesia's infrastructure development is being outstripped by the improvements in infrastructure of many other countries. As the table shows, Indonesia is particularly poor in roads and ports. Unsurprisingly therefore, Indonesia's logistics performance is also poor (Table 5.6).

**Figure 5.3. Indonesia's investment climate**
(respondents reporting obstacles as moderate, or severe, or very severe; %, n=589)




*Source:* LPEM-FEUI, 2008a.

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**Table 5.4. Infrastructure quality rankings**

| | Indonesia | | Philippines | | Malaysia | | Viet Nam | | China | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| Quality of infrastructure – overall | 46 | 96 | 94 | 98 | 19 | 27 | 97 | 111 | 58 | 66 |
| Roads | 105 | 94 | 94 | 104 | 17 | 24 | 102 | 102 | 51 | 50 |
| Railroad infrastructure | 58 | 60 | 85 | 92 | 17 | 19 | 66 | 58 | 28 | 27 |
| Port infrastructure | 104 | 95 | 100 | 112 | 16 | 19 | 112 | 99 | 54 | 61 |
| Airport infrastructure | 75 | 68 | 89 | 100 | 20 | 27 | 92 | 84 | 74 | 80 |
| Electricity infrastructure | 82 | 96 | 82 | 87 | 71 | 39 | 104 | 103 | 68 | 61 |
| Telephone lines | 100 | 79 | 105 | 103 | 31 | 72 | 37 | 36 | 47 | 49 |

*Notes:* 2008 survey ranked 134 countries and the 2009 survey ranked 133 countries.

*Source:* World Economic Forum (2009).

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Table 5.5 displays Indonesia's logistics performance as assessed by the World Bank (World Bank, 2010). The Logistics Performance Index (LPI) summarises the performance of countries in seven areas that capture the current logistics environment, namely: *i)* the efficiency of the clearance process by customs and other border agencies; *ii)* the quality of transport and information technology infrastructure for logistics; *iii)* the ease and affordability of arranging international shipments; *iv)* the competence of the local logistics industry; *v)* the ability to track and trace international shipments; *vi)* domestic logistics costs; and *vii)* the timeliness of shipments in reaching their destination. The index is based on survey responses of multinational freight forwarders and express carriers to an internet-based questionnaire. The overall LPI and its major component indicators are given on a numerical scale, from 1 (worst) to 5 (best).

### Table 5.5. Indonesia's logistics and infrastructure performance (2010)

| Country | LPI | | Customs | | Infrastructure | | International shipments | |
|---|---|---|---|---|---|---|---|---|
| | LPI Rank | Score | Rank | Score | Rank | Score | Rank | Score |
| Indonesia | 75 | 2.76 | 72 | 2.43 | 69 | 2.54 | 80 | 2.82 |
| Malaysia | 29 | 3.44 | 36 | 3.11 | 28 | 3.50 | 13 | 3.50 |
| Philippines | 44 | 3.14 | 54 | 2.67 | 64 | 2.57 | 20 | 3.40 |
| Singapore | 2 | 4.09 | 2 | 4.02 | 4 | 4.22 | 1 | 3.86 |
| Thailand | 35 | 3.29 | 39 | 3.02 | 36 | 3.16 | 30 | 3.27 |
| Viet Nam | 53 | 2.96 | 53 | 2.68 | 66 | 2.56 | 58 | 3.04 |

*Note:* The score is the average of the survey respondents' rankings from 1 (worst) to 5 (best).

*Source:* World Bank (2010).

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It is obvious that Indonesia is lagging behind all the other ASEAN countries in logistics performance. This is true not only of the overall performance but also performance in the areas of customs, infrastructure and international shipments. Indonesia ranks poorly in these areas especially relative to Singapore but also relative to Viet Nam.

The LPEM-FEUI (2008a) study shows that in general infrastructure conditions in Indonesia have worsened. A large majority of respondents reported that road capacity conditions were getting worse. Moreover, the portion of respondents reporting worsening conditions for most of the other infrastructure aspects surveyed (physical road condition, clean water, electricity and gas) increased from 2005 to 2007. Another study highlighting impediments to Indonesian exports as seen by exporting firms (LPEM-FEUI, 2006) also indicates that roads and ports especially need improvement (Table 5.6). Respondents from the electronics sectors gave roads and ports the lowest scores (both below 50) among the major infrastructure categories in terms of their favourability for exports. Considering that electronics is one of the key sectors in the growing regional trade integration, this suggests that both roads and ports are serious problems.



### Table 5.6. Infrastructure impediments to exporting

| Sectors | Electricity | Water | Road | Telecommunication | Port |
|---|---|---|---|---|---|
| Electronics | 59.62 | 72.06 | 47.86 | 68.63 | 43.46 |
| Furniture | 64.11 | 69.47 | 69.21 | 70.86 | 60.72 |
| Agriculture | 58.01 | 64.53 | 64.10 | 68.13 | 60.00 |
| Textile | 65.28 | 69.37 | 66.98 | 72.02 | 62.31 |

*Note:* The numbers are an index of 1-100, with a higher number indicating the infrastructure is more favourable to exporting.

*Source:* LPEM-FEUI, 2006.

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## Infrastructure deficiencies have lowered productivity by raising transport costs

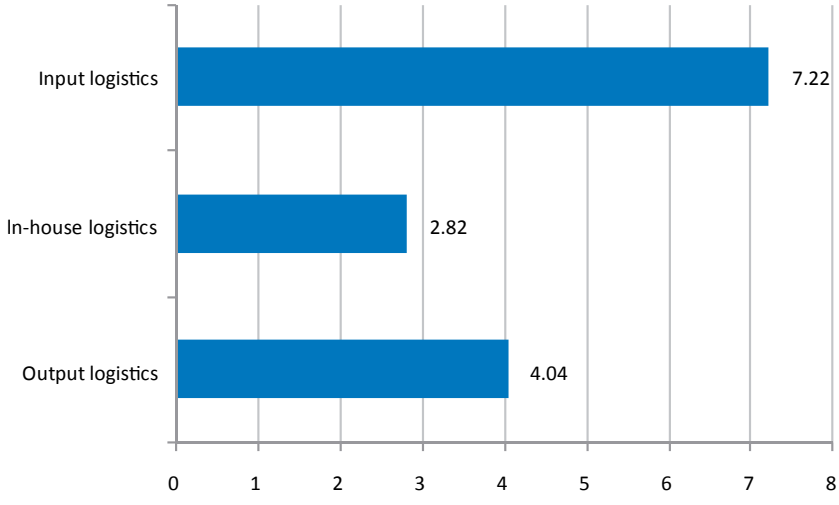
Excessively high transport costs can lower firms' productivity and distort the allocation of resources across the economy. There are several channels through which transport costs affect firm-level productivity.

- Trade discipline. Lowering international transportation costs and hence trade costs will foster competition from imports and increase firms' incentives to operate at their efficiency frontier.
- Better access to inputs and technology. This can foster the development of newer and more efficient methods of production.

A study by LPEM-FEUI (2005) examines the relationship between transport costs and productivity for Indonesian businesses (see also the discussion in Patunru *et al*., 2009). The study is based on a survey of the logistics, including transport costs, in Indonesia in 2005. The survey assesses the three segments of the logistics chain, namely input logistics (the segments connecting vendors of raw materials and capital goods, including imports of those inputs, to firms), in-house logistics (the segments dealing with operations within the firm, for example labour practices and inventory management) and output-logistics (the segments connecting firms to the marketplace, including export markets).

High logistics costs reduce the profitability of the tradeable sectors, especially in manufacturing. The study finds that logistics costs, including transportation costs and weighing station charges, comprise 14% of total production costs. Input and output logistics segments make up the major parts of the total logistics cost (7% and 4% of total costs, respectively); while in-house logistics costs are lower at around 3% (Figure 5.4). This implies that a large portion of logistics costs is beyond firms' control, because the roads and ports and activities directly related to them that largely determine input and output logistics costs are mainly government-provided. The respondents to the survey reported that their logistics costs were far higher than the levels that would be needed to make their products sufficiently competitive in international markets. For example, they reported that on average output logistics should be no more than 2.4% of the total production cost if they were to be able to compete adequately. This indicates a high discrepancy between what the firms felt they needed and the actual costs they faced (Figure 5.5). Their conclusion is supported by comparison with Japan, whose logistics sector is one of the most efficient in the world. Logistics costs in Japan were around 4% of total production costs in 2005.

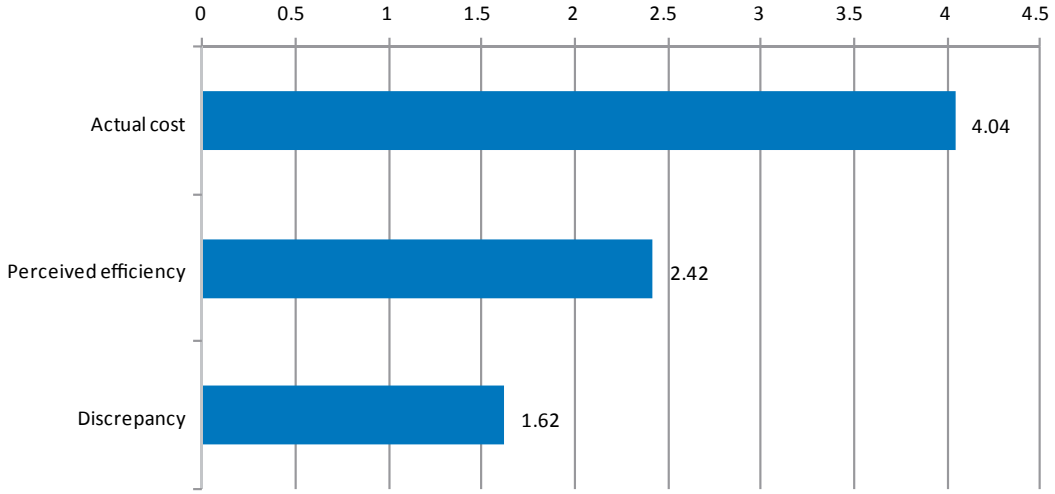
**Figure 5.4. Logistics costs in Indonesia**
(percentage of production costs)




*Source:* Patunru *et al.*, 2009.

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**Figure 5.5. Actual versus efficient output logistics costs**
(percentage of production costs)




*Notes:* Actual cost refers to the percentage of logistics costs in total production costs as reported by respondents. Perceived efficient cost is the ideal share of logistics costs as judged by respondents. "Discrepancy" is the difference between the first and the second.

*Source:* Patunru *et al*., 2009.

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The study found that the key sources of inefficiency in input logistics, as perceived by the survey respondents, are poor road infrastructure, informal (that is, unsanctioned by the authorities) payments and government policies (such as local taxes). In the case of in-house logistics costs, government policies such as the minimum wage are perceived as the main source of inefficiency, albeit to a lesser extent than for input and output logistics. Finally, the study also found that informal payments related to roads and ports contributed about 22.12% to the total inefficiency in output logistics costs.

As discussed in Patunru *et al*. (2009), inefficiencies in ports directly lead to higher transport costs, in particular for export- and import-based industries. Road and port physical inadequacies as well as administrative procedures and informal payments are key sources of inefficiency. Of course these factors are not independent of one another. Producers competing with imports also suffer from bribery and transportation and weighing station costs. The burden of the high transport costs is largely manifest in lowered profits for Indonesian firms engaged in international trade since their output prices, at least in manufacturing, are determined in world markets (that is they are "price-takers" and so cannot pass on higher transport costs).



## Inefficiencies in port facilities add to Indonesia's international trade costs

The conditions of ports along with roads are pivotal determinants of transport costs. These conditions are examined in Basri and Pantunru (2008), whose main findings are summarised below.

Bad management in the port authority, coupled with poor infrastructure, may create more informal payments. The additional payments in port areas have made Indonesia's terminal handling charges (THC) the highest among the ASEAN countries.[1] In 2004, the terminal handling charge (THC) in Indonesia totalled USD 150 for a 20 foot container, whereas in Thailand it was only USD 60.[2] The Indonesian government decided to cut the THC in November 2005 and a 20 foot container now costs USD 95, while a 40 foot container costs about USD 150. However, port users complain about the additional charges that were applied after the reduction in THC, such as a reposition fee for empty containers, trucking fees, lift on/off fees, a value added tax and a stacking fee.

Customers claim that the longest delay in port activity is in unloading the goods for physical inspection. This is attributable to a lack of sufficient cranes, forklifts and other necessary equipment and results in long waiting times. This situation provides opportunities to extract informal payments from customers wishing to move up in the unloading queue. The informal payment is made to port staff and not to customs officials. The total payment for unloading is higher for goods considered to be hazardous material, such as chemicals, than for other goods. The resulting costs and uncertainties are aggravated by the lack of standardised practices for the treatment of hazardous materials. For example, in the port of Semarang, Central Java, cotton that is categorised as a hazardous material was subject in 2002 to an additional official charge of 100% over the normal charge for storage before falling to 50% in 2003. The same policy also applied to the Surabaya port in East Java.

It is important to mention here that, although significant problems remain with import clearance procedures, there has been some improvement (LPEM-FEUI, 2008a). Moreover, export clearing procedures usually are simpler and faster than import procedures. However, these generalisations are subject to the qualification that the speed with which clearance procedures are completed often depends on informal payment.

Table 5.7 compares the time needed for export clearance procedures in Indonesia with that in other countries and regions. It takes longer to process exports in Indonesia than in any of its neighbouring countries, except Viet Nam. This is true even though the number of documents required for the processing is lower than for the other Asian countries, except for Singapore. Also, the cost per container is higher in Indonesia than in other ASEAN countries. According to the World Bank (2008) report, the higher costs in Indonesia are related to the logistics infrastructure and to the capabilities of the staff responsible for the processing. The report finds that the competency level of local operators of ports in Indonesia is lower than in Singapore, Malaysia, China and Thailand. Competency of operators in other logistics infrastructure is also comparatively low in Indonesia. In addition, the customs procedure in Indonesia is perceived as more complicated than that in, for example, Malaysia and Singapore.

### Table 5.7. Time needed for export

| Region or economy | Time to export (days/shipment) | Cost to export (USD per container) | Documents required for exports (number) |
|---|---|---|---|
| OECD | 9.8 | 905 | 4.5 |
| East Asia & Pacific | 24.5 | 885 | 6.9 |
| Latin America & Caribbean | 22.2 | 1 108 | 7.0 |
| South Asia | 32.5 | 1 180 | 8.6 |
| Sub-Saharan Africa | 35.6 | 1 660 | 8.1 |
| Indonesia | 21.0 | 667 | 5.0 |
| Malaysia | 18.0 | 432 | 7.0 |
| Singapore | 5.0 | 416 | 4.0 |
| Thailand | 17.0 | 615 | 7.0 |
| Viet Nam | 24.0 | 669 | 6.0 |
| China | 21.0 | 390 | 7.0 |

*Source:* World Bank (2008).

StatLink http://dx.doi.org/10.1787/888932350714

Further investigation reveals other interesting facts about trade costs in Southeast Asia. A study by De (2009) shows that average ocean freight rates differ for exports compared to imports. For example, De calculates that in 2005 the average freight rate to export goods from Indonesia to its destinations in Asia is USD 1 235.05 per 20-foot container (TEU), while the average rate to import from those Asian countries to Indonesia is USD 996.92 for an equal sized container. A similar pattern seems to prevail in other ASEAN countries. For instance, the corresponding figures for Malaysia are USD 1 0541.34 and USD 920.30, respectively; and for Thailand they are USD 1 111.29 and USD 773.80. Thus it is costlier to export a container from these countries than to import one into them.

De also shows that, among the countries he investigated (China, India, Japan, Korea, Indonesia, Malaysia and Thailand), India is the most expensive destination while China is the least expensive. This is consistent with the fact that China has become the centre of regional production networks that increasingly involve exports of parts and components from ASEAN to China.

Further information from De's study on Indonesia's shipping costs compared to major peers is given in Table 5.8.

**Table 5.8. Total ocean freight charges**
(USD/20-foot container)

| Origin\Destination | Indonesia | Thailand | Malaysia | China | Base freight rate to China | Share of auxiliary charges (%) |
|---|---|---|---|---|---|---|
| Indonesia | - | 827.89 | 954.26 | 840.95 | 483 | 42.56 |
| Thailand | 1 142.83 | - | 889.80 | 829.49 | 650 | 21.64 |
| Malaysia | 820.55 | 556.23 | - | 572.46 | 350 | 46.07 |
| China | 874.92 | 705.52 | 762.35 | - | - | - |
| Base freight rate from China | 500.00 | 600.00 | 600.00 | - | - | - |
| Share of auxiliary charges (%) | 42.85 | 14.96 | 21.30 | - | - | - |

*Source:* De (2009).

StatLink http://dx.doi.org/10.1787/888932350733

De (2009) divides total ocean freight into "base ocean freight" and "auxiliary charges". The former refers to those charged by the shipping company, while auxiliary charges include container handling fees and government duties. Auxiliary charges make up a substantial part of Indonesia's total freight costs to China, nearly 43% for both exports and imports. These figures are noticeably higher than the corresponding auxiliary cost shares for Thailand and compared to the share for Malaysia's imports from China (although the share for Malaysia's exports to China is higher).



## High road transport costs further elevate overall costs

Deficiencies in the road transport infrastructure and related logistics reinforce the problems in port facilities in elevating overall transport costs. The LPEM-FEUI (2008a) survey found that trucking costs in Indonesia make up the second highest portion of total shipping costs, after the terminal handling charges (THC). According to available data, THC take 53% and trucking 26% of the total cost, together accounting for nearly 80% of the total. Interestingly, fees charged by Indonesian trucking companies are not especially high compared to other ASEAN countries. However road congestion and inefficiencies in vehicle operations add considerably to trucking costs.

A study by LPEM-FEUI, the Asia Foundation and the World Bank analyses transportation costs as a barrier to domestic trade (LPEM-FEUI, 2008b). The study found that vehicle operating costs in Indonesia are higher than in other Asian countries, partly because of infrastructure impediments, such as geography and damaged roads. In addition, truck drivers are liable for various kinds of payments, which include *i)* local user charges; *ii)* legal and illegal payments at weigh bridges; and *iii)* payments to police or *preman* (civilian thugs or criminal organisations). Many user charges set by local governments are illegal and redundant.

Informal collections, or coerced bribes, in the logistics network seem to happen on the road mostly during the delivery process. The "collectors" vary from civil servants to police officers, from non-government organisations to *preman*. According to the most recent available figures, such payments amounted to 1.3% of firms' total production costs, somewhat less than the 1.7% of total cost reported for 2005.

The logistic costs related to ports and roads are certainly not independent. As discussed before, Indonesia has not been able to take full advantage of its archipelagic geography. In fact, as a study by LPEM-FEUI (2010) finds, transporting goods in a region that depends on land, water and sea transport tends to be more expensive than in a region that requires only land transportation. Furthermore, regions at a lower stage of development that depend on multiple transport modes face particularly great difficulties in this regard.

The study, which was conducted in Indonesia's East Nusa Tenggara province (NTT), found the following.

- The flow of goods into the province differs significantly in character from the flow out of the province. The volume of goods shipped into the province far outweighs that shipped out. Most of the imported goods are basic commodities (rice, flour, cooking oil, etc.), electronics, construction materials and automotives. Exports, on the other hand, are mainly of primary goods (cashew, chocolate/cacao), livestock, forest products (wood, tamarind and candlenut), mining products and fish. These exported goods do not have high value added.
- In general, the flow of goods to and from NTT is dominated by sea transport whereas goods move among the islands within the province more by ferry (roll-on-roll-off, "roro").
- Climate conditions in NTT are also a hurdle to sea transportation. With the existing capacity of sea transporters, NTT faces significant difficulty when the weather turns bad. According to experts, the ship capacity required to deal with such weather conditions is around 2 000 gross tonnes (GT) but the average capacity of the current line up of available ships is only 660 GT.
- Trucks that transport goods in NTT are in general overloaded.
- Port performance is suboptimal. The practice of paying a fixed salary to port labour means that workers are paid the same amount regardless of the volume of port activity. As a result, incentives to work efficiently are blunted, leading to low productivity.
- The waiting times in local ports are longer than those in major ports in Indonesia.



Together the factors above result in very high transportation costs in the province. The study estimates that the average transportation cost in NTT for a typical truck shipment is USD 0.49 per kilometre. If waiting time in the ports is factored in, the cost can increase to between USD 0.55 and USD 0.68 per kilometre. These costs are considerably higher than the average land transportation cost in Indonesia as a whole, which is around USD 0.34 per kilometre (LPEM-FEUI, 2008b) and even more above the average ASEAN figure of USD 0.22 per kilometre (Carana Corporation, 2004).

## GOVERNMENT POLICIES

The deficiencies in government infrastructure investment can be attributed to three factors, namely inadequate budget allocations for infrastructure spending; under-spending of these allocations; and a lack of co-ordination between jurisdictions (Kong and Ramayandi, 2008). Private sector involvement

in infrastructure investment is limited by government restrictions on its participation in the provision of transportation services as well as by the domestic banking sector's reluctance to commit significant funds to infrastructure projects. Private participation is also inhibited by the fact that infrastructure projects in many fields have to operate under non-market conditions. Many infrastructure services have to be provided at regulated prices well below cost and thus have at best limited prospects of being profitable (Narjoko and Jotzo, 2007).

## A four-pronged approach for improving infrastructure

The government has described its infrastructure development approach as a "four-pronged strategy" with the following elements:

1. Commitment to increase the government budget for transport infrastructure, particularly roads, ports and airports.
2. Amendment of the existing laws and regulations that prohibit private sector participation in the transportation industry, so as to allow more competition. The policy is also aimed at reducing budget pressures resulting from the government having sole responsibility for the provision of transportation services. Most important in this regard is a commitment to share the economic risks of investment in transport infrastructure with the private sector.
3. Deregulation and other reforms of transportation policies, including policies affecting the investment climate, border trade and ports and the streamlining of administrative procedures (*e.g.* institution of a single "national single window').
4. Partnerships with local governments, including the following:
   - Allowing local governments to participate fully in providing infrastructure services. New laws have explicitly opened opportunities for participation for local governments.
   - Encouraging local governments to simplify relevant local by-laws and regulations and to harmonise them with national laws and regulations.
   - Prohibiting local governments from imposing local regulations that may hamper the flow of goods and labour.
   - Encouraging risk-sharing for infrastructure upgrading projects.

The government has also issued "Indonesia's Logistics Blueprint" that defines the vision of Indonesian logistics for 2025 as "locally integrated and globally connected". The vision will be pursued through six "national logistics drivers", namely: *i)* the designation of key commodities, *ii)*laws and regulations, *iii)* infrastructure, *iv)* human resources and management, *v)* information and communication technology and *vi)* logistics service providers.



The document identifies the key logistics issues in Indonesia, including lack of clarity and lack of enforcement of laws and regulations; poor co-ordination across sectors; practices that hinder trade (*e.g.* stemming from free-on-board valuation for imports and cost-insurance-and-freight valuation for exports); poor infrastructure (especially lack of national hub ports, poor interconnection systems between port facilities, limitations on transportation and warehousing, and inadequately developed information networks and technology); as well as insufficient human resources.

Finally, the document also addresses key laws and regulations concerning transportation infrastructure. These include the Law 11/1965 on Warehousing,[3] the Law 6/1984 on Postal Services,[4] the Law 14/1992 on Road Cargo and Transportation (this has now been revised into Law 22/2009), the Law 15/1992 on Air Services (revised into Law 1/2009), the Law 21/1992 on Shipping (revised into Law 17/2008), the Law 17/2006 on Customs and the Law 23/2007 on Railways.

## A number of further reforms are being developed

There are at least three important policies under consideration that if adopted could have an important impact on the future development of infrastructure in Indonesia. These involve proposed revisions of three key regulations: the Presidential Instruction 80/2003 on Government Procurement of Goods and Services; the Presidential Regulation 67/2005 on Public-Private Partnership for Infrastructure Procurement; and the Presidential Regulation 65/2006 on Land Procurement in the Public Interest.

The proposed revision of the Presidential Instruction 80/2003 includes simplification of the vendor selection process for goods or services valued up to IDR 200 million. However, it maintains tight restrictions on the participation of foreign investors. With an objective to support domestic players, foreign investors can only participate in projects whose total value exceeds IDR 100 billion for construction, IDR 20 billion for goods and services and IDR 10 billion for consulting services. Projects using goods and services with a total value of more than IDR 5 billion are required to purchase only domestic products. Furthermore, a bidder that proposes a price no more than 10% higher than that offered by the lowest bidder can still be awarded the contract provided that the bidder promises to purchase at least 25% to 40% of the goods procured for the project from local sellers (Kompas, 1/2/2010).

In the current version of Presidential Regulation 67/2005, the bidding process on infrastructure procurement is required to be repeated when the number of legal bids received is less than three. In the proposed revision, this is relaxed to allow bidding to continue even if there are only two bidders. The bidding process is required to be repeated only if there is a single legal bidder.

Similarly important is the revision of Presidential Regulation 65/2006. The draft bill addresses five priorities: *i)* facilitation of land procurement; *ii)* protection of landowners' rights; *iii)* curbing of land speculation; *iv)* adherence to global best practices; and *v)* scrutiny of land procurement history. It is expected that this new revision will cut the time needed to procure land for infrastructure projects significantly. It is very discouraging, for example, that PT Jasa Marga, a state-owned toll road investor, needed more than two years to procure only six hectares of land for a project.

In addition to the three planned regulatory revisions, the government has also promised to achieve infrastructure acceleration through a three-step plan. First, it will focus its own resources increasingly on sectors that are not commercially viable or are unable to attract private investment. Second, to attract greater participation of the private sector, the government will focus on reforming the commercially viable sectors. This will be done by removing bureaucratic bottlenecks as well as regulations that inhibit private participation. Third and more immediately, the government will enact programmes to support greater public-private sector partnerships in infrastructure investment.

The implementation of public-private partnerships (PPPs) is intended to address limitations on government funding for infrastructure development. Prior to 2006, the Indonesian government had chosen not to provide any guarantees for infrastructure projects undertaken by the private sector. This has been perceived as one of the key contributing factors to the low level of infrastructure project development since the 1997 economic crisis. In 2006, however, the Ministry of Finance (MoF) established a risk management unit to supervise the implementation of the sharing of certain risks, including political risk, project performance risk and product out-take risk (MoF, 2008a). In addition, the government agreed to provide credit support for some infrastructure projects such as the Perusahaan Listrik Negara State Electricity Company (PLN) 10 000 megawatt power plants programme and the Trans-Java Toll Road Project. In that same year, the government also approved new implementing regulations related to roads, railways, shipping, aviation and utilities. Furthermore, it has promoted the establishment of self-regulatory bodies in the toll road, oil and gas, telecommunications and water supply sectors. To facilitate land acquisition, which has been the main impediment to toll road development projects, the government has established a new working team to overcome land acquisition problems and has allocated IDR 600 billion of infrastructure funds managed by the Government Investment Unit for land acquisition (MoF, 2008a). In addition, the government has allocated IDR 2 trillion for each of the years 2006-08 to promote infrastructure development, with the funds also to be managed by the Government Investment Unit.

## Important reforms to improve the customs process

A number of important reforms are being undertaken to improve the efficiency of customs procedures by increasing timeliness and simplicity. The centrepiece of these efforts is the institution of a one stop facility, the "National Single Window" (NSW) to handle all the key steps in customs clearance. The efficiency of this system is being further enhanced by integration of an electronic export and import documentation system.

The NSW is being developed as part of an agreement among ASEAN countries. The Indonesian government has so far implemented the system in four ports (Jakarta, Surabaya, Semarang and Medan) and one airport (Jakarta). Of these five ports, only Surabaya has implemented NSW for both import and export activities, while the other four only serve import activities. The remaining ports are scheduled to implement the NSW for exports by October 2010. The whole NSW project will be integrated with the ASEAN Single Window in 2012.

Further complementary steps are being taken to reduce the time needed to comply with customs and related procedures. The Tax Office is aiming to reduce the number of days required to process tax returns from three working days to only one day and to reduce the maximum time allowed for decisions on tax disputes from 12 months to 9 months (MoF, 2008b). The Customs Office is committed to reduce the time required for import clearance procedures in the "red lane" (where goods are subject to both physical and document checks) from 48 hours to 12 hours and for the "green lane" (where goods are subject to a document check only) from 4 hours to 30 minutes (MoF, 2008b).

Reforms are also being undertaken to improve the performance of customs officials and to reduce corruption. The MoF has launched a pilot project for bureaucracy reform that introduces a performance-based evaluation system for compensating staff more appropriately. This reform is expected to provide appropriate incentives for the MoF staff to improve their performance and to reduce incentives for corruption. In a further effort to combat corruption and to regain public trust, the Minister of Finance has reassigned thousands of employees, including those in Tanjung Priok, Indonesia's most important port. The time required to export and import should also be reduced by the commendable achievement of extending port operating hours — to 24 hours per day, 7 days per week — at the four major ports (Jakarta, Medan, Surabaya and Makassar).

Other achievements include the issuance of a joint decree between the Minister of Trade, the Minister of Home Affairs, the Minister of Justice and Human Rights, the Minister of Transmigration and Manpower, and the Head of the Investment Co-ordinating Board to abolish 70 business permits considered redundant and to accelerate licensing procedures required to start up a business from 60 days to 17 days. Although the implementation of this decree has yet to occur, it is a commendable starting point.



## More participation by private and foreign investors is needed to ensure adequate financing

Finally, the government's attempts to improve the economy are constrained by limited funds. Government spending on infrastructure improvement is part of the state budget for development, which makes up only 70% of total government spending. In this respect, a great deal of hope is being placed on financing assistance from overseas.[5] Ironically, however, the ability to make use of foreign assistance is still relatively limited, although this situation has begun to improve. In addition, the private sector is currently unlikely to play an important role because of the bad investment climate. This creates a vicious circle: infrastructure investment is needed to improve the investment climate; but funding for infrastructure is constrained by the poor current state of the investment climate.

The government has estimated that in the next five years it needs IDR 1 923 trillion to carry out its infrastructure investment plans. However, the government is able to provide only IDR 768 trillion, about 40% of the total amount. Therefore, it needs to attract participation from private investors, through public-private partnerships (PPPs) and other means.

To facilitate such partnerships, the government has set up PT Penjaminan Infrastruktur Indonesia (Indonesian Infrastructure Financial Guarantee Company, PII) to help firms to insure their infrastructure investments. The government has injected an initial IDR 1 trillion into the company and expects to include participation from private firms in the later stages. The World Bank has also pledged an IDR 1.5 trillion soft loan to support the PII. In addition to PII, the government also established PT Indonesia Infrastructure Finance (IIF) on 27 January 2010 to help accelerate infrastructure developments by providing long-term loan facilities. IIF will manage an initial capital of IDR 3.6 trillion from shareholders that include PT Sarana Multi Infrastruktur (SMI, a company established by the Ministry of Finance to manage infrastructure development financing), the World Bank, the Asian Development Bank, the International Finance Corporation and the German Investment and Development Company. From the Indonesian side, the three companies, namely PII, IIF and SMI, will complement one another's efforts to improve infrastructure development financing in Indonesia. They work in co-ordination with the Ministry of Finance.

## CONCLUSIONS

This chapter has addressed one of the key issues in Indonesia's current economic development, the role of transport infrastructure in the country's limited internal and external economic integration and in its inadequate competitiveness. It has been argued that high logistic costs, to which deficiencies in transport infrastructure are a major contributor, have hindered Indonesia's economic growth. Although it helped it to maintain its economic growth in the wake of the global financial crisis, Indonesia's relatively low trade exposure is a reflection of the economy's limited competitiveness in international markets and as such represents more of a liability than an advantage in the longer term. Indonesia's limited transport infrastructure is a key factor behind this low competitiveness.

A series of studies have examined the links between transport costs and productivity. The studies have focused on issues concerning port and road infrastructure since evidence suggests these two segments are pivotal to the entire logistic chain. Significant improvements have been made in government policies toward transport infrastructure in recent years but key challenges remain. Nevertheless, the success of future transport infrastructure development will require overcoming problems in a number of key areas, such as financing and private-sector participation. Failure to address these problems risks hindering Indonesia's further integration into the region.

# NOTES

1. THC involves a cost recovery mechanism whereby shipping lines claim charges to offset port costs that are not covered in freight handling fees. THC is set by agreement at international trade conferences involving associations of ship owners.
2. However, there are many controversies concerning the THC. Some observers have asserted that the official tariffs set by the Indonesian Port Authority (IPC) and the shipping agencies are about USD 120 or USD 30 lower than the total THC. The remainder is considered to comprise document fees charged by shipping companies to cargo owners, including the companies' profits. But this contention is disputed by the shipping companies, who assert that unclear and complicated handling processes and the resulting delays are the major problems behind the high THC. Some trade-related factors have also contributed to the high THC. These include imbalances between outward and inward international shipments that add to costs for empty containers, bribery, poor infrastructure inside and outside the port and other problems related to the clearance process (Patunru *et al.* 2009).
3. This law limits the definition of warehousing to those related to export and import activities.
4. While this law is rather obsolete, it is the only law that has regulated postal and courier services. The term "logistics" is not found in this law, which is at odds with the fact that currently almost all courier services call themselves "logistics service providers".
5. Note that the Indonesian government programmes with the IMF were terminated in 2003 and the Consultative Group on Indonesia was dissolved in January 2007.

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CHAPTER SIX

# Financing Transport Infrastructure Development

## ABSTRACT

Many growing Asian countries require huge amounts of investment in highways, railways, bridges, ports and other "hard" infrastructures. However, individual countries often do not have sufficient funds to finance that kind of investment. The allocation of infrastructure investment among regions may also be distorted by political exigencies. Finding more efficient ways of funding infrastructure investment is therefore a key concern for policy makers in the region. This chapter addresses various financing methods for infrastructure investment, in particular infrastructure revenue bonds (IRBs). It emphasises the importance of performance evaluation in infrastructure projects as part of the investment process.

# INTRODUCTION

Developing transport infrastructure is essential to economic development. Production sites must have easy access to railways, highways and other means of transport so as to make employees and products easily mobile from one place to another. In Southeast Asia, production sites are often located across national borders so that transport and logistics services play a critical role in connecting many production sites and people within and across countries. The development of public transport networks, as in the case of Singapore (see Chapter 4), also has positive external effects; it reduces carbon dioxide emissions, brings new firms and increases productive employment. All in all, transport infrastructure development generates considerable benefits to an economy at both national and regional level.[1]

Agreeing on the need for new infrastructure is one thing; finding a sustainable way to finance it is another. A recent study by Bhattacharya (2010) reports that total investment needs for national infrastructure development in eight middle and low-income ASEAN countries are projected at an amount of USD 1.1 trillion for the period 2010-20. Given the size of investment needed, individual countries would not have sufficient funds to meet their potential demands. Added to this challenge are the political exigencies in respective countries, which may result in inefficient allocation of public funds for infrastructure development. How best to finance infrastructure investment is, therefore, a key concern for policy makers in the region.

Infrastructure investment entails different types of risks to investors. Risks typically associated with transport projects are cost over-runs during construction; delayed completion of the facility; general market risk (*e.g.* interest rate and inflation shocks); and political risk, such as the possibility of a change in public sector requirements in the future. These risks arise from the nature of investment inherent in large infrastructure projects that have a long period of gestation (10-20 years).

To address the risks involved in infrastructure investment, policy makers in OECD countries are increasingly looking towards public-private partnerships (PPPs). On the one hand, PPPs allow for more competition and innovation (financial, technological and managerial) to be introduced into the infrastructure markets that are dominated by the public sector, and help the parties involved to handle the risks in the most efficient way (OECD 2007). Infrastructure revenue bonds (IRBs), discussed later in this chapter, offer an attractive means to solicit private sector involvement in infrastructure investment. On the other hand, the initial injection of public funds is also critical to making large infrastructure projects financially viable – small amounts of government money may be used to finance the gap between the expected project revenues and costs. Such financing schemes are often referred to as viability gap funds (VGFs). The combination of IRBs and VGFs constitutes a promising platform for partnerships and is particularly well suited for the construction and maintenance of transport infrastructure facilities in emerging economies.

This chapter examines several financing methods for infrastructure investment in light of what might be useful to Southeast Asia. As used here, infrastructure refers to "hard" infrastructure, such as roads, railways, bridges and so on. Investments in 'soft' infrastructure are excluded.[2]

# SOURCES OF FINANCING FOR INFRASTRUCTURE INVESTMENT

This section compares four ways of financing infrastructure investment: tax revenues, national savings, government bonds, and PPPs through the use of infrastructure revenue bonds (IRBs).

## Tax revenues provide only limited funds for infrastructure development

In general, tax revenues offer a stable source of funding for infrastructure investment. Still, there are mounting concerns over their future as a sustainable source of financing for infrastructure development. The size of tax revenues relative to GDP in many Asian economies has not increased over the last 20 years, with the exception of Viet Nam (Table 6.1). In the future, as discussed in Chapter 1, the fiscal capacity of many Asian economies is likely to be constrained as a result of the fiscal consolidation that will be required over the coming years.

Tax revenues as a source of infrastructure financing also raise some political-economy concerns. The allocation of budgets for hard infrastructure development is essentially a political process. The general budget expenditures and allocations have to go through parliament, which means that the allocation of funds to infrastructure investment is influenced by political concerns. This can affect the prioritisation of infrastructure projects and their regional distribution. Politically motivated budgetary decisions may cause inefficient allocation of scarce capital, as politicians are tempted to cater to their constituencies for electoral purposes, rather than to objectively address national economic priorities and benefits (Yoshino and Mizoguchi, 2010).

**Table 6.1. Asia's tax revenue**
(percentage of GDP)

| Selected economies | 1990 | 1995 | 2000 | 2005 | 2009 |
|---|---|---|---|---|---|
| China | 15.1 | 9.9 | 12.7 | 15.6 | 17.7 |
| Hong Kong, China | 10.2 | 10.7 | 9.5 | 12.6 | 12.3 |
| India | 7.5 | 6.9 | 6.5 | 7.3 | 7.4 |
| Indonesia | 17.8 | 16.0 | 8.3 | 12.5 | 11.6 |
| Korea | 14.8 | 15.2 | 17.9 | 14.7 | 15.5 |
| Malaysia | 17.8 | 18.7 | 13.2 | 15.4 | 15.7 |
| Philippines | 14.1 | 16.3 | 13.7 | 13.0 | 12.8 |
| Singapore | 14.6 | 15.9 | 15.1 | 11.8 | 13.8[a] |
| Chinese Taipei | 12.7 | 10.3 | 13.3 | 9.1 | 9.8[a] |
| Thailand | 16.6 | 16.5 | 13.2 | 16.4 | 14.6 |
| Viet Nam | 11.5 | 19.1 | 18.0 | 22.8 | 20.3 |

*Note: a)* 2008 for Chinese Taipei and Singapore.

*source*: Asian Development Bank, Key Indicators 2010.

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## National savings are not well allocated for infrastructure development

National savings provide another important source of infrastructure financing. Many emerging economies in Asia show high savings ratios relative to GDP (Table 6.2). It should in theory be possible to direct some of those savings towards infrastructure investment. However, savings in Asian economies are not well channelled into infrastructure development within the region. Less than 10% of savings in the region are invested in domestic deposits and stocks, while the rest is mostly used to purchase overseas government bonds, such as US treasury bills and stocks (43%) and European financial instruments (37%). In Europe, by comparison, about a third of savings are circulated among European countries.

Another problem concerns the nature of private capital flows into Asia. Around 37% of the money coming into Asia is from the United States and 30% from Europe. A majority of these funds are used for short-term investments. Less than 20% of funds actually come from within Asia. Thus, Asian savings are directed to the United States and European countries for long-term investments, while private capital flows from overseas into Asia are largely of short-term nature and thus less stable. This imbalance was indeed a contributing factor to the 1997 Asian financial crisis. The situation has not improved substantially since then (Yoshino, 2007).

**Table 6.2. Asia's gross domestic savings**
(percentage of GDP)

| Selected economies | 1990 | 1995 | 2000 | 2005 | 2009 |
|---|---|---|---|---|---|
| China | 35.2 | 39.6 | 38.0 | 46.4 | 51.2 |
| Hong Kong, China | 35.7 | 29.6 | 31.9 | 33.0 | 29.7 |
| India | 22.8 | 24.4 | 23.7 | 33.1 | 30.4 |
| Indonesia | 32.3 | 30.6 | 31.8 | 27.5 | 31.8 |
| Korea | 37.6 | 36.5 | 33.3 | 32.3 | 29.7 |
| Malaysia | 34.4 | 39.7 | 46.1 | 42.8 | 36.0 |
| Philippines | 18.7 | 14.5 | 17.3 | 21.0 | 15.6 |
| Singapore | 45.1 | 50.0 | 46.0 | 49.4 | 48.3 |
| Chinese Taipei | 28.7 | 28.2 | 27.8 | 27.1 | 26.3 |
| Thailand | 34.0 | 36.9 | 32.5 | 30.9 | 31.7 |
| Viet Nam | 2.9 | 18.2 | 27.1 | 30.3 | 27.2 |

*Source*: Asian Development Bank, Key Indicators 2010.

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If all domestic savings were used for infrastructure investments, these would more than cover financing needs in Asia. Infrastructure investments are of a long-term nature, and the economic growth expected in many emerging Asian economies should produce relatively high yields to investors in the region. Long-term investments in infrastructure could therefore attract more pension funds and other large institutional investors. However, the allocation of national savings to infrastructure investments presents some political-economy problems as in the case of tax revenues. In particular well-designed institutional arrangements would be required to ensure that these funds are allocated fairly to most vital infrastructure projects nationally and regionally.

## Government bonds as a means of infrastructure financing offer little incentive to investors

Asia's financial market is dominated by the banking sector, while its bond market is not well developed yet. If the government wants to finance infrastructure development by issuing bonds, the maturity of such bonds has to be of a long-term nature to match infrastructure needs. However, investors in Asia tend to opt for risk-free long-term government bonds. Therefore, government bonds for infrastructure investment maturing over a similar period are not attractive, unless they can offer higher yields to offset the perceived risk.

In fact, investors do not see government bonds as an efficient method to finance infrastructure investment. When an infrastructure facility is constructed by issuing government bonds, the rate of return of such investment is not considered important. Nor is profitability of the infrastructure project a major concern. Whatever infrastructure is constructed, the government pays the same interest rate to bond investors.

Infrastructure revenue bonds (IRBs) offer a solution to this problem. When revenue bonds are issued, the rate of return is determined by the performance of the infrastructure facility to be constructed. This can help overcome problems associated with the soft budget constraints often seen in government finance. In this case, the government would be required to disclose to the public the reasons why a particular infrastructure project was chosen for construction, its expected rate of return, and the *ex-post* rate of return. Those involved in infrastructure investment could not assume that the government would cover any cost overruns or operating losses.

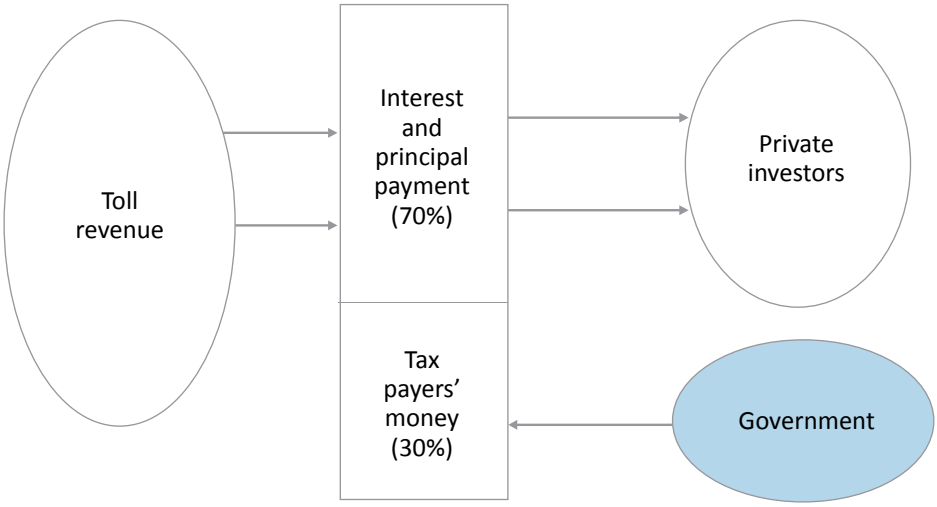
## Public Private Partnerships can generate value for money through more effective risk management

Public-private partnerships (PPPs) facilitated through the issuing of IRBs can enhance the transparency of infrastructure investments as interest payments (or dividends) are based on the profitability of each infrastructure facility. If the infrastructure project does not generate enough revenues for private investors at the beginning, the public sector can then inject money to make the infrastructure project viable.

For example, a new toll road with heavy traffic would be expected to show a high rate of return. Investors can compare various IRBs and monitor their performance. If a road's rate of return is lower than originally expected, IRB investors will demand explanations and put pressure on the operators to improve management and address the causes of poor performance. Transparency of the rate of return on each road will therefore improve the management of tolls throughout the country, generating value for money.

Figure 6.1 illustrates the use of IRBs for a toll road construction. If the toll road meets the expected flow of traffic, the project will generate enough revenues from toll operations to realise the expected rate of return for this investment. However, if it is uncertain whether the rate of return is higher than the interest rate on government bonds with the same maturity, the government may have to inject funds (for instance, 30 % of total infrastructure investment) to attract private investors at the start.[3]

**Figure 6.1. Revenue bond for infrastructure**




# INFRASTRUCTURE PROJECT FINANCING IN ASIA TODAY

## Financing gaps remain huge in Asia's infrastructure development

With the strong recovery of Asian countries from the global financial crisis, market participants expect that the infrastructure sector will become profitable enough to attract more private investment in the coming years. Nonetheless, the region is facing huge demands for infrastructure investment. Table 6.3 reports the estimated need for national infrastructure investment in Southeast Asian countries as well as in China and India. On a per capita basis, Asia's potential demand for national infrastructure investment would be in the order of USD 2 000 to 3 000 on average over the period of 2010-20.

**Table 6.3. Asia's infrastructure investment needs[a] for 2010-20**

| Country | Total estimated investment needs[a] (USD billion) | Estimated investment needs per capita (USD) |
|---|---|---|
| Cambodia | 13 | 918 |
| Indonesia | 450 | 1 981 |
| Laos | 11 | 1 833 |
| Malaysia | 188 | 6 962 |
| Myanmar | 22 | 438 |
| Philippines | 127 | 1 407 |
| Thailand | 173 | 2 566 |
| Viet Nam | 110 | 1 273 |
| ASEAN (8) average | 1 095 | 2 172 |
| China | 4 368 | 3 297 |
| India | 2 173 | 1 906 |

*Note: a)* Energy, transport, telecommunications, water and sanitation.

*Source:* Bhattacharya (2010).

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Asia's favourable medium-term growth prospects (see Chapter 2) and the region's potential demand for developing basic infrastructure should attract both domestic and international investments from the private sector. Local debt markets to finance major infrastructure projects have been developing steadily over the past decade in several Asian countries, such as Indonesia, Malaysia and Thailand. However, these local markets have suffered from a narrow investor base, limited rating capacity, restrictive legal and regulatory frameworks and lack of benchmark yield curves with long-term maturity. Private-sector participation in infrastructure investment, therefore, remains very limited in Asia. For example, in the transport sector, private sector participation in financing transport infrastructure is particularly limited in Southeast Asian countries (Table 6.4).

**Table 6.4. Asia's private investment in transport projects**
(USD million)

| | 2000-04 average | 2005-08 average |
|---|---|---|
| Indonesia | 32 | 378 |
| Malaysia | 735 | 492 |
| Philippines | 189 | 133 |
| Thailand | 188 | 0 |
| Viet Nam | 4 | 191 |
| China | 1 744 | 4 978 |
| India | 551 | 5 200 |

*Source*: World Bank (http://ppi.worldbank.org/).

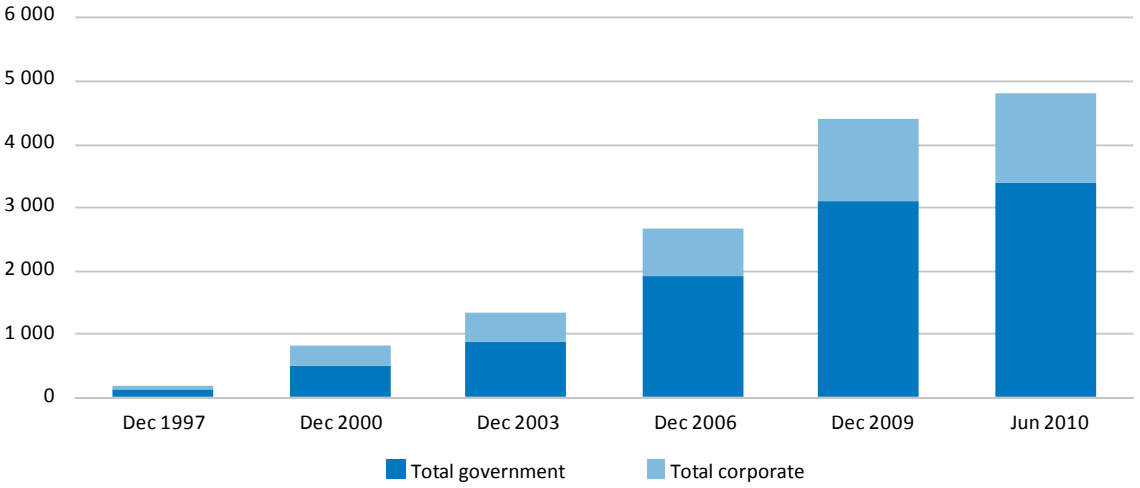
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In order to attract more private investors in infrastructure project financing, it is critical to address the double mismatch problem. One mismatch concerns maturity in that most long-term projects are financed by bank loans which are transformed from short-term deposits. The other is the currency mismatch resulting from the fact that project revenues are generated in local currency but financed in foreign currency. Moreover, exchange rate fluctuations and limited convertibility of local currency impose additional burdens on foreign investors and financiers.

To address the double mismatch problem, efforts have been made to develop local currency-denominated bond markets in the region. A case in point is the ASEAN+3 Asian Bond Markets Initiative (ABMI). This initiative was endorsed at the ASEAN+3 Finance Ministers Meeting in August 2003 with the aim to develop efficient and liquid bond markets through more effective channelling of the region's abundant savings for Asia's investment needs. As seen in Figure 6.2, Asia's bond markets have expanded rapidly over the last ten years. The total outstanding of local currency bonds issued in Asian countries (excluding Japan) surged to USD 4 800 billion in June 2010, almost six times the level in 2000.

The Asian Bond Fund (ABF) Initiative is another important initiative started in June 2003 by the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)[4] to develop Asia's local currency bond markets. The ABF purchases government bonds issued in the region, with the aim to deepen and broaden the Asian bond markets for greater financial stability and integration.

**Figure 6.2. The growth of the Asian bond market[a]**
(USD billion)




*Note*: *a)* Local-currency bonds outstanding in USD (excluding Japan), categorised as government and corporate.

*Source:* Asian Development Bank, *AsianBondsOnline.*

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The currency mismatch problem can be dealt with by applying multi-currency infrastructure financing. Supposing that private investors from the United States and Japan are willing to participate in a transport infrastructure project in Thailand; financing in this case will be arranged through the issuing of revenue bonds in domestic currency (*i.e.* Thai baht), dollar-denominated revenue bonds, and yen-denominated revenue bonds. When the toll road is under construction, each country raises their funding from various currencies.

Multi-currency infrastructure revenue bonds provide an attractive scheme for PPPs involving both domestic and international investors. However, it should be noted that the toll revenue is received in Thai baht and must be converted to US dollars or Japanese yen to make an interest (and principal) payment. Given the currency risks associated with this financing operation, the Thai government needs to issue both dollar and yen denominated government bonds into the market so as to absorb the dollar and the yen to pay back the infrastructure investment. The maturity of dollar and yen denominated government bonds has to match the duration of the infrastructure revenue bonds. This could guarantee the minimum rate of return which is the rate of return on government bonds. In this way, the currency mismatch for overseas investors can be mitigated.

## Bank financing versus bond financing

It is important to compare these two methods as a means to finance infrastructure projects. Bank loans are made via the direct relationship between a lender and a borrower and can be characterised as a negotiable financing tool with flexible disbursement and rescheduling of repayment. Conditions and terms of loans can be negotiated between the involved parties through clause amendments and waivers of loan agreements. Banks investigate the creditworthiness of prospective borrowers (or projects) and screen safe borrowers from less safe ones. After a loan is made, banks often monitor the borrower's business to prevent moral hazard problems. Activities such as information gathering and monitoring are conducted on a bilateral basis between the borrower and the lender.

On the other hand, bond issuance can be described as the direct financing via financial markets from the broad base of investors. In order to issue bonds, the issuing firm's financial conditions are scrutinised and rated and the information gathered in the process is open to the public if necessary.

Underwriting is important for the dissemination of the debtor's information to the public as well as for the treatment of risks related to public offers.

Bonds are standardised financial vehicles and most importantly transferable financing tools through capital markets. This kind of bond financing can cater to the financing needs of transport infrastructure projects, by matching the long gestation periods and by financing the large amount of funds needed for construction and maintenance of infrastructure facilities. Given the nature of infrastructure projects, bond financing is an alternative avenue since bank financing cannot match the long gestation period and the large fund requirements in the infrastructure industry.

## Establishing infrastructure funds helps to promote private participation in Asia

The Asian region lacks an attractive variety of regional debt instruments with long-term maturity that can satisfy institutional investors who want to manage their assets for long-term investments (Yoshino, Nakagawa and Hyun, 2007). Only four countries – China, Japan, Korea and the Philippines – have benchmark yield curves with more than 20 years maturity. This lack of long-term debt instruments causes the maturity mismatch problem that acts as a hindrance to private investment in large infrastructure projects with a long period of gestation.

The Asian region also lacks a sufficiently strong base of institutional investors. Japan has the largest base of institutional investors, followed by Korea, Hong Kong, China, and Singapore. However, the last two function as regional financial centres to attract capital from the United States and Europe; therefore, they do not really contribute to channelling Asia's savings to long-term investments within the region. Institutional investors in Japan and Korea are expected to play an important role in investing in long-term maturity bonds and developing the infrastructure bond markets to circulate high regional savings.

Many infrastructure assets traditionally considered as public-sector properties – such as toll roads, railways, airports, tunnels, bridges and ports – have been transferred to the hands of private sector through PPPs, private finance initiative (PFI) and privatisation. Private project finance has been trumpeted as a solution to the ever-increasing fiscal burden of building and maintaining basic infrastructures.

Good returns and low correlation between other asset classes have recently attracted many private infrastructure funds (see Table 6.5). These kinds of infrastructure funds have been invested mostly in the form of equity and bank loans. However, for private infrastructure building, debt financing is very important for the development of Asian bond market. Besides, the public sector can play an important role in developing an appropriate framework for sharing the cost and risk of infrastructure investment among different investors. Therefore the role of the public sector cannot be overlooked in infrastructure development.

**Table 6.5. Examples of infrastructure funds**

| Arranger | Major fields | Size (USD) |
|---|---|---|
| Macquarie Korea Infrastructure Fund<br>Macquarie Shinhan Infrastructure Asset Management (MSIAM) | Toll roads, tunnels, bridges etc. | 964 million<br>14 March 2006 |
| Alinda Capital Partners LLC | North America & Europe | 1 billion |
| Infrastructure Development Finance Corporation | India Infrastructure Initiative | 350-450 million |
| Carlyle Group | USA | 1 billion |
| MENA Infrastructure Fund<br>Dubai International Capital and HSBC | The infrastructure sector such as in utilities, energy, transportation and public-private partnerships across the Middle East and North Africa (MENA) region | 500 million<br>Mar 2006 |
| Islamic Development Bank Infrastructure Fund<br>Emerging Market Partnership (principal adviser) | Promote the use of Islamic finance in infrastructure development | 730 million |
| Goldman Sachs International | Global Fund for Infrastructure | 3 billion |
| KB Asset Management | J/V ING group and Korea Kookmin Bank<br>Consortium of 17 domestic pension funds and insurance company investors | 1.2 billion |
| Carlyle Group and Riverstone Holdings | Renewable energy infrastructure | 685 million |
| GE and Credit Suisse | Infrastructure such as power plants, pipeline, airports, railroads and toll roads | 500 million |

*Source:* Ministry of Economy, Trade and Industry (2010).

More infrastructure funds should be established in Asia through the participation and co-operation of governments, financial authorities, government financial institutions and professional market players in the region. While the basic concept and the necessity of the infrastructure funds in Asia has been clearly articulated, there are still many tasks remaining to be discussed with potential co-founding members.

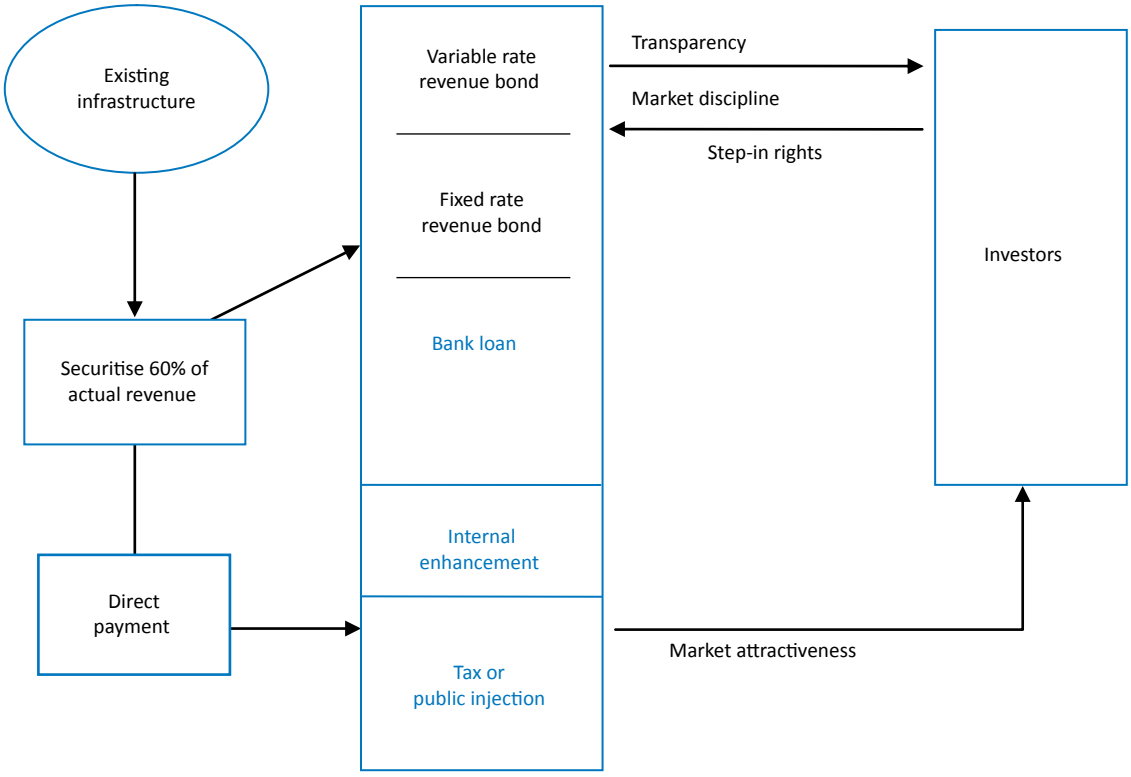
## USING INFRASTRUCTURE REVENUE BONDS TO FILL THE FINANCING GAP

From the perspective of market discipline, it is important to have both variable-rate and fixed rate revenue bonds (see Yoshino and Robaschick, 2004; Yoshino, 2006; and Hyun *et al.*, 2008).The former can be linked to future cash flows generated by the projects themselves, with incentives given to operators to manage and operate efficiently. Variable-rate revenue bonds enable investors to monitor projects and retain step-in rights. Because it is very difficult to forecast future cash flows precisely, securitising existing infrastructures with established track records can help to issue fixed rate revenue bonds, which are attractive to institutional investors (see Figure 6.3).

## Imposing caps and floors to the infrastructure revenue bond

Variable-rate revenue bonds might be considered too risky owing to the long-term nature and the political risks associated with large infrastructure projects. In order to mitigate the risks involved, the government can impose caps and floors as an option. If investors want to secure a minimum rate of return, the government can guarantee a floor on the minimum rate of return. Its rate can be set lower than the interest rate of the government bond with the same maturity. The market can inform the general public when the rate of return on the variable-rate revenue bond becomes lower than the bond yield (as illustrated in Figure 6.4).

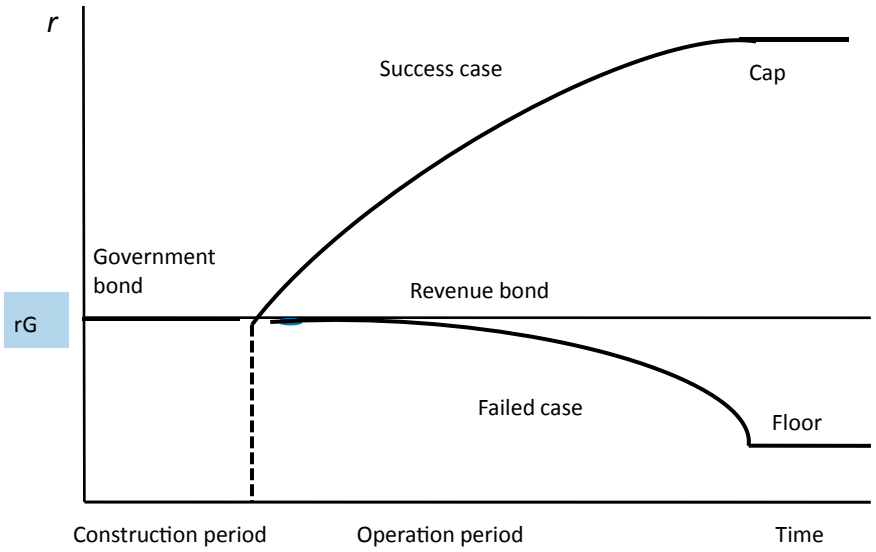
**Figure 6.3. Revenue bond schemes in Asia**




At the same time, the government can impose a cap on variable-rate revenue bonds. When investors want to secure their minimum rate of return, they must give up the upward unexpected rate of return as well. If the infrastructure facility becomes successful with larger-than-expected traffic, the government can receive revenues above the cap rate.

The infrastructure variable-rate bond will pay the interest rate on the government bond during the construction period so that investors can receive continuous flows of interest payments on their investment. This will make it easier for mutual funds and other institutional investors to include the infrastructure variable-rate bond into their investment portfolio.

**Figure 6.4. Caps and floors for convertible infrastructure variable-rate bonds**




*Note:* rG stands for return of government bond.

## Infrastructure revenue bonds help to modernise Asia's transport infrastructure services

Revenue bonds can be applied not only to new infrastructure projects but also to existing facilities (*i.e.* brown-field projects). Existing transport infrastructures generate daily income from direct toll and other revenues. These revenues can be securitised into the market as an infrastructure revenue bond. If so, the new money received by the government can be used for financing new infrastructure projects. Successful transport infrastructure projects can be easily securitised and attract various investors, both institutional and retail.

A key to success is that the revenues from infrastructure facilities must be clearly monitored. Otherwise, interest payments and dividends cannot be clearly set out for investors. The same principle also applies to cross-border infrastructure. In such cases, two countries issue local currency-denominated revenue bonds to their investors separately, together with international investors.

*Hong Kong Link 2004 Limited* provides a successful case of a toll revenue bond. This is a special purpose company created to securitise revenues from five government-owned toll tunnels and the Lantau Link (including Tsing Ma Bridge). These toll facilities represent key transport infrastructure links in Hong Kong with its surrounding areas. In order to fund the purchase of the Toll Revenue Bond from the government, the company issued Notes to institutional investors, and Retail Bonds, to retail investors, in a total amount of up to HK$ 6 billion. The Notes and Retail Bonds had credit ratings of AA- from Standard and Poor's, Aa3 from Moody's and AA+ from Fitch. The Toll Revenue Bond represents a right to receive amounts equal to the net toll revenues generated by the tolled facilities.[5]



The revenue bond scheme will also be used for the new construction of Intercity Motorways Network in the neighbourhood of the Bangkok Metropolitan region (see Table 6.6). The first project will be the route Bangpa In-Saraburi-Nakhon Ratchasima, with a distance of 196 km. It is expected to start from 2011 as a ten-year project with the total cost estimated at nearly 60 billion baht, of which 30% will be provided by the public sector and the rest by the private sector. This will be the first example of infrastructure revenue bond applied to transport services in Southeast Asia.

**Table 6.6. Intercity motorways network plan (five routes) by Department of Highways**

| Project | Distance (km) | Amount (million baht) | Current status | Type of investment |
|---|---|---|---|---|
| Bangpa In-Saraburi-Nakhon Ratchasima | 196 | 60 000 | Waiting for approval | Public private partnerships |
| Bangyai-Nakhon Pathom | 98 | 36 300 | Under survey/ design | Public private partnerships |
| Chonburi-Pattaya-Mab Ta Pud | 89 | 11 760 | Under study | Toll fee collection |
| Nakhon Pathom-Samut Songkram-Cha Am | 118 | 38 290 | Submission of environmental effect | Private participation Toll fee collection |
| Bangpa In-Nakhon Sawan | 206 | 32 380 | Submission of environmental effect | Private participation Toll fee collection |

*Source:* Thai Government Department of Highways, www.prachachat.net/view_news.php?newsid=02p0108300853&sectionid=0201&day=2010-08-30; and the private communications.

# CONCLUSIONS

Transport infrastructure projects are inherently long-term which poses a number of problems for financing. The long lead time involved in such investments tends to discourage many potential investors. Moreover, economic and political uncertainties surrounding these projects often amplify risk without a sufficiently increased yield to compensate for this added risk. Southeast Asia lacks both a large base of regional institutional investors pursuing a long-term strategy and regional debt instruments with long-term maturity that can satisfy the needs of the region.

The private sector is unlikely to find most transport infrastructure projects in the region attractive enough to finance them entirely. Due to budget constraints, public funds cannot be expected to finance them either, although they could help mitigate the risks the private sector is unwilling to assume. This suggests that PPPs should provide a range of viable options, notably through a revenue bond scheme, both to construct new facilities and to maintain or improve existing facilities.

Variable-rate revenue bond may need both floors and caps; the first essentially to reassure private investors as to future yields; and the second to guarantee an equitable return to public finances on the assumed risk. Steps should be taken to ensure that publicly-funded projects are financially viable in themselves and that private investors do not expect the government to guarantee all their losses. Another important point is that planned projects should be subject to a careful assessment of future returns. The combined use of variable-rate and fixed-rate revenue bonds can provide a promising avenue for dealing with the uncertainty of assessing future cash flows.

Infrastructure revenue bonds are not useful only for large-scale, high-profile projects and may be applied to financing smaller projects with equal success. The flexible nature of infrastructure revenue bonds will thus be well suited for transport infrastructure development in Southeast Asia.

# NOTES

1. See Yoshino and Nakahigashi (2004) for the role of infrastructure in economic development. See also Asian Development Bank, Japan Bank for International Co-operation and World Bank (2005) for the case of East Asia.
2. For the importance of soft infrastructure, see Chapter 4.
3. See, for example, Yoshino (2006) and Yoshino and Robaschick (2004).
4. EMEAP is a forum of eleven central banks and monetary authorities in the East Asia and Pacific region, established in 1991 to strengthen co-operation among its members.
5. See the Hong Kong Link 2004 website: www.hklink2004.com.hk

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# Statistical Annex

## MEDIUM-TERM GROWTH AND DEVELOPMENT OUTLOOK

1. Indonesia
2. Malaysia
3. Philippines
4. Singapore
5. Thailand
6. Viet Nam

## TRADE

7. Direction of exports
8. Intra-ASEAN trade

## RESOURCE FLOWS

9. FDI inflows
10. FDI outflows
11. ODA commitments
12. ODA disbursements

## Table A.1. Indonesia

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 5.5 | 6.1 | 7.1 | 6.6 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 4.2 | 5.2 | 5.0 | 5.2 |
| Government consumption | 6.8 | 2.0 | 5.2 | 5.6 |
| Gross fixed capital formation | 6.7 | 8.9 | 9.5 | 8.9 |
| Exports of goods and services | 10.8 | 11.0 | 10.2 | 10.7 |
| Imports of goods and services | 12.7 | 14.3 | 12.1 | 12.5 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 23.6 | 31.0 | 37.8 | 34.5 |
| Gross national saving | 25.5 | 31.3 | 36.6 | 33.7 |
| **4. Consumer prices** (percentage changes, 12-month average) | 8.5 | 5.1 | 4.6 | 4.8 |
| **5. Exchange rate** (local currency per USD, period average) | 9 104.0 | 9 100.0 | 8 900.0 | 9 001.0 |
| **6. Current account balance** (% of GDP) | 1.9 | 0.4 | -1.2 | -0.8 |
| **7. Public finance** | | | | |
| Fiscal balance (% of GDP) | -0.1 | -1.4 | -1.0 | -1.2 |
| Public debt (% of GDP) | 46.8 | 28.0 | 22.2 | 24.4 |
| **8. Broad money supply growth** (percentage changes) | 13.5 | 17.0 | 22.1 | 21.4 |

*Notes:*

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources.
The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350828

## Table A.2. Malaysia

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 6.0 | 6.5 | 5.3 | 5.5 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 8.9 | 6.3 | 7.0 | 7.0 |
| Government consumption | 6.8 | 5.0 | 5.1 | 4.7 |
| Gross fixed capital formation | 3.7 | 7.9 | 4.4 | 4.5 |
| Exports of goods and services | 7.9 | 13.0 | 6.1 | 6.4 |
| Imports of goods and services | 9.1 | 17.1 | 7.2 | 8.1 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 21.3 | 17.6 | 20.8 | 18.2 |
| Gross national saving | 35.5 | 31.6 | 30.3 | 30.0 |
| **4. Consumer prices** (percentage changes, 12-month average) | 2.2 | 2.0 | 2.5 | 2.3 |
| **5. Exchange rate** (local currency per USD, period average) | 3.7 | 3.1 | 2.8 | 3.0 |
| **6. Current account balance** (% of GDP) | 14.2 | 14.0 | 9.5 | 11.8 |
| **7. Public finance** | | | | |
| Fiscal balance (% of GDP) | 0.3 | -2.0 | -1.8 | -1.9 |
| Public debt (% of GDP) | 59.3 | 56.6 | 52.0 | 54.0 |
| **8. Broad money supply growth** (percentage changes) | 10.4 | 9.7 | 13.1 | 12.1 |

*Notes:*

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources.
The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350847

## Table A.3. Philippines

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 5.7 | 6.0 | 4.4 | 4.6 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 5.5 | 5.5 | 5.7 | 5.6 |
| Government consumption | 4.7 | 6.8 | 4.0 | 4.2 |
| Gross fixed capital formation | 3.8 | 8.0 | 3.8 | 4.1 |
| Exports of goods and services | 8.7 | 13.5 | 5.8 | 6.2 |
| Imports of goods and services | 3.3 | 13.2 | 7.8 | 8.1 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 15.2 | 14.9 | 14.9 | 14.8 |
| Gross national saving | 18.0 | 18.3 | 16.3 | 17.3 |
| **4. Consumer prices** (percentage changes, 12-month average) | 5.2 | 4.5 | 4.4 | 4.6 |
| **5. Exchange rate** (local currency per USD, period average) | 52.5 | 46.0 | 43.0 | 44.4 |
| **6. Current account balance** (% of GDP) | 2.7 | 3.4 | 1.7 | 2.5 |
| **7. Public finance** | | | | |
| Fiscal balance (% of GDP) | -2.5 | -3.3 | -1.2 | -1.4 |
| Public debt (% of GDP) | 83.5 | 60.9 | 54.2 | 56.0 |
| **8. Broad money supply growth** (percentage changes) | 10.9 | 12.3 | 12.0 | 11.4 |

*Notes:*

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources.
The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350866

## Table A.4. Singapore

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 7.5 | 14.0 | 4.5 | 4.7 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 3.7 | 6.8 | 3.7 | 3.8 |
| Government consumption | 2.8 | 7.1 | 3.8 | 4.1 |
| Gross fixed capital formation | 7.3 | 8.9 | 6.6 | 6.0 |
| Exports of goods and services | 12.5 | 15.7 | 8.2 | 9.5 |
| Imports of goods and services | 11.6 | 14.6 | 8.2 | 9.7 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 22.7 | 29.6 | 32.7 | 31.0 |
| Gross national saving | 45.2 | 47.8 | 48.6 | 47.5 |
| **4. Consumer prices** (percentage changes, 12-month average) | 1.1 | 3.0 | 1.8 | 2.0 |
| **5. Exchange rate** (local currency per USD, period average) | 1.6 | 1.4 | 1.3 | 1.4 |
| **6. Current account balance** (% of GDP) | 22.5 | 18.2 | 15.9 | 15.5 |
| **7. Public finance*** | | | | |
| Fiscal balance (% of GDP) | 8.1 | 1.0 | 0.8 | 0.7 |
| Public debt (% of GDP) | 92.0 | 98.0 | 95.0 | 96.0 |
| **8. Broad money supply growth** (percentage changes) | 10.3 | 16.4 | 10.2 | 11.8 |

*Notes:*

*provisional for public finance figures.

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources. The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350885

## Table A.5. Thailand

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 5.6 | 7.0 | 5.1 | 5.2 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 4.4 | 6.3 | 6.0 | 6.2 |
| Government consumption | 6.3 | 6.0 | 5.2 | 4.9 |
| Gross fixed capital formation | 7.3 | 10.5 | 6.1 | 6.3 |
| Exports of goods and services | 7.6 | 14.2 | 8.0 | 9.0 |
| Imports of goods and services | 7.7 | 20.1 | 10.0 | 10.5 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 27.7 | 25.0 | 29.1 | 28.0 |
| Gross national saving | 31.1 | 28.4 | 29.0 | 28.5 |
| **4. Consumer prices** (percentage changes, 12-month average) | 2.9 | 3.5 | 2.0 | 2.5 |
| **5. Exchange rate** (local currency per USD, period average) | 40.6 | 32.0 | 30.8 | 31.2 |
| **6. Current account balance** (% of GDP) | 1.6 | 3.4 | 1.4 | 1.9 |
| **7. Public finance** | | | | |
| Fiscal balance (% of GDP) | 0.5 | -3.2 | -1.8 | -2.4 |
| Public debt (% of GDP) | 45.6 | 48.5 | 44.0 | 46.0 |
| **8. Broad money supply growth** (percentage changes) | 8.1 | 11.4 | 12.3 | 12.2 |

*Notes:*

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources.
The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350904

## Table A.6. Viet Nam

| | 2003-07 | 2010 | 2015 | 2011-15 |
|---|---|---|---|---|
| **1. Real GDP growth** (percentage changes) | 8.1 | 6.8 | 7.2 | 7.1 |
| **2. Demand components** (percentage changes) | | | | |
| Private consumption | 8.3 | 7.2 | 8.0 | 7.8 |
| Government consumption | 8.1 | 7.2 | 6.8 | 6.4 |
| Gross fixed capital formation | 13.3 | 6.5 | 7.2 | 7.0 |
| Exports of goods and services | 19.9 | 13.5 | 13.0 | 13.3 |
| Imports of goods and services | 21.4 | 15.5 | 14.1 | 14.8 |
| **3. Saving and investment** (% of GDP) | | | | |
| Gross investment | 37.3 | 36.8 | 33.8 | 34.6 |
| Gross national saving | 33.8 | 28.8 | 29.8 | 30.0 |
| **4. Consumer prices** (percentage changes, 12-month average) | 7.0 | 8.5 | 7.5 | 8.1 |
| **5. Exchange rate** (local currency per USD, period average) | 15 843.0 | 19 244.0 | 19 927.0 | 19 700.0 |
| **6. Current account balance** (% of GDP) | -3.7 | -8.0 | -4.0 | -5.5 |
| **7. Public finance** | | | | |
| Fiscal balance (% of GDP) | -1.6 | -6.5 | -3.5 | -4.6 |
| Public debt (% of GDP) | 43.7 | 52.2 | 50.0 | 51.0 |
| **8. Broad money supply growth** (percentage changes) | 28.7 | 18.0 | 28.2 | 22.4 |

*Notes:*

Fiscal balance is for general government. 2003-07 averages are calculated based on data from IMF and national sources.
The cut-off date for data is 1 October 2010.

*Source:* OECD Development Centre, MPF-SAEO 2010 (The Medium-term Projection Framework for Growth and Development).

StatLink http://dx.doi.org/10.1787/888932350923

## Table A.7. Direction of exports
(percentage of total exports, 2000, 2008 and 2009)

| | ASEAN | China | Japan | United States | EU 27 |
|---|---|---|---|---|---|
| **Brunei Darussalam** | | | | | |
| 2000 | 23.2 | 1.8 | 40.7 | 12.0 | 3.6 |
| 2008 | 25.6 | 0.7 | 40.5 | 1.0 | 0.2 |
| 2009 | 13.2 | 4.0 | 46.8 | 0.6 | 0.5 |
| **Cambodia** | | | | | |
| 2000 | 6.8 | 2.1 | 1.0 | 65.9 | 20.6 |
| 2008 | 6.1 | 0.3 | 0.6 | 38.4 | 14.8 |
| 2009 | 13.0 | 0.3 | 1.6 | 31.2 | 14.3 |
| **Indonesia** | | | | | |
| 2000 | 17.5 | 4.5 | 23.2 | 13.7 | 14.4 |
| 2008 | 19.8 | 8.5 | 20.2 | 9.5 | 11.3 |
| 2009 | 21.1 | 9.9 | 15.9 | 9.3 | 11.7 |
| **Laos** | | | | | |
| 2000 | 42.7 | 1.5 | 2.8 | 2.3 | 26.2 |
| 2008 | 51.2 | 8.5 | 1.0 | 2.5 | 11.3 |
| 2009 | 42.8 | 20.1 | 1.6 | 2.7 | 11.4 |
| **Malaysia** | | | | | |
| 2000 | 26.6 | 3.1 | 13.0 | 20.5 | 14.0 |
| 2008 | 25.8 | 9.5 | 10.8 | 12.5 | 11.3 |
| 2009 | 25.7 | 12.2 | 9.8 | 11.0 | 10.9 |
| **Myanmar** | | | | | |
| 2000 | 21.3 | 5.7 | 5.5 | 22.4 | 16.7 |
| 2008 | 56.9 | 8.8 | 4.3 | 0.0 | 3.7 |
| 2009 | 48.7 | 9.9 | 5.2 | 0.0 | 3.3 |
| **Philippines** | | | | | |
| 2000 | 15.6 | 1.7 | 14.7 | 29.8 | 18.1 |
| 2008 | 14.4 | 11.1 | 15.7 | 16.7 | 17.3 |
| 2009 | 15.2 | 7.6 | 16.2 | 17.5 | 20.3 |
| **Singapore** | | | | | |
| 2000 | 30.1 | 3.9 | 7.5 | 17.3 | 14.0 |
| 2008 | 27.9 | 9.2 | 4.9 | 7.1 | 10.3 |
| 2009 | 26.3 | 9.7 | 4.5 | 6.5 | 9.6 |
| **Thailand** | | | | | |
| 2000 | 19.3 | 4.1 | 14.7 | 21.3 | 16.3 |
| 2008 | 22.6 | 9.2 | 11.4 | 11.4 | 12.9 |
| 2009 | 21.3 | 10.6 | 10.3 | 10.9 | 11.8 |
| **Viet Nam** | | | | | |
| 2000 | 18.1 | 10.6 | 17.8 | 5.1 | 20.6 |
| 2008 | 16.3 | 7.2 | 13.6 | 18.9 | 17.2 |
| 2009 | 15.0 | 8.6 | 11.0 | 19.9 | 16.4 |

*Source:* OECD Development Centre calculation based on IMF, Direction of Trade Statistics.

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## Table A.8. Intra-ASEAN trade
(1995, 2000, 2008 and 2009)

| | Value in USD million | | | | % of intra-ASEAN trade | | | |
|---|---|---|---|---|---|---|---|---|
| | 1995 | 2000 | 2008 | 2009 | 1995 | 2000 | 2008 | 2009 |
| **Intra-ASEAN exports by:** | | | | | | | | |
| Brunei Darussalam | 752.3 | 732.2 | 2 618.7 | 849.4 | 0.9 | 0.7 | 1.1 | 0.5 |
| Cambodia | 225.5 | 76.1 | 313.7 | 645.3 | 0.3 | 0.1 | 0.1 | 0.3 |
| Indonesia | 6 496.9 | 10 883.7 | 27 170.8 | 24 623.9 | 7.9 | 10.7 | 11.4 | 13.1 |
| Laos | 171.1 | 167.0 | 820.9 | 650.9 | 0.2 | 0.2 | 0.3 | 0.3 |
| Malaysia | 20 315.5 | 26 067.9 | 51 537.4 | 40 512.3 | 24.8 | 25.6 | 21.7 | 21.5 |
| Myanmar | 362.6 | 421.6 | 3 788.4 | 2 880.6 | 0.4 | 0.4 | 1.6 | 1.5 |
| Philippines | 2 361.4 | 5 982.6 | 7 089.9 | 6 008.5 | 2.9 | 5.9 | 3.0 | 3.2 |
| Singapore | 38 218.3 | 41 557.8 | 94 630.7 | 71 182.7 | 46.6 | 40.8 | 39.9 | 37.8 |
| Thailand | 11 916.4 | 13 340.0 | 39 163.0 | 32 398.8 | 14.5 | 13.1 | 16.5 | 17.2 |
| Viet Nam | 1 112.2 | 2 619.4 | 10 194.9 | 8 591.9 | 1.4 | 2.6 | 4.3 | 4.6 |
| ASEAN-6[a] | 80 060.8 | 98 564.2 | 222 210.5 | 175 575.5 | 97.7 | 96.8 | 93.6 | 93.2 |
| CLMV[b] | 1 871.4 | 3 284.1 | 15 117.8 | 12 768.6 | 2.3 | 3.2 | 6.4 | 6.8 |
| Total intra-ASEAN | 81 932.3 | 10 1848.3 | 23 7328.3 | 188 344.1 | 100.0 | 100.0 | 100.0 | 100.0 |
| **Intra-ASEAN imports by:** | | | | | | | | |
| Brunei Darussalam | 1 488.8 | 822.8 | 1 653.1 | 1 663.9 | 2.1 | 0.9 | 0.7 | 1.0 |
| Cambodia | 1 195.4 | 554.4 | 1 695.2 | 1 453.4 | 1.7 | 0.6 | 0.8 | 0.8 |
| Indonesia | 6 047.7 | 6 486.6 | 40 971.1 | 27 722.0 | 8.7 | 7.2 | 18.3 | 16.1 |
| Laos | 330.2 | 536.0 | 2 141.0 | 2 041.7 | 0.5 | 0.6 | 1.0 | 1.2 |
| Malaysia | 13 508.3 | 19 743.5 | 38 103.4 | 31 190.7 | 19.4 | 22.1 | 17.0 | 18.1 |
| Myanmar | 1 021.7 | 1 377.1 | 3 535.3 | 3 143.4 | 1.5 | 1.5 | 1.6 | 1.8 |
| Philippines | 2 993.2 | 5 363.5 | 15 289.6 | 11 671.9 | 4.3 | 6.0 | 6.8 | 6.8 |
| Singapore | 31 470.8 | 39 840.4 | 69 985.7 | 55 079.1 | 45.2 | 44.5 | 31.3 | 31.9 |
| Thailand | 9 252.0 | 10 318.7 | 30 619.3 | 24 890.4 | 13.3 | 11.5 | 13.7 | 14.4 |
| Viet Nam | 2 377.7 | 4 449.1 | 19 570.9 | 13 813.1 | 3.4 | 5.0 | 8.8 | 8.0 |
| ASEAN-6[a] | 64 760.8 | 82 575.5 | 196 622.2 | 152 217.9 | 92.9 | 92.3 | 87.9 | 88.2 |
| CLMV[b] | 4 925.0 | 6 916.6 | 26 942.4 | 20 451.6 | 7.1 | 7.7 | 12.1 | 11.8 |
| Total intra-ASEAN | 69 685.8 | 89 492.1 | 223 564.6 | 172 669.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| **Intra-ASEAN exports and imports by:** | | | | | | | | |
| Brunei Darussalam | 2 241.1 | 1 555.0 | 4 271.8 | 2 513.2 | 1.5 | 0.8 | 0.9 | 0.7 |
| Cambodia | 1 420.9 | 630.5 | 2 008.8 | 2 098.6 | 0.9 | 0.3 | 0.4 | 0.6 |
| Indonesia | 12 544.6 | 17 370.2 | 68 141.9 | 52 345.9 | 8.3 | 9.1 | 14.8 | 14.5 |
| Laos | 501.3 | 703.1 | 2 961.9 | 2 692.6 | 0.3 | 0.4 | 0.6 | 0.7 |
| Malaysia | 33 823.9 | 45 811.4 | 89 640.8 | 71 702.9 | 22.3 | 23.9 | 19.4 | 19.9 |
| Myanmar | 1 384.3 | 1 798.7 | 7 323.8 | 6 024.0 | 0.9 | 0.9 | 1.6 | 1.7 |
| Philippines | 5 354.6 | 11 346.1 | 22 379.5 | 17 680.3 | 3.5 | 5.9 | 4.9 | 4.9 |
| Singapore | 69 689.1 | 81 398.2 | 164 616.3 | 126 261.8 | 46.0 | 42.5 | 35.7 | 35.0 |
| Thailand | 21 168.4 | 23 658.8 | 69 782.4 | 57 289.2 | 14.0 | 12.4 | 15.1 | 15.9 |
| Viet Nam | 3 489.9 | 7 068.5 | 29 765.8 | 22 404.9 | 2.3 | 3.7 | 6.5 | 6.2 |
| ASEAN-6[a] | 144 821.7 | 181 139.7 | 418 832.6 | 327 793.4 | 95.5 | 94.7 | 90.9 | 90.8 |
| CLMV[b] | 6 796.4 | 10 200.8 | 42 060.3 | 33 220.2 | 4.5 | 5.3 | 9.1 | 9.2 |
| Total intra-ASEAN | 151 618.1 | 191 340.5 | 460 892.9 | 361 013.5 | 100.0 | 100.0 | 100.0 | 100.0 |

*Notes:*
*a)* ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.
*b)* CLMV includes Cambodia, Laos, Myanmar and Viet Nam.

*Source:* OECD Development Centre calculation based on IMF, Direction of Trade Statistics.

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## Table A.9. FDI inflows

(USD million, current prices and current exchange rates)

| FDI inflows | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Brunei Darussalam | 582.8 | 549.2 | 288.5 | 433.5 | 260.2 | 239.2 | 311.0 |
| Cambodia | 150.7 | 148.5 | 381.2 | 483.2 | 867.3 | 815.2 | 532.5 |
| Indonesia[a] | 4 427.9 | -4 495.0 | 8 336.0 | 4 914.0 | 6 928.0 | 9 318.0 | 4 877.4 |
| Laos | 88.4 | 34.0 | 27.7 | 187.4 | 323.5 | 227.7 | 156.7 |
| Malaysia | 5 815.0 | 3 787.6 | 4 063.6 | 6 059.7 | 8 538.5 | 7 318.4 | 1 381.0 |
| Myanmar | 317.6 | 208.0 | 235.8 | 427.8 | 257.7 | 283.5 | 323.0 |
| Philippines | 1 459.0 | 2 240.0 | 1 854.0 | 2 921.0 | 2 916.0 | 1 544.0 | 1 948.0 |
| Singapore | 11 535.3 | 16 484.5 | 15 459.6 | 29 055.6 | 35 777.5 | 10 911.8 | 16 808.8 |
| Thailand | 2 070.0 | 3 410.1 | 8 066.6 | 9 517.0 | 11 355.0 | 8 543.8 | 5 949.0 |
| Viet Nam | 1 780.4 | 1 289.0 | 2 021.0 | 2 400.0 | 6 739.0 | 8 050.0 | 4 500.0 |
| ASEAN-6[b] | 25 889.9 | 21 976.4 | 38 068.3 | 52 900.8 | 65 775.2 | 37 875.2 | 31 275.2 |
| ASEAN-10 | 28 227.0 | 23 655.9 | 40 734.0 | 56 399.2 | 73 962.7 | 47 251.5 | 36 787.4 |
| CLMV[c] | 2 337.1 | 1 679.5 | 2 665.7 | 3 498.4 | 8 187.5 | 9 376.3 | 5 512.2 |
| CLMV/ASEAN-10 (%) | 8.3 | 7.1 | 6.5 | 6.2 | 11.1 | 19.8 | 15.0 |
| **FDI inflows in % of GFCF** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Brunei Darussalam | 33.6 | 70.6 | 26.7 | 36.1 | 16.3 | 14.2 | n.a. |
| Cambodia | 34.6 | 22.1 | 32.1 | 34.3 | 51.9 | 34.7 | n.a. |
| Indonesia[a] | 7.7 | -13.7 | 12.3 | 5.6 | 6.4 | 6.6 | n.a. |
| Laos | 46.0 | 9.9 | 3.1 | 17.3 | 19.8 | 11.6 | n.a. |
| Malaysia | 14.6 | 16.0 | 14.4 | 18.6 | 21.1 | 16.8 | n.a. |
| Myanmar | 30.0 | 24.2 | 15.7 | 23.0 | 9.9 | 8.0 | n.a. |
| Philippines | 8.9 | 13.9 | 13.0 | 17.7 | 13.7 | 6.0 | n.a. |
| Singapore | 41.1 | 58.1 | 60.0 | 94.7 | 89.2 | 21.0 | n.a. |
| Thailand | 3.0 | 12.6 | 15.8 | 16.4 | 17.4 | 11.2 | n.a. |
| Viet Nam | 33.8 | 15.0 | 11.6 | 11.8 | 24.8 | 24.7 | n.a. |
| **FDI inflows stock** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Brunei Darussalam | 642.8 | 3868.1 | 9 427.7 | 9 861.2 | 10 121.4 | 10 360.6 | 10 671.5 |
| Cambodia | 355.9 | 1579.9 | 2 471.0 | 2 954.2 | 3 821.5 | 4 636.7 | 5 169.2 |
| Indonesia[a] | 20698.1 | 25132.1 | 41 187.0 | 54 534.0 | 79 927.0 | 67 964.0 | 72 841.4 |
| Laos | 210.6 | 555.9 | 668.9 | 856.3 | 1 179.8 | 1 407.5 | 1 564.2 |
| Malaysia | 28730.6 | 52747.5 | 44 459.5 | 53 709.8 | 76 612.4 | 73 262.1 | 74 643.2 |
| Myanmar | 1209.7 | 3864.8 | 4 862.0 | 5 004.9 | 5 262.6 | 5 546.0 | 5 869.0 |
| Philippines | 10148.2 | 18156.2 | 14 978.0 | 16 914.0 | 20 463.0 | 21 611.0 | 23 559.0 |
| Singapore | 65644.2 | 110570.3 | 194 580.7 | 241 569.7 | 322 977.8 | 326 789.8 | 343 598.7 |
| Thailand | 17684.4 | 29915.0 | 60 408.0 | 77 161.9 | 94 112.1 | 93 045.9 | 99 000.3 |
| Viet Nam | 7150.0 | 20595.6 | 31 136.3 | 33 536.3 | 40 275.3 | 48 325.3 | 52 825.3 |
| ASEAN-6[b] | 143548.3 | 240389.2 | 365 040.9 | 453 750.6 | 604 213.7 | 593 033.4 | 624 314.1 |
| ASEAN-10 | 152474.5 | 266985.4 | 404 179.1 | 496 102.3 | 654 753.0 | 652 948.9 | 689 741.8 |
| CLMV[c] | 8926.2 | 26596.2 | 39 138.3 | 42 351.8 | 50 539.2 | 59 915.6 | 65 427.7 |
| CLMV/ASEAN-10 (%) | 5.9 | 10.0 | 9.7 | 8.5 | 7.7 | 9.2 | 9.5 |

| FDI inflows stock in % of GDP | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Brunei Darussalam | 13.6 | 64.5 | 98.9 | 86.0 | 82.4 | 71.3 | 100.2 |
| Cambodia | 10.8 | 43.1 | 39.3 | 40.6 | 44.2 | 41.4 | 48.2 |
| Indonesia[a] | 9.3 | 15.2 | 14.4 | 15.0 | 18.5 | 13.3 | 13.5 |
| Laos | 12.4 | 33.6 | 24.4 | 25.8 | 28.7 | 26.4 | 27.7 |
| Malaysia | 31.1 | 56.2 | 32.2 | 34.3 | 41.0 | 33.1 | 39.0 |
| Myanmar | 15.6 | 53.1 | 40.8 | 36.1 | 29.7 | 20.9 | 18.5 |
| Philippines | 13.7 | 23.9 | 15.2 | 14.4 | 14.2 | 12.8 | 14.5 |
| Singapore | 78.2 | 119.3 | 160.9 | 173.6 | 193.5 | 179.6 | 200.7 |
| Thailand | 10.5 | 24.4 | 34.3 | 37.3 | 38.2 | 33.0 | 36.2 |
| Viet Nam | 34.5 | 66.1 | 58.8 | 55.1 | 56.7 | 53.3 | 57.1 |

*Notes:*

*a)* Indonesia includes East Timor until 2002.

*b)* ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

*c)* CLMV includes Cambodia, Laos, Myanmar and Viet Nam.

*Source:* UNCTAD.

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## Table A.10. FDI outflows

(USD million, current prices and current exchange rates)

| FDI outflow | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Brunei Darussalam | 43.0 | 20.1 | 46.8 | 17.9 | 37.5 | 34.1 | 29.8 |
| Cambodia | n.a. | 16.3 | 11.4 | 12.0 | 4.8 | 24.2 | -1.4 |
| Indonesia[a] | 1 319.0 | 150.0 | 3 065.0 | 2 726.0 | 4 675.0 | 5 900.0 | 2 949.1 |
| Laos | 4.8 | 4.1 | n.a. | n.a. | n.a. | n.a. | n.a. |
| Malaysia | 2 488.0 | 2 026.1 | 2 972.4 | 6 083.7 | 11 279.7 | 14 988.0 | 8 038.2 |
| Myanmar | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Philippines | 98.0 | 125.0 | 189.0 | 103.0 | 3 536.0 | 259.0 | 359.0 |
| Singapore | 6 787.3 | 5 915.4 | 11 218.3 | 18 811.0 | 27 645.5 | -8 477.9 | 5 979.3 |
| Thailand | 887.0 | -19.8 | 529.5 | 969.8 | 2 849.6 | 2 559.6 | 3 818.0 |
| Viet Nam | n.a. | n.a. | 65.0 | 85.0 | 150.0 | 100.0 | 111.7 |
| ASEAN-6[b] | 11 622.3 | 8 216.8 | 18 021.0 | 28 711.4 | 50 023.3 | 15 262.8 | 21 173.4 |
| ASEAN-10 | 11 627.0 | 8 237.1 | 18 097.4 | 28 808.4 | 50 178.1 | 15 387.0 | 21 283.7 |
| CLMV[c] | 4.8 | 20.3 | 76.4 | 97.0 | 154.8 | 124.2 | 110.3 |
| CLMV/ASEAN-10 (%) | 0.0 | 0.2 | 0.4 | 0.3 | 0.3 | 0.8 | 0.5 |
| **FDI outflows stock** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Brunei Darussalam | 326.7 | 446.6 | 642.6 | 660.5 | 698.0 | 732.1 | 732.1 |
| Cambodia | 139.2 | 193.2 | 267.0 | 279.0 | 283.8 | 308.0 | 306.6 |
| Indonesia[a] | 5 896.0 | 6 940.0 | 13 932.4 | 16 658.4 | 21 333.4 | 27 233.4 | 30 182.5 |
| Laos | 7.5 | 21.4 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 |
| Malaysia | 5 123.2 | 15 877.6 | 21 919.0 | 36 126.9 | 58 232.9 | 67 580.0 | 75 618.2 |
| Myanmar | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Philippines | 1 308.0 | 2 044.0 | 2 028.0 | 2 131.0 | 5 667.0 | 5 736.0 | 6 095.0 |
| Singapore | 35 049.7 | 56 755.2 | 121 392.1 | 160 668.0 | 218 201.4 | 207 130.2 | 213 109.5 |
| Thailand | 2 276.3 | 2 203.0 | 5 069.0 | 6 398.0 | 9 835.0 | 12 467.0 | 16 303.0 |
| Viet Nam | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| ASEAN-6[b] | 49 979.9 | 84 266.4 | 164 983.2 | 222 642.8 | 313 967.7 | 320 878.7 | 342 040.3 |
| ASEAN-10 | 50 126.7 | 84 480.9 | 165 270.7 | 222 942.3 | 314 272.0 | 321 207.2 | 342 367.4 |
| CLMV[c] | 146.8 | 214.6 | 287.5 | 299.5 | 304.3 | 328.4 | 327.0 |
| CLMV/ASEAN-10 (%) | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| **FDI outflows stock in % of GDP** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Brunei Darussalam | 6.9 | 7.4 | 6.7 | 5.8 | 5.7 | 5.0 | 6.9 |
| Cambodia | 4.2 | 5.3 | 4.2 | 3.8 | 3.3 | 2.8 | 2.9 |
| Indonesia[a] | 2.7 | 4.2 | 4.9 | 4.6 | 4.9 | 5.3 | 5.6 |
| Laos | 0.4 | 1.3 | 0.7 | 0.6 | 0.5 | 0.4 | 0.4 |
| Malaysia | 5.6 | 16.9 | 15.9 | 23.1 | 31.2 | 30.5 | 39.5 |
| Myanmar | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Philippines | 1.8 | 2.7 | 2.1 | 1.8 | 3.9 | 3.4 | 3.8 |
| Singapore | 41.8 | 61.2 | 100.4 | 115.4 | 130.7 | 113.8 | 124.5 |
| Thailand | 1.4 | 1.8 | 2.9 | 3.1 | 4.0 | 4.4 | 6.0 |
| Viet Nam | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |

*Notes:*
*a)* Indonesia includes East Timor until 2002.
*b)* ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.
*c)* CLMV includes Cambodia, Laos, Myanmar and Viet Nam.

*Source:* UNCTAD.

StatLink http://dx.doi.org/10.1787/888932350999

## Table A.11. ODA commitments (All donor)

(USD million, current prices)

| Year | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Recipient(s) | | | | | | | |
| All recipients | 95 335.9 | 81 975.6 | 150 023.1 | 163 617.3 | 163 799.4 | 202 768.9 | 56 660.0 |
| All developing countries | 74 858.4 | 63 607.5 | 123 717.5 | 131 368.4 | 131 737.8 | 162 083.1 | 46 350.2 |
| Brunei Darussalam | 5.2 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Cambodia | 571.7 | 403.7 | 516.8 | 687.0 | 577.6 | 765.1 | 179.9 |
| Indonesia | 3 933.4 | 2 034.5 | 4 142.6 | 3 332.7 | 3 020.6 | 3 672.6 | 620.0 |
| Laos | 326.3 | 258.4 | 349.3 | 282.5 | 335.6 | 340.5 | 130.8 |
| Malaysia | 113.3 | 1 189.9 | 795.8 | 126.1 | 69.7 | 134.1 | 12.4 |
| Myanmar | 230.9 | 89.0 | 123.9 | 132.8 | 262.0 | 546.6 | 57.8 |
| Philippines | 1 885.3 | 1 079.2 | 565.9 | 457.3 | 797.5 | 968.5 | 324.4 |
| Singapore | 23.7 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Thailand | 989.6 | 1 106.5 | 618.3 | 344.0 | 216.3 | 844.6 | 74.0 |
| Viet Nam | 1 838.8 | 1 750.7 | 2 715.4 | 2 792.2 | 3 824.3 | 3 631.4 | 1 977.2 |
| ASEAN-6[a] | 6 950.5 | 5 410.1 | 6 122.6 | 4 260.1 | 4 104.1 | 5 619.7 | 1 030.7 |
| ASEAN-10 | 9 918.2 | 7 911.9 | 9 828.0 | 8 154.5 | 9 103.6 | 10 903.2 | 3 376.4 |
| CLMV[b] | 2 967.7 | 2 501.8 | 3 705.4 | 3 894.4 | 4 999.5 | 5 283.5 | 2 345.6 |
| | | | | | | | |
| **SHARE** | | | | | | | |
| **Year** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Recipient(s) | | | | | | | |
| All recipients | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| All developing countries | 78.5 | 77.6 | 82.5 | 80.3 | 80.4 | 79.9 | 81.8 |
| Brunei Darussalam | 0.0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Cambodia | 0.6 | 0.5 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 |
| Indonesia | 4.1 | 2.5 | 2.8 | 2.0 | 1.8 | 1.8 | 1.1 |
| Laos | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Malaysia | 0.1 | 1.5 | 0.5 | 0.1 | 0.0 | 0.1 | 0.0 |
| Myanmar | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.1 |
| Philippines | 2.0 | 1.3 | 0.4 | 0.3 | 0.5 | 0.5 | 0.6 |
| Singapore | 0.0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Thailand | 1.0 | 1.3 | 0.4 | 0.2 | 0.1 | 0.4 | 0.1 |
| Viet Nam | 1.9 | 2.1 | 1.8 | 1.7 | 2.3 | 1.8 | 3.5 |
| ASEAN-6[a] | 7.3 | 6.6 | 4.1 | 2.6 | 2.5 | 2.8 | 1.8 |
| ASEAN-10 | 10.4 | 9.7 | 6.6 | 5.0 | 5.6 | 5.4 | 6.0 |
| CLMV[b] | 3.1 | 3.1 | 2.5 | 2.4 | 3.1 | 2.6 | 4.1 |

*Notes:*
*a)* ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.
*b)* CLMV includes Cambodia, Laos, Myanmar and Viet Nam.

*Source:* OECD International Development Statistics online. http://www.oecd.org/dataoecd/50/17/5037721.htm

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## Table A.12. ODA disbursements (All donors)

(USD million, current prices)

| Year | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Recipient(s) | | | | | | | |
| All recipients | 58 897.0 | 53 961.7 | 107 830.0 | 104 823.7 | 104 181.1 | 122 296.0 | 26 606.2 |
| All developing countries | 40 552.4 | 36 195.3 | 82 887.6 | 77 277.4 | 73 371.6 | 86 960.6 | 16 964.8 |
| Brunei Darussalam | 4.2 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Cambodia | 341.2 | 248.6 | 364.3 | 361.3 | 452.5 | 459.7 | 85.6 |
| Indonesia | 1 218.3 | 1 547.8 | 2 260.4 | 620.9 | 391.4 | 593.3 | 85.8 |
| Laos | 170.1 | 195.5 | 168.6 | 201.2 | 239.6 | 225.2 | 66.0 |
| Malaysia | 106.9 | 43.5 | 18.5 | 231.1 | 192.4 | 153.3 | 17.3 |
| Myanmar | 128.2 | 68.9 | 85.8 | 100.5 | 129.8 | 421.8 | 28.4 |
| Philippines | 765.4 | 505.1 | 532.3 | 526.5 | 575.6 | -4.9 | 75.4 |
| Singapore | 13.9 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Thailand | 807.9 | 683.6 | -210.5 | -290.7 | -394.1 | -698.8 | 12.3 |
| Viet Nam | 553.0 | 1 262.2 | 1 268.1 | 1 316.4 | 1 513.0 | 1 649.4 | 329.8 |
| ASEAN-6[a] | 2 916.6 | 2 780.0 | 2 600.6 | 1 087.8 | 765.3 | 43.0 | 190.8 |
| ASEAN-10 | 4 109.2 | 4 555.2 | 4 487.3 | 3 067.2 | 3 100.3 | 2 799.2 | 700.8 |
| CLMV[b] | 1 192.6 | 1 775.3 | 1 886.7 | 1 979.4 | 2 335.0 | 2 756.2 | 509.9 |

| SHARE | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Year** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** |
| Recipient(s) | | | | | | | |
| All recipients | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| All developing countries | 68.9 | 67.1 | 76.9 | 73.7 | 70.4 | 71.1 | 63.8 |
| Brunei Darussalam | 0.0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Cambodia | 0.6 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 |
| Indonesia | 2.1 | 2.9 | 2.1 | 0.6 | 0.4 | 0.5 | 0.3 |
| Laos | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Malaysia | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 |
| Myanmar | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 |
| Philippines | 1.3 | 0.9 | 0.5 | 0.5 | 0.6 | 0.0 | 0.3 |
| Singapore | 0.0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Thailand | 1.4 | 1.3 | -0.2 | -0.3 | -0.4 | -0.6 | 0.0 |
| Viet Nam | 0.9 | 2.3 | 1.2 | 1.3 | 1.5 | 1.3 | 1.2 |
| ASEAN-6[a] | 5.0 | 5.2 | 2.4 | 1.0 | 0.7 | 0.0 | 0.7 |
| ASEAN-10 | 7.0 | 8.4 | 4.2 | 2.9 | 3.0 | 2.3 | 2.6 |
| CLMV[b] | 2.0 | 3.3 | 1.7 | 1.9 | 2.2 | 2.3 | 1.9 |

*Notes:*

*a)* ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.
*b*) CLMV includes Cambodia, Laos, Myanmar and Viet Nam.

*Source:* OECD International Development Statistics online. http://www.oecd.org/dataoecd/50/17/5037721.htm

StatLink http://dx.doi.org/10.1787/888932351037

# ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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# Southeast Asian Economic Outlook 2010

The global financial crisis has offered an important opportunity for Southeast Asian countries to rethink past growth strategies and project new development visions. This inaugural edition of the *Southeast Asian Economic Outlook* looks at current efforts to rebalance growth for the region and at what form growth will take in the future.

The analyses and discussions presented in this volume highlight the need to implement five-year development plans with a view to rebalancing growth and instituting a credible fiscal policy framework conducive to greater fiscal discipline. In particular, well-designed fiscal rules, independent fiscal agencies and a medium-term budgetary framework are crucial elements. Although such institutions are becoming increasingly important across OECD countries, there is room for improving the institutional settings in Southeast Asia.

The 2010 *Outlook* also addresses the fact that the future development of Southeast Asian countries is likely to be uneven across sectors and economies, unless necessary measures are taken. Sectors of new growth in the region will need to be supported by going beyond the current narrow range of electronic products and developing more niche and speciality products that are priorities of the Association of Southeast Asian Nations.

Another area of policy action proposed is to develop more integrated transport networks. Given the huge investment needs for infrastructure development, new financing methods, such as infrastructure revenue bonds, should be further explored to promote public-private partnerships in the region.

The effectiveness of regional co-operation hinges largely upon its form. From the different options available, the *Southeast Asian Economic Outlook 2010* presents the OECD's peer review mechanism as a flexible instrument which may be suitable for policy dialogue and capacity building. Regional monitoring and surveillance based on peer reviews, including the support of macroeconomic policy co-operation, could potentially work well.

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