ERIA Research Project Report 2011, No.10

MOVING TOWARD A NEW DEVELOPMENT MODEL FOR EAST ASIA- THE ROLE OF DOMESTIC POLICY AND REGIONAL COOPERATION

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December 2012

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EXECUTIVE SUMMARY AND POLICY RECOMMENDATIONS

I. New challenges

1. Over the past two decades, East Asia has become a growing force in global production, trade, investment and finance. And the region will become the biggest stakeholder in an open trading system, a stable financial system, and a sustainable environment. However, to realize the Asian Century scenario, the region must tackle daunting policy, institutional and governance challenges. The Asian Century is complicated by the less benign global economic environment, and domestic economic, political and social constraints. The global environment holds trade imbalances, threats of protectionism and the need to rebalance away from export-led growth towards domestic and regional demand; there are international financial instability and volatility; and there is increasing concern over food and energy security, climate change and environmental deterioration and lack of sustainability. On the domestic front, East Asia is confronted with growing economic, political and social constraints that could lead to the 'middle income trap', to and political-social instabilities. Unless the constraints are resolved, the Asian Century will not materialize, and large parts of East Asia will remain low and middle income economies. Nonetheless, East Asia has already become a global economic and financial power to be reckoned with. In particular, it has the opportunity to play a larger role in international economic and financial institutions such as the WTO, IMF, World Bank and G20. East Asia has to bear in mind its increased responsibility to act as a cooperative global power so that its continuing prosperity would not be a threat to the rest of the world but would facilitate global growth, stability and prosperity.

2. The export-oriented development strategy in East Asia has been the most successful model of development since World War II, and even in a longer term. It has been accomplished against the background of an open global economy, and in particular of economic globalization. Following the recent global financial crisis, the implementation conditions for an export oriented strategy in East Asia have greatly changed, including a decline in demand from the U.S. and Europe, weak external demand brought about by a prolonged slump in their economic growth, and pressure for readjustments and changes of the global economic balance. However, these will neither reverse the entire trend of globalization of market economy development, nor rule out the rational choice of international trade. China's restructuring and upgrading of its trade strategy are the most important part of the export-oriented strategy adjustment in East Asia at the moment and for the foreseeable future. In meeting the new challenges, East Asia should unequivocally support globalization, oppose trade protectionism and promote the economic recovery process. East Asia is both a global dynamic production and processing base and the world's largest potential market. The regional integration process can tap an enormous internal market potential in East Asia, making up for the lack of external demand. It can also improve the export competitiveness of East Asia and stabilize the foundation of the export strategy.

3. The developing economies of Asia are confronted by serious environmental problems that threaten to undermine future growth, food security, and regional stability. They certainly will not be solved by growth, nor will "rebalancing" or moving to a "green growth" paradigm an easy fix. Seven general principles may be useful across the board: a focus on co-benefits; an emphasis on stakeholder participation; a commitment to scientific research; an emphasis on long-term planning; pricing and broader economic reform; tackling corruption, in addition to generally bolstering institutional capacity with regard to environmental regulation;

and a strengthening of regional approaches and international support. It is clear that the current trajectory of environmental degradation in Asia is unsustainable. Policy makers around the region acknowledge the importance of environmentally sustainable growth and are already acting, but much more will need to be done. Neither the region nor the globe can afford Asia as a whole to retain any vestiges of a "development first-environment later" mindset. Asia's diverse environmental problems share the characteristic of being "wicked". That is, they are dynamic and complex, they encompass many issues and stakeholders, and they evade straightforward, lasting solutions. Tackling environmental problems in Asia requires sustained regional cooperation, strong implementation capacity, and the ability to tackle domestic vested interests and compensate affected parties. All of these present serious challenges to even the best-intentioned government.

4. The big challenge facing many countries today is the growing imbalance between economic development and social development, which causes the potential conflict and social crisis, hampering development. Despite their economic achievements, socio-economic disparities still exist in ASEAN countries. The challenge facing ASEAN countries is how to sustain rapid economic growth that reduces poverty and is socially inclusive. Import demand from outside the region is not likely to play the buoyant role as it did in the past decade. The region will have to identify new drivers for growth, to compensate for the anticipated reduction in demand from traditional export markets. Each country will have to address its own specific needs and constraints and exploit opportunities for strengthening growth and achieving its Millennium Development Goals. In order to become more resilient, they need to spend more on basic social services, social protection and basic infrastructure, as well as measures to boost the income of the poor. It is crucial to promote intraregional trade and investment flows that benefit the landlocked developing countries. Social imbalances are pervasive in many countries in the region, where

large majorities of the people live under the poverty line. Reducing poverty and ensuring an equitable sharing of economic prosperity thus constitute important agenda for mitigating social imbalances in these countries. The limited availability of infrastructure constrains the contribution that infrastructure can make to economic growth. Closing the infrastructure gaps in these countries is therefore a necessary condition for their balanced and inclusive development. The resource requirements for bridging or even narrowing the infrastructure gaps are substantial, and appropriate financing mechanisms are therefore needed. ASEAN member countries need to become more regionally integrated in order to generate rapid inclusive and sustainable growth. To boost regional economic integration, they need to address a wide spectrum of constraints in institutional and physical infrastructure, as well as in their policy agenda. This requires concerted actions for the evolution of a broader framework for economic integration, at the regional level, to ensure equitable economic and social benefits for all countries, the development of regional transportation networks, and the improvement of trade facilitation and strengthening of connectivity through wider use of information and communications technologies.

II. New Strategy and Policy

5. China has achieved rapid economic growth since the introduction of reform and the opening up of the economy. However, many factors that supported China's growth in the past three decades are about to change. The global financial crisis and the EU sovereign debt crisis harbingered huge changes in China’s external demand environment and inevitably led to a slowdown of China’s exports. Domestically, conditions for development will also experience a fundamental change. Many factors that supported past high growth, such as export growth, abundant and cheap labor and capital supply will no longer exist. And China’s growth is increasingly constrained by rising social and environment tensions. Faced with new challenges, China needs to search for a new approach for development. The key components of

the new approach may include: a coordinated social and economic development strategy, an innovation-centered industrial restructuring strategy, a consumption-centered domestic growth strategy, a resource and environmentally sustainable strategy, and a balanced external economic strategy. To turn to the new approach, China needs to push reform further in key areas. Among other things, the role of government and the way government runs the economy should be reformed; the new round of liberalization of land and financial markets should be pursued; further state-owned enterprise (SOE) reform is also needed.

6. India has emerged as a high-performing economy with a vibrant external sector and a rapidly expanding domestic sector. There are, however, many issues which need to be examined. Is the present development paradigm inclined towards export-led growth or domestic demand-led growth? India has entered into the group of middle income countries, and some of the advantages, which India used to enjoy earlier as a low income country, are likely gradually to be lost. This amounts to loss of comparative advantage in both domestic production and export sectors. India retains, however, export competitiveness in a large number of sectors of the world economy. It will continue to rely on an export-led growth strategy as long as it has not fully exhausted its global competitiveness. India will continue to focus on the simultaneous use of the key policies of domestic demand-led growth, as well as export-led growth to shape its development strategy in the long run. This policy mix would contribute to the integration of the Indian economy with the East Asia Summit framework.

7. To realize the idea of inclusive development, both Indonesia and ASEAN as a whole now are facing a new challenge, or have a new role to play, namely to promote rapid and sustainable economic growth with high quality: growth which is environmentally friendly and generates equal opportunities for all individuals in

member countries. The success of economic development in Indonesia has already shown itself in a large number of achievements in past years, but needs to be maintained and further developed. Indonesia must improve the welfare of its people, enhance the justice sector, apply better governance, raise the quality of democracy and improve the maintenance of national unity and security. In increasing regional economic cooperation, the role of ASEAN in realizing inclusive development is to increase welfare for all members of communities in member countries, not just to expand trade and investment activities and to achieve higher rates of national economic growth.

8. Thailand is now facing many challenges. The first is to ensure that future growth will not be too low compared to its past performance. Specifically, the country needs to escape from the middle-income trap, in which it seems already to have been struggling for more than a decade. One of the causes of this recent slow economic growth is the country's low resilience to economic crises, both home-grown and imported. On the social front the country does quite well in many areas and can claim to have achieved a satisfactory level of economic-social development balance. These areas include the alleviation of poverty, basic and advanced health-care and basic education. There are, however, some social areas showing significant development delay. Economic and social inequality stands as a top priority problem for the country. Environmental sustainability is also problematic. The quality of human capital is also lagging, as indicated by the low performance of the education system and labor skills. The three fundamental problems hindering the development of a more balanced society in Thailand (human development, unequal society, and environmental challenges) can only be overcome with strong institutions, as they are problems that cannot be entirely dealt with by using market mechanisms. However, to realize its potential the country needs strong economic and social institutions that would steer the politicians to a more balanced, productive and sustainable path of

future economic and social development.

9. To achieve more inclusive growth and sustainable development, and narrow the development divide in ASEAN and East Asia, the CLMVs, their private sectors and development partners must focus on: hard and soft infrastructure for connectivity; economic diversification and private sector development; agricultural development, diversification and productivity; trade, transport and investment facilitation; regional integration and the capacity to implement domestic policy for the cross-border movement of goods, services and people, particularly education and skills development responsive to the labor market; institutional strengthening and governance; aid effectiveness and graduation from aid dependency. CLMVs need to focus on the following reform policies for regional economic convergence and cohesion; human capital formation; a conducive investment climate and sound macroeconomic fundamentals; distribution of land ownership and mitigation of asset inequality. The strategic coordination of GMS, ASEAN and ASEAN+3 regional integration initiatives is imperative for the CLMVs, with better coordination, resourcing, investment in long term reform and institutional capacity building in transport, connectivity, trade and investment facilitation and customs reforms. There is also need for greater awareness of and engagement with their private sectors in regional integration mechanisms and their potential opportunities. The Regional Comprehensive Economic Partnership (RCEP), initiated at the ASEAN summit in Bali in 2011 to facilitate and resource regional economic and development cooperation, and recommitted to by ASEAN leaders at the 2012 ASEAN Summit, should be reconfigured at the 2012-13 ASEAN+3 Summits as an ASEAN+3 or East Asian Convergence and Development Fund, as a building block for an East Asia Free Trade Area and eventual East Asian Community, involving ASEAN +3 as its core but inviting the participation and support of other ASEAN regional dialogue and

development partners.

10. After the global financial crisis and the European fiscal crisis, East Asia is expected to become the engine of growth for the world economy. In order to meet such high expectations, East Asia should maintain its economic dynamism by raising its economic efficiency as well as by enlarging its internal market. In order to realize a region-wide FTA in East Asia, East Asian countries need to overcome existing obstacles and meet the new challenges. There have been two impediments to forming a region-wide FTA in East Asia: one was a pending issue and the other was a fundamental obstacle. The former is the initial membership issue of ASEAN+3 vs. ASEAN+6. The latter problem is the lack of FTAs between China, Japan and Korea. New developments on both fronts have recently been seen. A region-wide FTA is urgently needed. Ideally, if the East Asian countries want to realize it within a relatively short period of time, they should start with the EAFTA among ASEAN+3 countries, because it would be relatively simple, unless the three Northeast Asian countries were unable to form FTA(s) among themselves. In this case, the three Northeast Asian countries should be aware of the fact that a prompt realization of a CJK FTA would greatly facilitate the formation of a region-wide FTA in East Asia. Furthermore, they should also have the EAFTA in mind when they negotiate the trilateral FTA, especially regarding the rules of origin. In order to realize a CEPEA, or now under RCEP, along with efforts to prepare its formation among ASEAN+6 countries, one possible approach is to consolidate 5 ASEAN+1 FTAs. In this case, ASEAN FTA partner countries should strive to conclude bilateral FTAs among themselves. In addition to FTA(s) among the three Northeast Asian countries, the following missing links should be completed: an India-China FTA, an India-Australia FTA, an India-New Zealand FTA, an Australia-China FTA, an Australia-Japan FTA, an Australia-Korea FTA, a New Zealand-Japan FTA and a New-Zealand-

Korea FTA.

11. Institution-building in East Asia is still at an early stage, and its role in managing regional relations, regional integration and cooperation and providing effective public goods seems limited. There are many challenges and difficulties that need to be dealt with and overcome. The new challenges to East Asia do not simply stem from the global economic crisis but also derive from its own problems, ranging from the export-led growth and the imbalance of social-economic structure to sustainable development. East Asia needs to do more on moving toward a new model of economic and social development, for example toward domestic demand-led, rather than export-led growth, and toward a green and sustainable development, rather than a traditional "catching-up model". To succeed, it is vital for each individual country to put a new strategy on the top of its agenda and for regional cooperation to make joint efforts to move toward a new East Asia. Real progress in institution-building in East Asia has become crucial for ensuring economic dynamism and political stability and peace. However, East Asia's institutional building should not be inward-looking since the regional economies are highly integrated into the world economy and they should play an active and strong role in global governance. Considering the great need for restructuring the economic development model, it is highly desirable that East Asia moves from an FTA/CEP to an economic community. This seems possible since ASEAN will realize its Community by 2015 and the negotiation on a broad regionally based FTA/CEP will also be completed (RCEP). An East Asia Economic Community will be helpful for policy coordination and cooperation on stimulating regional demand, and moving toward a social-economic balanced development structure. Within a Community, the institutions could be more effective in regional economic governance.

12. East Asia's economies have benefitted from the regional production networks. To

further utilize the mechanics of production networks, development strategies and industrial policies have to be considered together. For instance, innovation in industrial agglomeration is necessary. Small and medium sized enterprises (SMEs) should play an important role in forming industrial agglomerations, and thus SME-related policies must be reviewed; better access to technology, better access to finance, fostering human resources, and establishing industrial organization may be helpful for their involvement in the industrial agglomeration. It is also important to identify and resolve bottlenecks that prevent participation in production networks. International connectivity and new business models need to be considered, particularly to further deepen the regional production networks. East Asia is strongly connected to the outside economies through the production networks, in addition to the countries in the region. Deepening regional integration and enhancing connectivity certainly require open-minded policies, rather than protectionism, and various development strategies and regional cooperation. While East Asia's integration has been market-driven, now that free trade agreements (FTAs) must be one of the tools for further trade and investment liberalization and facilitation and cooperation. This is a big challenge, but whether each economy in East Asia can implement the necessary strategies and policies, depending on its stage of development and involvement in the production networks, will certainly influence whether regional production networks and regional integration/cooperation are successfully enhanced, and whether further economic development in the region is achieved.

13. Moving toward a new and sustainable development mode, it is necessary to build a recycling society. The sluggish recovery from the global financial crisis of 2008 in affluent markets has affected exporting countries and prompted consideration of ways to increase domestic demand. Mining the waste stream for recyclable materials

offers prospects of both stimulating domestic activity and securing supplies of some rare and expensive materials. The experience of New Zealand in evolving waste management and recycling policy over recent decades, primarily for the purposes of environmental improvement, provides a valuable model for moving toward a sustainable future. Institutional changes in both general legislation and specific waste policy have contributed to reductions in waste disposal, but the economic stimulation is more difficult to measure and has probably been rather small. There are complementary roles to be played by small consumer markets and larger producing countries in the effective recycling of materials across the region.

CHAPTER 1

Changing Global and Regional Economic Environment and Challenges Facing East Asia

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This overview paper analyses some key global and regional challenges to East Asia's continuing economic ascent. On the global front are the weakened growth engines of US-EU-Japan, threats to the open multilateral trading system from large trade imbalances and rise of protectionism, international financial instability and volatility, natural resource and environmental constraints threatening food and energy security, climate change and environmental deterioration and un-sustainability, and the challenge of global governance. On the regional (and national) front are the growing economic, political and social constraints of demographic ageing, rising inequality and weak national governance. East Asia has the tremendous opportunity and responsibility to be a global growth engine, contribute positively to governance of global economic and financial institutions, and assuring the world that it would facilitate global growth, stability and prosperity.

Keywords: East Asia, multilateral trading system, international finance, climate change, governance

JEL classification: F02, F13, F42, F62, J11, O53

1. Introduction

The East Asia region has experienced the fastest economic growth in the world for the past three decades, with the highest growth rate achieved by China.

In 1993 the World Bank published *The East Asian Miracle: Economic Growth and Public Policy* extolling the economic transformation of 8 East Asian economies. In 1998 East Asia was engulfed in the Asian financial crisis (AFC), which led to painful IMF bailouts and reforms for several countries, and led to critics questioning the East Asian development model. In the global financial crisis (GFC) one decade later, fingers were pointed at East Asia for its role in the global imbalances and its export-led growth model, requiring the region to rebalance towards domestic and regional demand. East Asia has survived both the AFC and GFC, and its economies are recovering from the latter, although the ongoing Eurozone crisis is again negatively impacting its highly export-dependent economies.

The ADB report on *Asia 2050* highlights the prospect of an "Asian Century". It argues that if Asian economies can maintain their momentum until 2050, adapting to the shifting global economic and technological environment by continually recreating their comparative advantages, Asia's GDP will rise by 2050 to account for half of global GDP (market exchange rate), and Asia's per capita GDP (in terms of purchasing power parity (PPP)) would reach $40,800, similar to that of Europe today. Seven economies would lead the march to Asian prosperity, namely PRC, India, Indonesia, Japan, South Korea, Malaysia and Thailand. However, to realize the Asian Century, Asia must tackle daunting policy, institutional and governance challenges, and the report proposed major changes at the national, regional and global levels.

This overview paper analyses some key global and regional economic challenges to East Asia's continuing ascent. Challenges that are domestic in origin with no cross-border spillover effects, and require domestic actions, are largely beyond the scope of the paper. Section 2 briefly examines East Asia's ascent and the challenges facing it. Subsequent sections focus on the key challenges to East Asia's ascent from the weakened western economies and global financial risks, threats to the open multilateral trading system, natural resource and environmental constraints, Asia's demographic ageing and rising inequality, and the challenge of global governance and national governance constraints. Section 10 concludes.

2. Global Growth Shift and an Asian Century

The world is currently witnessing a major shift in the balance of economic and financial power from the advanced industrialized countries to the emerging economies of Asia, particularly from US-EU-Japan to China-India. Over the past two decades, East Asia has become a growing force in global production, trade, investment and finance. And the region will become the biggest stakeholder in an open trading system, a stable financial system, and a sustainable environment.

Eichengreen (2011) argues that this shift could be usefully seen in the light of previous global shifts. First, there was the rise of the West from the 15th century and concomitant decline of China. Second, there was the industrial revolution, which led to Great Britain dominating the world by the end of the 19th century. Until then, China's economy was the largest in the world and the economies of developing East Asia together were larger than today's high income economies combined, in PPP terms. Over the following century, the share of global output of both China and developing East Asia declined dramatically. Third, there was the power shift from Great Britain to the US after the 1930s Great Depression. The aftermath of World War II was an era of hegemonic stability when the US as dominant power had the capacity to act unilaterally to stabilize the European and Japanese economies and manage the international financial system. The closing two decades of the 20th century was an era of hegemonic cooperation as the US could no longer act unilaterally but nonetheless led in organizing collective action. The advent of the 21st century saw the shift from US dominance toward a multi-polar world. If developing countries continue to grow at their current rate, their share of the global economy will rise to nearly half in current prices by 2030, as shown in **Table 1** below.

Table 1: Rising Percent Share of Developing Countries in Global GDP

	At 2010 prices	At 2030 current prices		
	2010	2030	Low	High
High income:	66.4	52.4	49.1	40
US	23.6	20.5	19.2	15.7
Other	42.8	31.9	29.9	24.4
Low & middle income:	33.6	47.6	50.9	60
China	9.5	17.1	18.8	23.6
India	2.3	4.6	5.1	6.7
Other	21.9	25.9	27	29.7

Source: World Bank EAP Update 2011 Vol.1, Table

Rapid growth in emerging Asia was facilitated by export-led growth, high domestic savings, foreign direct investment (FDI) inflows, growing human resource and infrastructure developments and economic and institutional reforms. Asian governments, learning from the experience of the 1997-1998 AFC, reduced their economic vulnerability by avoiding large current account deficits and real exchange rate overvaluation, strengthened the supervision and regulation of their banking systems, and accumulated foreign reserves as a buffer against external shocks. The process of Asian catch-up was further accelerated with the US sub-prime financial crisis and the EU sovereign debt crisis or recent years. In 2010 East Asia's share of global output was one third at market prices and half in PPP terms.

East Asia's successful export-led growth strategy was based largely on a relatively open global trading environment and on significant levels of foreign direct investment flows, and these were made possible by a framework of global rules and supporting institutions. However, Asia's continuing economic ascent will face a different global environment from that faced by the western advanced economies during their economic ascent after World War II. At that time there were closed capital accounts, limited flows of portfolio capital and fixed exchange rates. Today there is high volatility in capital accounts, capital flows, commodity prices and exchange rates, and there is the new issue of environmental sustainability. The global economic environment has also become less benign and more challenging as compared to the years of the "East Asian Miracle".

To realize the Asian Century scenario, the region must tackle daunting policy, institutional and governance challenges. At the global level there are the dysfunctional global trading system, global financial architecture and global governance institutions, as well as threats from climate change and global warming. In addition, there is intense competition for finite natural resources (energy, water and fertile land) unleashed by Asia's ascent, as the newly affluent Asians aspire to higher living standards. Further, East Asia also faces structural problems which could adversely affect its longer term growth prospects. These include demographic ageing; growing environmental degradation that necessitates shifting economic growth towards more sustainable models; and overcoming rising domestic discontent over growing inequality and corruption.

The growing economic weight of East Asia is accompanied by its aspirations for a greater voice in international affairs. So far East Asia's role in the governance of international economic institutions is far less than its rapidly growing economic weight, but this is beginning to change. Also, East Asia benefitted from global public goods in the past, but going forward the region must actively support them, for example, the international trading environment, international financial architecture, global economic governance and addressing the risks of climate change. There are great expectations of East Asia not only as an engine of global growth but also as a leader at a time of global economic volatility and fragility.

3. Challenge: Global Economic Fragility and Financial Instability

The global financial crisis (GFC) of 2008-2009, and its contagion effects, triggered the recent global recession, followed by the unfolding Eurozone sovereign debt and banking crisis engulfing several EU countries and dozens of European banks. East Asia was not badly affected by the GFC due to its reformed and robust financial systems and foreign exchange reserves, and timely fiscal stimulus packages. The GFC affected East Asian economic growth mainly through the export and investment channels. There was recovery in 2010 in response to stimulus packages. But the unfolding Eurozone sovereign debt crisis is once again threatening East Asia's growth, re-affirming that there has been no de-coupling of export-dependent East Asia from its major markets in the US and Europe. The global and regional financial markets have been see-sawing between pessimism and optimism over the possible resolution of the Eurozone crisis. Most analysts are agreed that the US and Eurozone problems cannot be resolved in the short term and will continue for some time to adversely impact the global economy and East Asia.

Financial instability is a challenge to the international financial system arising from the widespread presence of information asymmetries. Financial instability goes beyond budgetary considerations, affecting people's wealth, standard of living, investment and employment, and can trigger waves of bankruptcies and major recessions. International institutions involved in providing international financial

stability include the IMF, the World Bank, the Bank for International Settlements (BIS) and the Basle Committee on Banking Supervision, but the problems of taking collective action have led so far to an under-provision of the international public good. The G7 was born out of early attempts to stabilize exchange rates following the end of the Bretton Woods system, and evolved into G8 (including Russia) as a broadly based mutual surveillance facility among the large developed economies. G8 has since been replaced by G20 which includes several large developing economies. The London G20 Summit in April 2009 agreed to strengthen global financial institutions, with additional funds to support growth in emerging markets and developing countries, increased resources for the IMF, and establishment of a new Financial Stability Board (FSB) to succeed the Financial Stability Forum. At the Los Cabos G20 Summit in June 2012, China, India and other emerging economies made commitments to a fund being set up by the IMF to help nations escape contagion. Following the Summit, the EU's Big 4 (Germany, Italy, France and Spain) pledged to cooperate on a growth plan amounting to 1% of EU GDP to restore financial stability, support growth and investment, and create jobs in the EU.

4. Challenge: Multilateral Trading System in Crisis, Rise in Protectionism, and the Need for Global Rebalancing

4.1. Whither the Doha Round?

The Doha Round is comatose, as World Trade Organization (WTO) members failed to reach agreement on any concluding package. The Round was launched in November 2001 and negotiations cover market access in agriculture, non-agriculture market access (NAMA) and services, and rules. Why has the Round failed so far? Reasons include:

- Complexity and huge scope of the negotiations: Earlier General Agreement on Trade and Tariffs (GATT) rounds were successful in considerably reducing tariffs on non-sensitive manufactures, leaving the most difficult issues and areas to be tackled in the Doha Round. These include agricultural export subsidies; domestic support for agriculture; agricultural tariff reductions; trade in services; anti-dumping duties and rules governing regional trading agreements (RTAs).

Complexity has been made worse by the necessity in Agriculture and NAMA negotiations of converting bound rate commitments to applied rate commitments. Also, the single undertaking meant that agreement would have to be reached on everything before conclusion.

- Enlarged WTO membership and large differences in policy stances: WTO membership has grown to over 150. Managing the negotiations became more difficult as the power relations among WTO members have changed dramatically. The US, and to a lesser extent the EU, which shaped the earlier negotiating rounds are now much less dominant in the world economy, while developing countries are no longer prepared to take a back seat. The US and other developed countries are looking to open markets in important advanced developing countries through major tariff reductions. Developing countries have different priorities and interests but insist that Doha delivers on the promised development agenda.
- Profound changes in the structure of the world economy and international trade: This makes the WTO and its negotiating agenda increasingly irrelevant. In particular, the emergence of FDI and related production networks as the main driver of global integration has challenged the assumption that the interests of countries and their multinational corporations (MNCs) are largely the same. In many developing countries, particularly in East Asia, the drives to attract FDI and to link deeply into global supply chains and production networks have provided an impetus for autonomous liberalization. On the other hand, in the industrialized countries, with high and structural unemployment, there is growing concern over their MNCs' moving production and jobs offshore.
- RTAs have proliferated: This is perceived by some as a viable and sometimes possibly as a preferable alternative, but perceived by others as a stumbling bloc for the multilateral trading system. Not all RTAs have subscribed to the principles laid out in GATT Article XXIV, particularly those between developing countries and notified to the WTO under the more lax enabling clause. The "substantially all trade" criterion has often been violated in the areas of agricultural and services liberalization. Also, the lack of a common template in negotiations has given rise to the "spaghetti bowl" effect of different and conflicting rules of origin, product standards, and formulae and time lines for removing tariffs and non-tariff barriers (NTBs). In East Asia, FTAs have proliferated since the first FTA was formed by Association of Southeast Asian Nations (ASEAN) in 1992. Reasons include: defensive reactions to RTA formation in North America and Europe which discriminated against East Asian exports; disappointment with the lack of progress of the Doha Round and an insurance against its breakdown; to achieve faster and deeper liberalization than possible multilaterally; and to achieve geopolitical objectives. The regional and bilateral FTAs in East Asia have so far been FTA-plus and WTO-plus, that is, going beyond the scope of a traditional FTA and beyond the mandate of the

WTO to include areas and issues such as investment, competition policy, government procurement, intellectual property rights, labor and environment, and wide ranging areas of economic cooperation.

Does it matter if the Doha Round is not completed? Some believe it is in the interest of all to complete the Doha Round as it would provide a signal to the international community on whether international obligations and commitments can be followed through, and whether global interests will be taken seriously. Others argue that the time is ripe to think strategically about a post-Doha agenda, with the goal of achieving results within a reasonable time period. For example, negotiating smaller sector-specific deals (in areas such as services and environmental goods similar to the IT and Government Procurement Agreements) could be more fruitful than a large-scale single undertaking.

4.2. Issue of Keeping Protectionism at Bay

It is important to keep markets open and resist protectionism in the challenging global economic environment. The *Asian Development Outlook 2009* noted that most of the world's major economies have put various forms of protectionism into effect, including the substantial amount of aid given to automobile manufacturers around the world in the aftermath of the GFC. In November 2008 the G20 Summit made a "no protectionism" pledge. However, a September 2009 report from Global Trade Alert (Evenett 2009) revealed that at least 121 protectionist measures had been implemented by G20 governments since November 2008 and another 134 measures were pending.

The Toronto G20 Summit in June 2010 renewed, until end-2013, commitments to refrain from raising barriers or imposing new barriers to investment or trade in goods and services, and imposing new export restrictions or implementing WTO export incentive measures. The Seoul Summit in November 2010 affirmed the Toronto commitments and further committed to roll back any new protectionist measures that may have risen, including export restrictions and WTO-inconsistent measures to stimulate exports. These were further affirmed at the Cannes Summit in

November 2011. However, the WTO reported[1] that from mid-October 2011 to mid-May 2012, 182 new measures that restrict or can potentially restrict or distort trade had been recorded. G20 restrictive measures put in place since October 2008 are estimated to apply to almost 4% of G20 trade. The main measures are trade remedy actions, tariff increases, import licenses and customs controls. The recent wave of trade restrictions smacks of industrial policy, including granting tax concessions, government subsidies, domestic preferential government procurement and local content requirements. There is also the growing threat of environmental trade protectionism, as the US and EU provide protection via subsidies and import restrictions to help their firms offset the higher production costs arising from carbon taxes and regulatory mandates.

The threat of protectionism looms large as recovery of the global economy remains weak and unemployment levels are high in the advanced industrialized economies. Governments need to make greater efforts to resist protectionist pressures and take active steps to keep markets open and advance trade liberalization. East Asia's trade-dependent economies are highly vulnerable to protectionism and need to keep multilateralism alive and open.

4.3. Issue of Global Imbalances

Global imbalances remain sizeable despite the narrowing of current account surpluses and deficits of major trading nations since 2007. By 2011, the external imbalances of the major economies had stabilized at about half their pre-crisis peak levels (relative to GDP). The US remained the largest deficit economy, with an estimated external deficit of about $450 billion (3% of GDP), while the external surpluses in China, Germany, Japan and a group of oil-exporting countries had fallen. China registered a surplus of about $250 billion (less than 4% of GDP), Japan's surplus was 2.5% of GDP, Germany's around 5% of GDP, while the current account for the Euro area was virtually in balance (Table 2). Large surpluses, relative to GDP, were still found in oil-exporting countries.

Table 2: Global imbalances

[1] WTO website, assessed 12 June 2012

	C/A balance	2005	2006	2007	2008	2009	2010
China:	US$ billion	160.8	253.3	371.8	426.1	371.5	451.2
	% of GDP	7.2	9.5	11	9.80	7.8	8.6
Germany	US$ billion	143.8	178.8	250.3	235.3	94.2	120.2
	% of GDP	5.1	6.1	7.5	6.4	2.9	3.6
Japan	US$ billion	165.7	170.4	211.0	157.1	96.9	105.6
	% of GDP	3.6	3.9	4.8	3.2	1.9	2.0
US	US$ billion	-748.7	-803.5	-726.6	-706.1	-369.8	-324.7
	% of GDP	-5.9	-6.0	-5.2	-4.9	-2.6	-2.2

Source: Jeffrey Schott in Il Sakong and Fred Bergsten (eds) 2009: The New Global Trading System in the Post-Crisis Era.

At issue is whether the adjustment of the imbalances in major economies so far has been mainly cyclical or structural. Continued global imbalances are an issue that is expected to influence sustainability and patterns of trade and growth in the coming years. Rebalancing is necessary, if global growth is to be sustained. The economic prescription is fairly straightforward, but faces strong political resistance: the US needs fiscal consolidation with its large current account deficit and should consume less and save and export more; Germany as the main European surplus economy should stimulate domestic demand and lead structural reforms in the Eurozone.

The GFC has prompted a major rethink of East Asia's export-led growth model. In East Asia the two main surplus economies are Japan and China. Japan's yen has been appreciating vis-à-vis the US dollar and its trade surplus appears to be shrinking, especially with the production and export declines from the 2011 tsunami and nuclear fallout, continuing weak economic growth, and weak corporate balance sheets. China needs to implement domestic rebalancing goals to see a rise in household incomes and consumption as well as exchange rate appreciation. While China leadership is clear about relying more on domestic demand, it will take time and political capital to change institutions and incentives. A more flexible RMB is only one part of the package needed to rebalance demand and alter the pattern of growth in China. Other East Asian surplus countries should promote a similar shift toward domestic and regional demand, including services and infrastructure investments, and reduce reliance on exports to the West.

The central challenge in the G20 Summits in Pittsburgh in September 2009 and Toronto in June 2010 was to rebalance global growth and place the world economy on a sustainable long-term path. Reducing the imbalances has been the major focus

of consultation among G20 Finance Ministers under the G20 Framework for Strong, Sustainable and Balanced Growth and the related Mutual Assessment Process (MAP) during 2011. Most developed economies (US, Europe and Japan), find themselves in a difficult economic bind. There are no simple solutions that would quickly win political support. Their economies have been growing too slowly for too long, making it more and more difficult to pay for the increasing costs of healthcare and pensions for ageing populations. In the short term, there is resistance to emergency measures, while over the longer term, there is resistance to the higher taxes and reduced benefits deemed necessary to return countries to financial stability. Developing countries find themselves in a different bind - they need to protect themselves against volatile commodity prices and external financial conditions, and also to step up investment to sustain higher growth and shift their economies towards faster poverty reduction and more sustainable production.

5. Challenge: Competition for Finite Natural Resources and Security of Food, Energy and Water Supplies

5.1. Competition for Finite Natural Resources

Asia's ascent and the addition of some 3 billion increasingly affluent Asians is leading to intense global and regional competition for natural resources such as agricultural land, energy, minerals, water, and forestry and marine resources.

Global known supply cannot readily accommodate huge changes in demand, especially for non-renewable raw materials. Reflective of this intense competition are rapidly rising prices of food and primary commodities in recent years. The spike in 2008 is comparable to previous commodity hikes during the Korean War in 1950/51 and the oil crisis of 1973. Since 2000, food prices are up almost 3-fold in real terms, oil prices almost 2-fold, and metal prices by more than half. Volatility in food prices is higher than before, and concern is increasing over an inevitable up-trend in food prices, given the rapid industrialization and urbanization taking place in East Asia, unless there is a repeat of the 1960s Green Revolution. International prices of oil and other primary commodities have seen reversals due to weaker global demand for commodities; positive supply shocks in a number of markets; a sell off in

markets for financial commodity derivatives; and appreciation of the USD. Commodity price volatility is likely to remain high.

Underlying factors driving food prices, apart from the demands of a rising population, is the demand for bio-fuels. There is need to balance the dual priorities of using agricultural crops for food and for bio-fuel production. There is also a need for a comprehensive approach in tackling food security. This includes enhancing agricultural production, encouraging investment in agriculture (particularly in productivity-enhancing agricultural technologies and knowhow), balancing government policies in industrialization and agriculture, market-oriented policies in agricultural trade, international emergency grain reserves, and promoting harmonization of food safety standards.

The existing supply of global and regional energy sources is vulnerable to two primary threats. First is the threat to adequate and secure supplies of energy at affordable prices. The increasing volatility of energy supply has caused dramatic price changes, with serious implications for the availability and affordability of energy; this is due essentially to lack of alternative energy supplies. Second is the threat of environmental damage as a result of excessive energy consumption. World energy demand is forecast to grow by 53% from 2008 to 2035 due to continuing economic growth and the resulting higher living standards. Economic development is unsustainable in a scenario where no additional policy action is taken to counter global warming. Adjustments would call for price increases to reduce demand and increase supply; new technologies to produce more food, reduce unit consumption and/or substitute with more plentiful, renewable resources, and recycling to minimize waste. Action is needed to eliminate energy subsidies and to switch from fossil fuels to renewables. The solution is a combination of price increases (including removal of subsidies) more stringent green standards for buildings and transportation, adjustments in consumption patterns and green technology breakthroughs.

Rapid growth in East Asia's energy demand creates major concerns for the region and the world: First, growth in energy consumption implies an increasingly larger claim on global energy resources and higher dependence on imported energy, and triggers concern about the security of energy supplies, especially of oil and gas. Second, growth in energy consumption is accompanied by rapid increases in carbon

emissions, with China, India and the ASEAN region projected to be the source of much of these emissions. The strong dependence on fossil fuels for economic development only exacerbates this threat, as it could serve to increase the level of carbon emissions. The increasing dependence of East Asian countries on fossil fuel imports is harmful to the environment and detrimental to their economic growth.

5.2. Issues of East Asian Food, Energy and Water Security

Can East Asia feed itself and if not, will the rest of the world provide enough food? How will East Asia's massive needs for energy and other natural resources be met? How will East Asia sustain its rapid growth with limits on carbon emissions and water supply? Food and energy price hikes pose challenges to, and affect, the region's socio-economic development. In particular, the surge in PRC's demand has led to its scramble to invest in resources in Australia, Africa and beyond.

5.2.1. Food Security

Food security includes accessibility, the availability, quality and safety of food. There is increasing anxiety about East Asia's food security that will impair its growth prospects, its progress in poverty reduction, and its strategic security. In addition, food price inflation gives rise to the specter of political-social unrest. East Asia is more vulnerable to higher food prices than other regions because of its huge and dense populations, its high levels of absolute poverty, and the higher weights of food in its consumer price index (CPI) baskets. Food price volatility and high prices are likely to continue and possibly increase in the near future, making farmers and consumers more vulnerable to poverty and food insecurity. Under ASEAN+3, the East Asia Emergency Rice Reserve should promote rice security in times of need in the region; the region needs to strengthen this mechanism to enable the scheme to respond effectively and promptly to emergencies caused by natural disasters such as flood, drought, cyclone, earthquake and tsunami.

5.2.2. Energy Security

East Asia's energy consumption increases with population growth, rising incomes, and energy intensity as a result of the changing structure of production and

more energy-intensive consumer lifestyles. Overall East Asia contains some of the largest global energy consumers, although per capita energy consumption is still a small fraction of that of developed economies. Additionally, China and several other East Asian economies have made significant progress in reducing energy intensity.

East Asia faces the issue of energy security with its growing reliance on oil and gas imports. The region's dependence on oil as an energy source has declined over the past three decades (with significant variations among countries) and its dependence on natural gas as an energy source has increased. The high energy growth and energy mix has led to twin main energy challenges facing East Asia: supplying energy in an environmentally sustainable manner that does not adversely impact GDP growth; and improving the long term security of energy supplies. Concerns about energy, especially oil security is expected to heighten over coming decades because of further concentration of oil consumption in the transport sector, where the possibilities for fuel switching are limited, increases in import dependency on oil and the concentration of import sources. China has now become a large importer of oil. ASEAN countries, once major exporters of oil and gas, have now become net importers of oil and are likely to become net importers of gas in the next three decades.

To address these energy vulnerabilities, promoting energy conservation, improving energy efficiency and encouraging the adoption of renewable energy would be of utmost importance. Clearly new technologies are required to increase efficiency and reduce their environmental footprint. Countries need to reform institutions and policies to encourage efficient energy use and reduce pollution. Apart from domestic action, regional cooperation would address East Asia's two distinct energy security risks, namely a sudden interruption of energy flows and the risks in the long term availability of energy resources. Building strategic petroleum reserves and integrating gas and electricity networks are effective means of addressing the first risk, while recommendations for lowering energy intensity and diversification away from fossil fuels address the second risk.

Regional cooperation in energy promises a win-win outcome for all. Regional cooperation needed to ensure an uninterrupted and sustainable energy supply, enhance efficient functioning of markets, and strengthen greater collaboration to

improve energy efficiency and conservation. A regional energy strategy and roadmap for the development of alternative and renewable energy sources, including bio-fuels and hydro power, are needed. Energy security should be a priority area of East Asian cooperation. Cooperation provides a policy alternative to addressing and overcoming conflict and reduces uncertainty. The regime complex for energy security comprises institutions that perform three types of function. These are rules and standards setting, correction of market failures and lowering of transaction costs.

5.2.3. Water Security

Water security is the ability to access sufficient quantities of clean water to maintain adequate food, goods production and health and sanitation. Water security will become a global priority in the coming decades. Water scarcity is an emerging critical challenge in East Asia. The water challenge has far-reaching adverse consequences on ecosystems and socio-economic development. Challenges related to water scarcity and management are complex.

Millions lack access to clean drinking water. The water challenge will be further exacerbated by urbanization. Ensuring access to water resources depends very much on good governance. In many countries, institutions involved in water management are fragmented. Agencies often lack necessary capacity and capabilities, and roles and responsibilities are often misaligned. Lack of long term strategic planning, poor financial management, and ineffective legislation often serve to worsen situations. Governments must take the lead in setting policies, regulations and standards to promote water management and ensure optimal water allocation and use. Governments should also be leading the efforts to generate awareness of water scarcity, and to educate the public about the importance of water conservation. The private sector can provide partial funding for water projects, technical innovations and training of personnel to ensure that they are equipped with the necessary skills to execute plans. Singapore provides a best practice example of water management, as its government has made substantial progress in the country's efforts to reduce the consumption of water, and to reuse and recycle it.

Regional cooperation in Southeast Asia on water security would focus on the Mekong Region. The Mekong River stretches from southwest China through 5

Southeast Asian countries. The river system is already under stress from multiple competing uses, particularly from the impact of dams, and pollution from industry, wastewater and agriculture.

6. Challenge: Environmental Risks from Climate Change and Urbanization

6.1. Environmental Risks from Climate Change and Mismanagement

Environmental risks include, first, natural phenomena such as persistent extreme weather, unprecedented geophysical destruction, and geo-magnetic storms that could disable critical communication and navigational systems. Second, they include also man-made and policy risks, such as a failure of climate change adaptation, a failure to reduce greenhouse gas emissions and expand carbon sinks, species overexploitation resulting in loss of biodiversity and ecosystem collapse, irreversible pollution (air, water and land) that threatens ecosystems, social stability, health outcomes, and economic development, the mismanagement of land and waterway use, and the mismanagement of urbanization.

Climate change is a global challenge. Environment global risks could devastate the earth's vital resources and inhabitants, destabilize economies and societies, and trigger geopolitical conflict. Mitigation of climate change and global warming risks would affect every economy and way of life. It might include increasing the efficiency of energy use, reducing dependence on fossil fuels, changing modes of transportation, changing the design of buildings and cities, care of forests and green areas, and the need to shift to an economic growth model that is more eco-friendly and sustainable. Reducing emissions of greenhouse gases requires substantial and sustained efforts by all. Developed countries need to take the lead by committing to drastic cuts in greenhouse gas emissions and providing technical and financial assistance to developing countries to support and expand the latter's ability to introduce green technologies that will help them meet the global need to reduce greenhouse gases.

East Asia is more vulnerable to environmental risks than many other regions, due to its huge populations, population concentrations in low lying areas in danger of

rising sea level, and the past rapid destruction of forests and land and marine species that endangers biodiversity. East Asia has paid a heavy environmental price for its economic growth achievements. It relies heavily on coal combustion and fossil-fueled vehicles, and these emissions are the main polluters. As a result East Asia has many of the world's worst-polluted cities, especially in China. Further environmental risks for East Asia in the coming decades would arise from climate change and global warming, especially the rising sea levels affecting coastal areas and the increased incidence of droughts and floods affecting agricultural production.

6.2. Managing East Asia's Rapid Urbanization

East Asia's high economic growth has been accompanied by rapid urbanization brought on by industrialization, population growth and rural-urban migration. The urban population is expected to increase by 50% between 2000 and 2030. In many East Asian countries, a substantial proportion of the urban population comprises migrant labor and those working in the urban informal sector. Most of the world's mega-cities are in Asia, as well as more than half the world's slum-dwelling population. Many cities are poorly managed, with inefficiency and inadequate supplies of power and clean water, insufficient treatment of waste water before being discharged into local waterways, flooding due to poor drainage, and uncollected garbage. Poor sanitation leads to poor health conditions. Urban slum problems have been exacerbated by disputes over land titles, lack of functioning land markets, and unrealistic zoning.

Well-run cities (with quality amenities such as education, health, finance, infrastructure, recreational facilities and proper sanitation and good air quality) are drivers of economic growth and economic and social welfare. Thus the urban transformation could be an unparalleled opportunity for increased productivity and an improved quality of life for all. In East Asia, the city-states of Hong Kong and Singapore are thriving hubs enjoying the highest per capita GDP and living standards. Singapore also offers an example of a well managed East Asian city in its successful urban planning, transportation management, and water and waste management.

7. Challenge: East Asia's Rapid Demographic Ageing

The demographic bonus has been a major contributor to East Asia's high growth performance in recent decades. It takes the form of a high proportion of working age population and low dependency ratios, providing the workforce in the labor-intensive phase of industrialization and contributing to the region's high savings and investment rates. The demographic bonus can be realized only if the economy is able to productively employ the additional workers. In the case of the Philippines, low labor absorption due to anemic economic growth has resulted in large numbers having to seek employment abroad.

The demographic bonus in East Asia is coming to an end, as declining fertility rates and rising life expectancies have resulted in rapid demographic ageing. There is considerable heterogeneity, with countries at different stages of the demographic transition. Countries with rapidly ageing societies, where the demographic window has already closed or is about to close, include high income Japan, South Korea, Taiwan, Hong Kong and Singapore. Lower income countries in ASEAN, with a more recent demographic transition, can still benefit from their demographic dividend for another one to two decades. But China will suffer rapid demographic ageing before it becomes rich, reflective of its one-child policy enforced for decades.

The demographic bonus will be giving way to the demographic onus in much of East Asia. Inflexion points of ageing indicate the demographic dividends that countries could exploit to their advantage. For the major East Asian economies, these inflexion points are: Japan (2005), South Korea (2024), PRC (2032), Thailand (2039), Indonesia (2050), Vietnam (after 2050). Other things being equal, a fall in the share of working population will lead to lower economic output. Population ageing will negatively impact labor supply, although policies such as encouraging immigration, encouraging higher female labor force participation rates, and raising retirement age can compensate. Also population ageing will have important implications for savings and capital formation and the sustainability of publicly funded pension and healthcare systems. The concern is that a country might become too old before it becomes rich.

Demographic ageing gives rise to two fundamental challenges for East Asia in the medium to long term. These are sustaining strong growth in the face of demographic ageing, and developing socioeconomic systems that can provide economic security to the growing number of elderly. First, with high old-age dependency ratios, economic structures, institutions and policies will have to adjust to accommodate the rising numbers of elderly. As the labor force shrinks and wages rise, labor intensive industries will become uncompetitive and will disappear. The economic structure will have to upgrade towards technology- and innovation-intensive manufacturing and services and depend on rising productivity to drive economic growth. Accelerated human resource development thus becomes critical for economic upgrading and avoiding the middle income trap. Second, meeting the needs of a growing elderly population will entail building the costly economic and social institutions that are needed to achieve income security and provide adequate healthcare and other needs. Healthcare and related regulations will have to be adjusted to the special needs of the elderly. Older people are often more conservative and more resistant to change and this in turn will impact on governance and require wide-ranging institutional adjustments.

When individuals accumulate pension funds or personal savings during their working years, they rely on asset income and/or liquidation of those assets during their retirement. In high income economies, the elderly are taken care of through pension and social security payments and medical care programs. However, these measures have taxed the fiscal resources of the countries concerned, and contribute to rising fiscal deficits in countries such as the US and Japan. In most developing countries of East Asia, including China and India, pension funds and social security systems are underdeveloped and the aged usually depend on private transfers through the family and community. Governments are under pressure to provide public transfers to prevent poverty among the elderly. Some public transfers are required, but the challenge for East Asian governments is how to avoid over-generous public transfers that need to be funded by higher tax burdens, which could hamper long run economic growth.

8. Challenge: East Asia's Growing Inequality, and the Case for Inclusive Growth

In recent decades East Asia has lifted millions out of poverty at unprecedented rates, but inequality is also on the rise. From the early 1990s to the late 2000s, the *Gini* coefficient worsened from 32 to 43 in PRC, 33 to 37 in India, and 29 to 39 in Indonesia.

Why does inequality matter? First, rising inequality can lessen the poverty impact of economic growth. If inequality had remained stable while the Asian economies grew, the same growth in 1990-2010 would have lifted 240 million more people out of poverty, or 6.5% of developing Asia's population in 2010 and 8.0% of those countries with rising inequality. Second, inequality can weaken the basis of growth itself. High and rising inequality can curb medium-term growth by reducing social cohesion, undermining the quality of governance, and increasing pressure for inefficient populist policies.

What are the drivers of income inequality? Technological progress, globalization and market-oriented reform (the primary drivers of the region's growth) are also behind the rise in inequality, as the new opportunities for economies to prosper have not benefited all people equally. These forces affect income differences through three biases. These are the capital, skills, and location biases. The bias towards physical capital reduces labor's share of national income. Labor's share of total income is falling in many economies in the region. Between the mid-1990s and the mid-2000s labor income as a share of manufacturing output in the formal sector fell from 48% to 42% in PRC and from 37% to 22% in India. The employment intensity of growth in Asia is lower than the global average, and has declined in recent decades. Likewise, the growing demand for skills raises the premium on the earnings of skilled workers and the earnings premium for skills and tertiary education has increased in recent years. And locations with superior infrastructure, market access, and scale economies such as urban centers (for example Singapore, Hong Kong, Jakarta, Bangkok, Tokyo, Shanghai) and coastal areas (for example coastal Thailand and coastal PRC), are better able to benefit from changing circumstances.

Inequality of opportunity is a crucial factor in widening income inequality in East Asia. Disparities in the means to raise living standards, such as physical assets, human capital (education and health) and market access (labor and finance) are common. Unequal access to public services, especially education and health, generates inequality of opportunity. These inequalities can lead to vicious circles as unequal opportunities create income disparities, which in turn lead to differences in future opportunities for individuals and households. These forces require policy makers to redouble their efforts to generate more productive jobs, equalize opportunities in employment, education, and health, and address spatial inequality. Inclusive growth needs policies to ensure that all can participate in the development process productively and benefit equitably from the opportunities generated by economic growth. Because the forces behind rising inequality are also the engines of productivity and income growth, policy makers should not hinder their progress but emphasize equal access to opportunities and mitigate vulnerability and risks and prevent extreme poverty. More Asian developing countries are embracing inclusive growth at the heart of their development policy, as reflected in their recent medium-term development plans.

Governments can address rising inequalities through several policy channels, including three below:

- Efficient fiscal policies: these include spending more on education and health, especially for poorer households; spending more on better targeted social protection schemes including cash transfers for the poorest and incentives for human capital development; minimizing price subsidies (such as on fuel) and compensating the impact on the poor by targeted transfers; and broadening the tax base and strengthening tax administration for larger and more equitable revenue mobilization.
- Policies to make growth more employment-friendly: these include encouraging structural transformation to create a greater number of productive jobs, and maintaining a balanced sectoral composition of growth between manufacturing, services and agriculture; supporting the development of SMEs which are more job-creating than big enterprises; removing factor market distortions that favor capital-intensity over labor use, including strengthening labor market institutions; and as a temporary measure to address unemployment and underemployment, using public employment schemes as a temporary bridge.
- Policies to improve regional balance within a country: including improving connectivity through transport and communications networks between the more

developed and less developed regions, creating new growth poles in lagging regions; using fiscal transfers to accelerate investment in human capital and improve access to public services in poor regions; and removing barriers to within-country migration, such as the household registration system in PRC.

Growing inter-country inequalities could also pose potential concerns to political-social stability in East Asia. Instabilities within countries can spill over to richer neighboring countries, including rises in illegal and legal cross-border migrations. In ASEAN, wide disparities in income and economic growth prospects would also hinder the objective of economic integration, as poorer countries resist economic opening up to larger trade and investment flows. Hence the ASEAN Economic Community has as one of its primary goals the narrowing of the development gap between the more developed and less developed members. Measures include special and differential treatment for the less developed members (Cambodia, Lao PDR, Myanmar and Vietnam) in meeting the integration commitments and timelines, and special programs under the Integration for ASEAN Initiative to promote infrastructure development and human resource development in the CLMV countries.

9. Challenge: Improving Global Governance –the IMF and the G20

9.1. East Asia and Reforming the IMF

Mohsin Khan (2011) suggests that given the size and strength of Asia in the global economy, the region clearly still 'punches below its weight' in the global financial institutions like the IMF. There have been calls for IMF reforms to reflect the changing economic power shift towards emerging market economies. These include:

- A doubling of quotas, with a corresponding rollback of the New Arrangements to Borrow (NAB) preserving relative shares, when the quota increase becomes effective. Comprehensive review of the quota formula by January 2013 to better reflect economic weights. Completion of the next general review of quotas by January 2014.

- Greater representation for emerging market and developing countries at the Executive Board through two fewer advanced European chairs and the possibility of a second alternative for all multi-country constituencies. Moving to an all-elected Board, along with a commitment by IMF membership to maintaining the Board size at 24 chairs and a review of the Board's composition every 8 years.
- Advanced economies, the IMF and other international organizations should provide capacity-building programs for emerging market economies on the formulation and implementation of new major regulations, consistent with international standards.

Eichengreen (2011) argues that design flaws can be fixed. The articles of the IMF, for example, could be amended to provide for automatic penalties for chronic surplus countries; the composition of the executive board could be changed to further enhance the representation of emerging market countries. Nonetheless, the US has shown foresight in advocating reform of IMF quotas and executive board representation, while Europe has been less forthcoming in this regard. East Asia, partly reflecting its unhappy memories of the IMF's role in the AFC, instead of pushing for a larger voice in the IMF, has chosen to develop its own regional arrangements such as the Chiang Mai Initiative Multilateralisation (CMIM) the ASEAN+3 Macroeconomic Research Office (AMRO) and the Asian Bond Market Initiative (ABMI).

9.2. East Asia and the G20

The G8 has evolved into the G20. The 2008 global financial crisis has forced the leading economic powers to confront the need to integrate the emerging economies more effectively into international economic decision making. The latter includes the G8 countries (Canada, France, Germany, Italy, Japan, Russia, United Kingdom and United States) as well as the European Union, Australia and the emerging economies of Brazil, China, India, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea and Turkey. It is a grouping that comprises 85% of world GDP. The inclusion of emerging economies is a positive development for global governance. But the G20 has a legitimacy problem, in that it has no written constitution, its membership is arbitrary and it has no enforcement power.

Asia is represented by 6 countries, developed (Japan, Australia) and developing (China, India, Indonesia, South Korea). But is Asia up to the task? Asia has to play a more active role in G20. The G3 (US-Europe-Japan) face serious risk of double-dip recession, and the Eurozone countries are mired in sovereign debt. In contrast, the East Asian economies are in relatively good health. The countries have huge foreign reserves, healthy public finances and low debt ratios; their banking systems and corporate balance sheets are healthy, economic growth is still satisfactory and unemployment rates are nowhere alarming, and trade is being restructured to reduce dependence on the US-EU markets. Hence Asia has the economic and financial power to be co-driving the agenda and actions of G20. As Asia's weight in the world economy grows, its interests will also be served by a strong commitment to global institutions.

The first G20 Summit in November 2008 proposed immediate actions to focus on standard setting and strengthening collaboration:

- Enhancement of efforts to better integrate regulatory and supervisory responses into the macro-prudential policy framework and conduct early warning exercises.
- Reviewing the adequacy of the resources of the IMF, the World Bank Group and other multilateral development banks and standing ready to increase them where necessary. Revising their lending role in the light of the ongoing financial crisis.

Looking at the agendas of various G20 Summits since November 2008, some analysts have cited the "hijacking" of G20 summit agendas by the need to respond to current crises as an inherent weakness of the G20 approach. A related question is whether these agendas should continue to deal primarily with systemic financial/economic matters or whether they should be expanded to include consideration of other related topics. Agenda hijacking and agenda broadening are both reflections of the nature of G20 summitry itself. There is a clear expectation that they will deal with the most important issues of the day, and as other large issues come to the fore, G20 leaders will want to expand the range of issues they discuss for understandable political reasons.

Once established, the G20 did a creditable job of framing solutions to the financial crisis. Decisions taken at the 2009 London Summit and confirmed at the 2010 Seoul Summit laid out a constructive agenda. Unfortunately, much of that work

program remains incomplete. For the moment at least, the political will among G20 leaders to deal with underlying systemic issues seems limited. Going forward, G20 should strive to handle not only the short-term problems of the global economy but also address the longer term rebuilding the global economic order.

10. Conclusion

Asia is on the ascent. The US, Europe and much of the world looks to East Asia as the driver and engine of growth of the world economy and to provide growth in import demand. East Asia's economic rise has changed the world economy, and is shaping world trade, financial markets, commodity markets and consumer markets. The Asian middle class will quintuple in size and spending in the next 20 years. East Asian growth will generate demand for imports of primary products, manufactures and services from the rest of the world, as well as attracting investment capital from the advanced economies for agricultural, industrial, services, infrastructure and human resource development.

But Asia's continuing ascent to realize the Asian Century is complicated by the less benign global economic environment, and domestic economic, political and social constraints. On the global environment, there are the trade imbalances and threats of protectionism, and the need to rebalance away from export-led growth towards domestic and regional demand; there is international financial instability and volatility; and there is increasing concern over food and energy security and climate change, and environmental deterioration and un-sustainability. On the domestic front, East Asia is confronted with growing economic, political and social constraints that could lead to the middle income trap and political-social instabilities. Unless the constraints are resolved, the Asian Century will not materialize and large parts of East Asia will remain low and middle income economies.

Nonetheless, East Asia has already become a global economic and financial power to be reckoned with. In particular, it has the opportunity to play a larger role in decision making in the international economic and financial institutions such as the WTO, IMF, World Bank and G20. East Asia has to bear in mind its increased

responsibility to act as a cooperative global power so that its continuing prosperity would not be a threat to the rest of the world but would facilitate global growth, stability and prosperity.

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CHAPTER 2

New Challenges to the Export Oriented Growth Model

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The export-oriented strategy played a crucial role for the successful development of East Asian economies after the World War II. They first exported low-technology manufactured goods, then gradually upgraded and transformed their export goods packages and finally caught up with the developed countries. Export oriented strategy in East Asia has been based on a series of internal and external conditions. Those conditions includes an open international environment, the existence of a certain size of external market, a stable supply of raw materials, as well as good and convenient navigation, and some internal conditions.

Global financial crisis badly changed some of these conditions. For example, the external market was very unstable and was growing very slow; after the financial crisis, international raw material and energy prices experienced sharp volatility, which caused great challenges to the countries and enterprises seeking to implement an export oriented strategy. However, after the financial crisis the changes in international and domestic environments did not change the nature and trends of globalization, only temporarily slowed the pace of this process. East Asian countries can therefore continue their export oriented strategy, but should be prepared for slower progress than in past decades.

Given the unstable and uncertain external markets, East Asia's export strategy and economic development models must find alternative markets. One of these is the intraregional market. The potential intraregional market in East Asia is huge. In 2011, East Asian intraregional trade was 52.62% of its total exports, which was very low compared to the EU (66.75%). If for example, East Asian economies were to catch up with the EU in terms of intraregional trade, then each year there would be more than 1 trillion US dollars new demand from this region alone. Unfortunately, to tap this potential, there is a long way to go for the East Asian economies.

Keywords: East Asia, growth model, export-led growth model, development strategy

JEL classification: F13, F43, 053

1. Introduction

The recent global financial crisis has badly impacted the world economy. Since the crisis broke out in 2008, the US government has stimulated its economy with very loose macroeconomic policy packages. These policies have already been in place for almost four years, yet US economic recovery is still very weak. For example, since 2008, the annual growth rates in the US have been -0.3 % (2008), -3.1% (2009), 2.4% (2010) and 1.8% (2011) respectively, far below the US's long term average rate[1]. At the same time the US unemployment rate has been very high, at 8-10%. Another round of Quantitative easing, QE3, is now under consideration.

As far as the EU's economy is concerned, together with the impact of the global financial crisis, it also has had to deal with the Euro-zone sovereignty debt crisis. The EU economy has suffered greatly because of these two crises, and its economic growth rate has been negative, its unemployment rate has been more 10%, and several countries have been on the verge of debt default. There are as yet no clear and strong signs of recovery and stability in the European economy.

In addition to the negative impacts of the global financial crisis, the Japanese economy has also suffered from the Tohoku earthquake and Fukushima nuclear disaster. More than one year later, the Japanese economy is still to return to its pre-disaster level.

The very slow economic growth of key industrial countries will greatly reduce the demand for exports from developing countries. With this background and under these conditions, can the export oriented strategy of East Asia survive? If not, what are the challenges it will face, and how can the region adjust to the necessary changes? These are the key issues to be analyzed in this paper.

The term "East Asia" in this paper refers only to 12 countries and regions, namely: Japan, the Asian Tigers (Hong Kong, Singapore, Taiwan and South Korea),

[1]IMF, World Economic Outlook, 2012, Oct.

China and the ASEAN4 countries (Malaysia, Thailand, Indonesia and the Philippines), Vietnam and India. In 2011, those 12 economies have more than 46% of the world's population (3,286.52 million), 33.15% of world GDP in terms of purchasing power parity (PPP) (Table 1). It is a very diverse group of economies. Some are high income economies, while the others are middle or even low income.

Table 1: East Asian economies in 2011

	Population	Share of World GDP (PPP)	Share of Current Account Balance to GDP,%	Per capita GDP, Current International Dollar
China	1,348.12	14.32	2.75	5,413.57
Hong Kong SAR	7.15	0.45	4.14	34,048.92
India	1,206.92	5.65	-2.82	1,388.78
Indonesia	241.03	1.43	0.25	3,508.61
Japan	127.82	5.63	2.05	45,920.30
Korea	49.01	1.97	2.38	22,777.93
Malaysia	28.73	0.57	11.48	9,699.70
Philippines	95.86	0.50	2.74	2,223.44
Singapore	5.27	0.40	21.93	49,270.87
Taiwan	23.23	1.11	8.84	20,100.50
Thailand	64.08	0.76	3.43	5,394.36
Vietnam	89.32	0.38	-0.54	1,374.01
Total	3,286.52	33.15		

Source: IMF, World Economic Outlook Database, April of 2012.

In terms of culture, these 12 economies are also very different, and only some of them sharing cultures, languages, and religions.

The first part of this paper will explore the development of the region's export strategy and the East Asian economic development model. The second part will focus on the challenges that this model faces, the third part will give analysis on future readjustments and the fourth part will make a special study of the changes to China's export oriented strategy.

2. Export Strategy and East Asian Economic Development

Looking back at global economic development in the 60 years after World War II, only some countries and regions, such as Japan in East Asia, and the Asian Tigers, rose successfully from backward positions to the ranks of the developed economies. Taking a longer period of observation, in the past one or two centuries, these countries and regions are also among the few groups that successfully leapt into the ranks of the developed economies, in addition to the United States and Europe[2]. Looking ahead, more and more new developing economies will be likely to rise in the East Asian region, where economic development is always fast and very dynamic.

There are many reasons for the successful development of East Asia. These include, for example, the high local savings, government intervention, emphasis on education and others (World Bank 1993, Maddison 2006). Among these, the export-oriented strategy played a crucial role. This was oriented towards external markets, as opposed to the import-substitution development strategy which was aimed at the internal market. The East Asian export-oriented model of development is an international regional development model, beyond that of a country or different regions within a country. The model has a long history and continues to be expanded and deepened. It involves the division and collaboration of labor or functions along the value chains between countries both inside and outside the region. It also involves cooperation and integration among different countries in the region. It is connected with the outside environment and also closely linked to the local environments. Why, then, did the East Asian countries and regions select this export-oriented development strategy?

[2]According to the World Bank (2012), "Of 101 middle-income economies in1960, only 13 became high income by 2008—Equatorial Guinea; Greece; Hong Kong SAR, China; Ireland; Israel; Japan; Mauritius; Portugal; Puerto Rico; the Republic of Korea; Singapore; Spain; and Taiwan, China."World Bank, 2012, *China 2030*, P12, Box1.

The early developing East Asian countries and regions (Japan first, followed by the Asian Tigers) form a group of resource-poor economies. Learning advanced technology and management expertise from Western countries, importing foreign technology and equipment and exploiting the advantages of backwardness are essential means for backward countries to develop rapidly. However, all these efforts need to be supported by foreign exchange reserves. Another reason for these economies to follow an export oriented strategy is that they are all, or were at the start of their development, small economies. With very limited local markets, they cannot cultivate local industries which are mainly dependent upon internal markets, for example by using an import substitution strategy. The East Asian countries and regions were thus forced to explore the export-oriented development model because of their lack of natural resources, and their limited local markets. They first exported low-technology manufactured goods, then gradually upgraded and transformed their export goods packages and finally caught up with the developed countries.

Let's take Japan's development as an example. Japan is a typically resource-poor, densely populated small economy (Kojima, 1971), and stepped onto the development path of modernization after the Meiji Restoration in 1868. Before World War II, Japan had aimed to build a so-called "East Asian Co-Prosperity Sphere" which was centered on Japan and developed its economy by opening up policy, learning and absorbing Western technology (especially military technology), developing military industries, invading China, Korea and other Asian neighbors, plundering the resources and wealth of these countries through military expansion, monopolizing these countries' markets and implementing colonial rule and brutal aggression. This was a costly development path, and, at the same time, a catastrophic development path for the other Asian countries. Following the ending of the Second World War, the utterly defeated Japan was forced to take the alternative route to economic parity with the West, namely the export oriented development model focused on

manufactured goods, not traditional commodities. The key feature of this development model is to export manufactured goods and earn foreign exchange reserves, and then to import the technology, machinery and equipment needed to develop local industries, especially export oriented industries. With this development pattern, the country may export more manufactured goods, and earn more foreign exchange reserves, and again expand and upgrade local industries further. Gradually, over time, the country can catch up successfully.

From the perspective of the political economy of the multilateral trading system (Hoekman and Kostecki 1995), the General Agreement on Tariffs and Trade (GATT) is the game of the major powers, and the small countries are only marginal to it. Small countries, through unilateral or multilateral independent opening-up processes, can gain numerous benefits, such as entering into the unified international market and free-riding[3]. In 1955, Japan joined the GATT and gained significant benefits as a small country at that time; thus, in the market of the developed countries, especially in the product markets of low-tech textiles and clothing, Japan became a major source of supply.

It is very difficult to pave this new development model. The path towards an export-oriented strategy in East Asia was filled with many hardships and restrictions. Among them, opening up external markets was the most important.

Concentrating on the export of labor-intensive textile and clothing products was the earliest choice for the East Asian countries and regions adopting an export-oriented strategy. Internationally, the first restrictions on trade in manufactured goods were introduced in the 1930s (Raffaelli and Jenkins 1995). At that time, the two dispute parties were the U.S. and Japan. Japan's textile exports to the U.S. caused a negative impact on American domestic industry, and under the

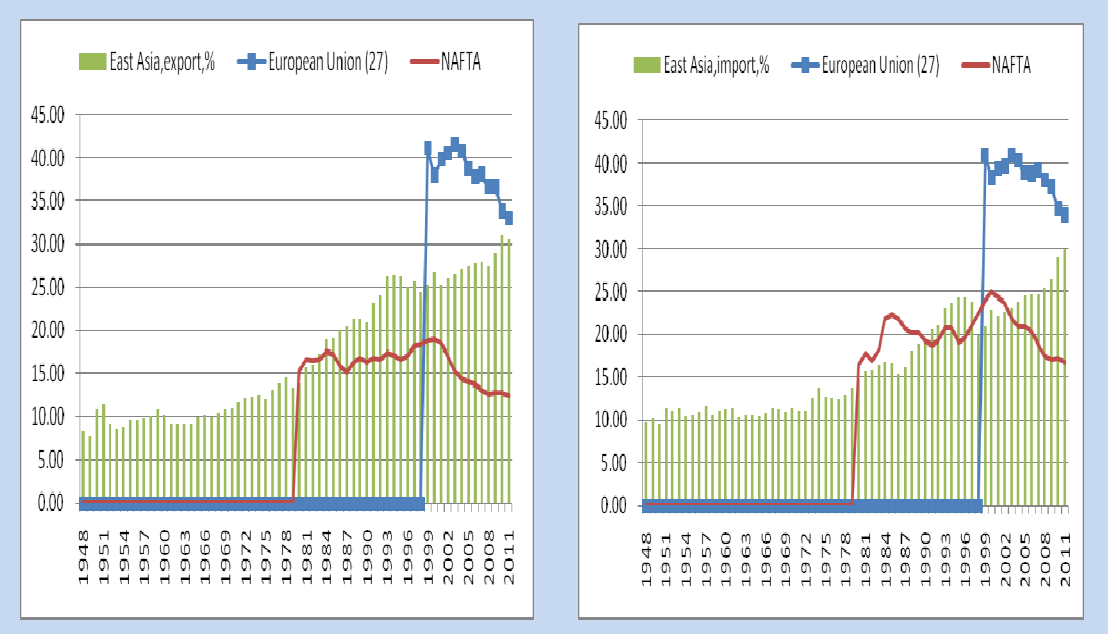
[3]However, if there were no unilateral or multilateral liberalization of the market for the backward small economies, the overall economic development would have been "isolated" and become the "enclave" of global economic development. For example, India, Pakistan, Brazil, Cuba and etc. as original GATT contracting states, have the highest level of world tariff and non-tariff protection. And in multilateral negotiations, these countries are also the most difficult negotiating partners to deal with.

pressure from the U.S., Japan implemented voluntary export restraints (VER). In the 1950s after World War II, under pressure from the U.S. again, the scope of such constraints expanded. The GATT meeting in 1959 officially mainly discussed the "market disruption caused by the importing surge from low-income countries", and the consensus reached at this meeting became the basis for subsequent safe-guard mechanisms covering textile exports. Given this effort, a Short-term Cotton Textiles Agreement (STA) (1 year) was enforced in 1961, and a Long-term Cotton Textile Trade Agreement (LTA) (5 year) was brought in 1962 (Keesing and Wolf 1980). The main targets of this restriction were the export of cotton textiles from Japan, Hong Kong, India and Pakistan. Although the LTA implementation effectively protected the cotton textile industry in the developed countries, the rapid development of the chemical fiber and wool textile industries brought more and more competitive pressure on to the textile industries in the developed countries. In 1974, under pressure from the U.S., the Multi-Fiber Arrangement (MFA), which covered cotton, wool and synthetic fiber, was formally introduced and became the major obstacle to international trade in textiles. Japan, Taiwan, Korea and Hong Kong were affected most heavily during this period. The Agreement was supposed to last for four years but was extended several times. It continued in effect until the establishment of the WTO in 1995, to be replaced by a new textile agreement (ATC), which was itself eventually repealed in 2005. During the period from 1974 to 2005, China was the party most injured by the agreement (Song Hong, 2006). Obviously, however, all the parties targeted by these restrictions were East Asian countries and regions.

It is clear that the export-oriented development model explored by Japan has led to imitation and learning from the other East Asian countries and regions. In the 1960s, the development of these countries and regions triggered a new round of waves of export development. From that time onwards, East Asia has stood out in terms of development, and a unique model of development has begun to take shape.

Another question can be raised here; why did this export-oriented development model continue to expand and deepen over more than half a century in East Asia? This is mainly due to the first-mover advantage and its cumulative effect. Although they faced some limitations and restrictions in the developed countries' markets, these East Asian countries and regions were the first to interact with and to gradually become familiar with the rules and habits of markets in the western developed countries. They then established good economic relations with western countries, especially the local firms. Driven by investment and trade liberalization among the post-war developed countries, and under competitive pressure among themselves, and from the Asian tigers, some low-end industries in developed countries began to shift outwards from the mid-1960s. Thanks to its good reputation as an export oriented region, East Asia has become one of the best destinations for the 'migrant' industries of western countries. Take foreign direct investment (FDI) in East Asia as an example. For many years, East Asia has been the destination attracting most foreign investment in developing regions of the world. Among the developing countries which are the major manufacturing exporters in the world, East Asian countries and regions accounted for the lion's share. This long-term position caused the East Asian countries and regions to grow into the global processing and manufacturing center, during the wave of globalization since the 1980s. At the same time, the early developed countries and regions in East Asia became new hubs of production and investment networks in the region. Thanks to geographic proximity, and the close links and similarity of culture, it is very easy for an economy in the region to learn and share in developments in the 'neighborhood'. In consequence the East Asian export-oriented development model continues to expand, as more and more economies join into this network. A true regional development strategy had gradually formed since the mid 1960s, and was to show itself in the mid 1980s.

Figure1: The Share of East Asia in World Trade, %, 1948-2011



Source: WTO database.

Figure 1 shows the share of the East Asia region in world trade from 1948 to 2011. From this figure, it seems clear that after the mid-1960s, when the Asian Tigers joined Japan in adopting an export oriented strategy, the share of East Asia in world exports began to increase. Since then its share has more than doubled, increasing from 10% in 1966 to 30% in 2011. A similar trend occurred for the imports of East Asia. The share of East Asia (only 12 economies) in world trade is very close to that of the EU (27) and is far greater than that of NAFTA. Based on the trend in the last 10 years, it is expected that East Asia will replace the EU as the top trader in the next few years.

Why did not the other countries do this, or quickly catch up with East Asia? Exporting raw materials and primary products and developing the local economy have always been the main choices for backward countries, especially those which originated as colonies. This model of economic development was also favored by the colony's 'home' state. However, for many reasons[4], these countries and regions

[4]For example, the view of the resource curses theory, Prebish - Singh's point of view of import

have not developed successfully. From the perspective of export-oriented development, the unique characteristics of East Asia, particularly the successfully developed countries and regions in East Asia, are as follows: 1) exporting manufactured goods; 2) supporting the entire country's industrialization through exporting manufactured goods. It calls for a great deal of assurance for long-term persistence in this strategy, involving the consensus of generations and the struggle of the whole country. These conditions are not easily satisfied, especially in backward countries.

Other under-developed countries did not quickly catch up with East Asia because of the 'first-mover advantage' and long-term accumulation of experience, skills, and social capital in the East Asian region. In the meantime the international environment has changed greatly, and much history cannot be repeated since the historic opportunity appeared only once. Even if the same policies and strategies were implemented elsewhere today, the effect would not be the same, since the outside international conditions have changed so much.

3. New Challenges to the Export Oriented Strategy in a New International Economic Environment

Since the global financial crisis, the export oriented strategy has faced new challenges. More and more people have begun to question the ongoing feasibility and effectiveness of an export oriented strategy, and to doubt, whether there is a need to continue to adhere to it, if export orientation is not still the best strategy for a developing country seeking to catch up with the developed world. Even if export orientation remains the best strategy, what challenges and constraints must be faced in its effective implementation?

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substitution strategy, as well as the authoritarianism of the East Asian economic development, and so on.

For the first question, there is ample literature in which the main finding is that there is a significantly positive correlation between trade liberalization and economic growth. Thus an outward, export oriented strategy, is one of the most effective strategies which can promote faster economic growth. The experience of East Asia is a vivid example (Krueger, *et al.* 1985; World Bank, 1993). Here we will not go further on this point except to point that, since the 1980s, along with the advance of globalization, an export oriented strategy has become a common choice for economic development in many countries, especially developing countries and regions.

So, given that the export oriented strategy is a very good one, what are the challenges it will face in future? Export oriented strategy in East Asia has been based on a series of internal and external conditions. If these conditions continue to exist, then this strategy can continue to be implemented. If not, change is needed.

First, the implementation of an export oriented strategy needs an open international environment. Since the financial crisis broke out, questioning and criticism of economic globalization have been a common theme in the western developed countries. In 2009 doubts about the impact of globalization on US employment appeared in US political and academic circles (Spence 2011), as well as critical reflections on the capitalist system. In 2010, the former French President Nicolas Sarkozy publicly questioned the impact of globalization (Sarkozy 2010). However, the process of globalization will not be terminated, let alone be reversed. The market mechanism is the most effective way of allocating resources and the most efficient way to coordinate the behaviors of market players. Globalization is actually the expansion of the market mechanism all over the world. In fact, in the last few years, the global market mechanism has still worked, and worked very well. It may even have been strengthened. For example, the multilateral trading system still played a very important role during the financial crisis. Although the multilateral negotiation is stalled, the rules of the WTO are still working. Because it continued to work trade protectionism neither become a fashion, nor hindered the

normal development of the global economy; exchange rate wars, similar to the currency wars of the Great Depression in the 1930s, did not occur. Further, the key developed countries, especially the United States as the representative of the Pacific Rim countries, are also actively pushing the highest level of regional trade arrangements in the history of mankind (The Trans-Pacific Economic Partnership, (TPP)). This is strong evidence that globalization was still progressing, and was actively being pushed forward during financial crisis. Meanwhile, the U.S. is also strengthening the so-called institutional architecture of the global marketing system. And in order to maintain the healthy operation of the global market mechanism, a new office was set up in the USA to monitor other countries' obedience of the international rules,

Second, the implementation of an export oriented strategy in East Asia requires the existence of a certain size of external market. Otherwise, nobody could accomplish anything, without the necessary means. As far as the external market is concerned, there are two changes worth noting: 1) After financial crisis, economic recovery in the developed countries has been weak, and may even have fallen into a long-term path of slow growth. Demand from these countries will not be very strong in the near future, as compared with past decades. The expansion space of export oriented strategies in East Asia is therefore being, and will be, squeezed. East Asian countries consequently face the important task of looking for new sources of growth. 2) To a certain extent, the adjustment of the financial crisis and global imbalances is a new constraint for the implementation of an export oriented strategy in East Asia. After the financial crisis, a new view took shape, namely that the financial crisis was caused (at least partly) by the global economic imbalances. Therefore, the imbalances must be readjusted. In 2009, the Pittsburgh summit of the G20 in the United States reached a consensus on a basic framework for adjustment of global imbalances, namely, "A framework for strong, sustainable, and balanced growth", and required an adjustment of external balances by both deficit

and surplus countries. In order to ensure global economic rebalance, the G20 also established "a mutual appraisal mechanism" to evaluate policies and progress in each country. In the following G20 Toronto, Seoul and Cannes summits, measuring and constraining the global imbalances became one of the focus discussions. The IMF has accepted the commission of the G20 to embark on a technology assessment for global economic rebalance, and to establish a "reference guide" to quantify and assess progress in this area (IMF 2010a, 2010b).

Third, the implementation of an export oriented strategy also needs a stable supply of raw materials, as well as good and convenient navigation. The development of modern international trade relies on maritime transportation. For a country choosing to implement an export oriented strategy, assessment of port availability and quality, and shipping cost is essential. Since 2003 and 2004, especially before and after the crisis, international raw material and energy prices experienced sharp volatility, which caused great challenges to the countries and enterprises seeking to implement an export oriented strategy. A survey found that, during the crisis, the bankruptcy and closure of enterprises were mainly due to sudden disruptions in cash flows caused by fluctuations in raw material prices on international markets (Wang and Song Hong, 2009). In addition, rising oil prices also led to a substantial surge in shipping costs, making some exports unprofitable.

Fourth, on the basis of the existing international economic environment, the implementation of an export oriented strategy also requires certain internal conditions. Among them the most important are adequate infrastructure, competitive production and operational costs, strong local production support capacity, favorable labor and regulatory conditions, and economic ties to the regional, even global production networks. These conditions may also change. For example, with economic development local labor and other factor costs will rise. This will change the basis of local comparative advantage and force firms to upgrade their product and process technology, even relocate some of their production capacity.

During the financial crisis, China's labor costs rose by 10-20% annually. Affected by this, some Asian countries have followed suit (rather than take this opportunity to attract more foreign investment and crowd out China's export market). Therefore, the cost advantage in East Asian exports generally has been eroded. It is against this background that some western countries are actively promoting a new round of the reindustrialization process (the industrialization of high-end manufacturing), urging their multinational enterprises to repatriate their overseas manufacturing activity.

In all, after the financial crisis the changes in international and domestic environments did not change the nature and trends of globalization, but only temporarily slowed the pace of this process. East Asian countries can therefore continue their export oriented strategy but should be prepared for slower progress than in past decades.

4. Reforming the Export Oriented Strategy

The implementation of East Asia's export-oriented strategy had spillover effects, with one group of countries first participating, followed, some years later, by another group of countries, and soon, one wave after another. Initially, the process started in Japan in the 1950s, followed by Asia's Four Little Dragons in the 1960s, next followed by China and the ASEAN-4 countries in the 1970s. Subsequently Vietnam, India and other ASEAN countries joined the process in the second half of the 1980s. With this proliferation, a growing number of East Asian countries and regions began to enter into the international market. This brought changes in two aspects: on the one hand, East Asian countries and regions became increasingly in great need of external markets and thus faced the risk of volatility in the external market and the restrictions imposed by trade protectionism. On the other hand, with

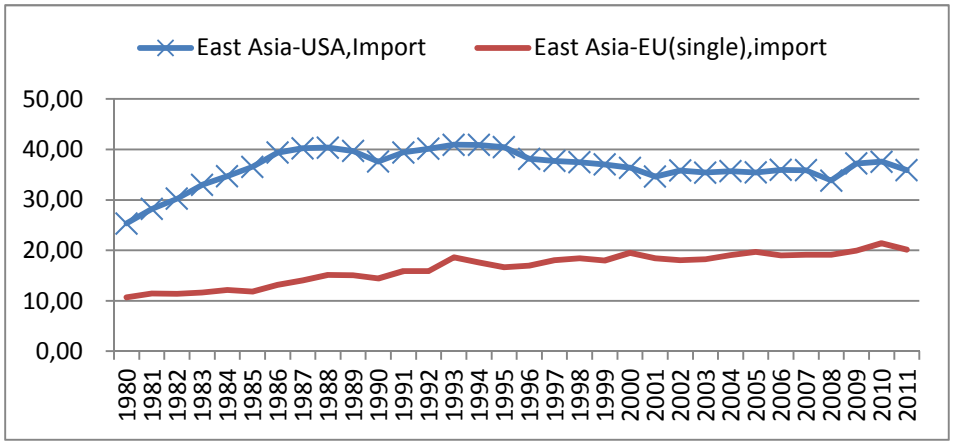
the economic linkages between the East Asian countries and regions deepening, more and more institutional arrangements were needed to support and guarantee such development.

Therefore, in addition to the challenges arising from the changes of internal and external conditions, there are two major problems in the existing export oriented strategy in East Asia.

First is the heavy reliance on the outside market, especially in the developed countries.

1) In the market in the developed countries, the share of East Asian countries and regions is already very high. For example, in the U.S. market the share of imports from East Asia is steady at 35% of total imports of the U.S., which is far higher than the proportion of NAFTA members (25%). And in the EU market (as a whole, not including intra-trade) the share of imports from East Asia has reached about 20% (Figure 2).

Figure 2: Share of Imports from East Asia in USA and EU, 1980-2011.



Source: IMF, DOTS, May of 2012 database CD.

2) Additionally, the expansion of trade for the East Asian countries and regions in developed countries' markets seems to be facing a new ceiling. The share of East Asia's imports in the EU and the U.S. markets has been basically stable for at least the past 10 years. So, where is the new export market for East Asian countries and regions?

3) One of the new export markets for East Asia is that of developing countries. However, the risk in these new export markets is very high. For example, in the last decade, antidumping cases initiated by developing members of WTO have been more common than those initiated by developed members.

The second major problem is that, East Asian intra-regional economic integration is deepening, but the guarantee of the institutional framework is weak.

1) With the expansion of an export-oriented production base within East Asia, the internal economic integration in East Asia is deepening, especially with Japan and China. But it lacks unified institutional architecture to promote the change. In recent years, moreover, the East Asian economies signed many competitive FTAs, which could break up the integrated East Asian production system and markets. For example, peripheral countries or regions economically, such as the members of ASEAN have become the axis of the regional integration process in East Asia. However, the real core countries retreat behind. And the integration process between the core countries in this region has been very difficult and very slow. Another example is the TTP arrangement. That would be a divergent force for East Asian economic integration, or at least a new alternative track[5], besides the existing one with the ASEAN plus one framework.

2) Along with the rise of China come new challenges. For instance, the U.S has aggressively returned to East Asia with a so-called new strategy (Clinton 2011) and closely built its relationships with its allies, apparently seeking to balance the influence of China in this region. This new US strategy has brought new uncertainty for the process of regional integration in East Asia. For example, the TPP arrangement with U.S. leadership would force many East Asian economies to make a choice, either to maintain the existing ASEAN plus one track or to participate in the TPP track. Obviously, the TPP arrangement is aiming

[5] According to Bernard K. Gordon (2012), "The TPP would go well beyond categories traditionally included in trade agreements. To begin with, over the next decade, it would gradually remove all tariffs on trade between member states. Following the model of the FTA between the United States and South Korea, it would affect almost all forms of economic interaction among its members, covering policies on investment and government procurement, labor and environmental standards, agriculture, intellectual property, and such new sectors as state-owned and small and medium-sized enterprises, businesses with anywhere between 50 and 500 employees. The United States and its partners hope that the TPP becomes the linchpin of free trade in the Asia-Pacific region."

to split and interfere with the economic integration process in East Asia.

3) Along with the return of the US to East Asia have come the new uncertainties in the South China Sea. With the clear support of the US, some of the ASEAN countries, even Japan in the Yellow Sea, have challenged China in terms of territorial disputes. These disputes in detail and the deterioration of the situation in general in the South China Sea have badly damaged the trust among East Asian economies and have threatened the cooperation between East Asian countries.

Given the dramatic changes in the internal and external conditions triggered by the financial crisis, and the problems of the export-oriented strategy, how should East Asian Economies adjust and change their export oriented strategy and development model?

First, the traditional concepts and misunderstanding of the export-oriented strategy should be rectified all over the world, for example the view that the export-oriented strategy has created the global imbalances. Additionally, in the international background the traditional statistical methods used to calculate a country's trade surplus and deficit are still in use, and the belief that a trade surplus is good and a deficit is bad is stubbornly maintained, and so on. In the international context, the way that the trade data is collected, and the classifications used, should be changed, and the international production networks should be considered more objectively. A case in point is the “made in the world” initiative, which was promoted by the WTO Director General Pascal Larmy who was determined to explore new ways to calculate a country’s trade surplus and deficit based on value-added. Those efforts are expected to change people’s views about the export-oriented strategy. In fact, from the historical and international points of view, the export oriented strategy and the development model in East Asia are very advanced and very effective in terms of economic performance, so it ought to have a very good reputation.

Second, the cooperation within East Asia should be deepened. With the export

capacity of the East Asian region enhancing continuously, the number of participating countries increasing, the East Asian export production network has extended to more remote countries; that is, from the core area of East Asia (Japan, the Asian Tigers, China) to non-core regions (ASEAN, India and Vietnam). The development of the export oriented strategy is now facing a dilemma. On the one hand, the scale and quality of export goods are increasing and upgrading, whilst on the other, more and more export capacities are being transferred to countries with even worse conditions such as poor infrastructures and low labor skills. More in-depth economic integration and the building of more diverse supporting systems are needed in the East Asian region to facilitate those changes. Here, the core countries in East Asia should take their historical responsibility. Regional integration negotiations among China, Japan and South Korea are now actively being promoted, in the hope that new progress can be made.

Furthermore, the markets in East Asia need to be more open. The development of East Asia's export-oriented model is closely related to the status of small or developing countries in the East Asian region. These countries and regions have made full use of their advantage. During the GATT multilateral negotiations, the East Asia region liberalized slowly, compared with other regions, say the EU and NAFTA. Reform of the export strategy therefore needs to promote greater openness in the region's various countries and regions. Obviously, the construction of regional trade agreements is a good means of doing this.

Finally, the East Asian export strategy and the development model are based on as well as promoted by the local economic development conditions of its members. Japan and South Korea have already successfully joined the OECD club. However, for many new users of this model, the coordination of the local economy with the export sector is very poor. In some countries, an export-oriented industrial base only has developed, without any effort to build a diverse national industrial system. The export oriented strategy has sadly only resulted in an uneven distribution of

wealth, with a dual economy, as well as deformity of the economic structure and development conditions. To maintain the momentum of long-term development in East Asia, the local economy of its member countries must be healthy and sustainable. Here, the experience of Japan and the Asian Tigers is worth studying by the latecomers.

In short, as the external demand is weak in the developed countries, which may possibly lapse into a long term depressed state, and the needs of developing countries are unstable and uncertain, East Asia's export strategy and economic development models must find alternative markets. One of these is the intraregional market. The potential intraregional market in East Asia is huge. In 2011, East Asian intraregional trade was 52.62% of its total exports, which was very low compared to the EU (66.75%). If for example, East Asian economies were to catch up with the EU in terms of intraregional trade, then each year there would be more than 1 trillion US dollars new demand from this region alone. The traditional East Asian export strategy should therefore be adjusted to a more integrated, more open, more East Asia-oriented trade and development strategy. It would exploit the potential demand within East Asia and take advantage of the increasing middle class population of this region to make up for the lack of external demand needed to achieve sustainable economic development. At the same time, it can make full use of the overall regional competitive advantage to consolidate and improve its international competitive position.

5. Adjustment of China’s Export Oriented Strategy - Moving to Inland China, Moving Up or Moving Out?

Following its reform and opening-up to the outside world, China built cooperative relationships first with Hong Kong in the 1980s, then with Taiwan, South Korea, Singapore and Japan in the 1990s, and once again integrated further with

Japan, the four Asian Tigers, and even with the U.S. and EU in the 2000s. In this way, China gradually joined into the East Asian or even the global production network and became one of the regional or global processing and manufacturing bases.

Probably from 1986, China began to gradually integrate into the East Asian export-oriented development model. The expansion of export markets (cumulated as the annual growth of export market) and import sources of China (cumulated as the annual growth of import source) clearly demonstrated the three different stages of development:

1) Before 1986, foreign trade was mainly concentrated in the Asian area. More than 80 % of export growth and 60 % of import growth came from the neighboring Asian economies.

2) During the period from 1986 to 1993, China established for the first time, a trade pattern putting the developed markets such as the U.S., Europe and Japan as the main exporting targets. These three markets accounted for more than 50% of export trade expansion, reaching 53.1%; during the period from 1980 to 1986, in contrast, these three markets only absorbed 35% of China's export expansion. In the short period of seven years, their contribution to China's export expansion increased more than 50%. During the same period, imports from Taiwan, Korea and Singapore increased substantially from 0.2% to 33.8%. From 1994 to 2002, a similar trade pattern was maintained to that from 1986 to 1993.

3) From 2003 to 2009, a new trade pattern began to emerge. On the export side, the three developed markets' contribution to China's export expansion reduced to 43.7%. The Japanese market had contributed most to this decline, falling from 14 % in 1994-2002 to 5.6 %, more than 50% down. At the same time, the contribution from emerging market economies such as India, Brazil and Vietnam to China's export expansion showed a significant increase, up to more than 50%. In this period, China's import demand was focused on resource products. Resource imports from related countries took higher and higher shares of China's import expansion.

Table 2: The Role of China in East Asia, 2011

East Asia Economies	Top 4 Export Markets	Top 4 Import Sources
Japan	China, USA, Eurozone, Korea	China. USA, Eurozone, Australia
Hong Kong	China, USA, Eurozone, Japan	China, Japan, Singapore, Eurozone
Korea,	China, USA, Eurozone, Japan	China, Japan, USA, Eurozone
Singapore	Malaysia, Hong Kong, Indonesia, China	USA, Malaysia, China, Eurozone
Taiwan	China, USA, Hong Kong, Eurozone	Japan, China, USA, Eurozone
China	USA, Hong Kong, Eurozone, Japan	Japan, Eurozone, Korea, Taiwan
Indonesia	Japan, China, Singapore, USA	China, Singapore, Japan, Korea
Malaysia	China, Singapore, Japan, USA	Singapore, China, Japan, USA
Philippines	China, Japan, USA, Singapore	China, Japan, USA, Korea
Thailand	China, USA, Japan, Hong Kong	Japan, China, UAE, Eurozone
India	Eurozone, UAE, USA, China	China, Eurozone, UAE, USA
Viet Nam	USA, Eurozone, Japan, China	China, Korea, Singapore, Japan

Source: IMF, DOT CD, May of 2012.

China is now the most significant representative of the East Asian export-oriented development model: on the one hand, as the final part of the model, China is now the processing and assembling base for manufactured goods; on the other hand, China's accession also deepened trade integration within the East Asia region, and, more importantly, reduced the region's dependence on the developed countries such as the U.S. and the EU. In 2011, for example, China became the top export market for 7 of the other 11 economies in East Asia, and also the top import source for 7 of the other 11 East Asian economies (Table 2).

In recent years, substantial changes put China's export enterprises and industries under a huge pressure of adjustment. The changes included the rising price of imported raw materials and energy, the particular shock of the financial crisis, rapidly rising wage levels, the increasing appreciation of the RMB exchange rate, the shortage of labor, increasing external trade restrictions and so on. Did these changes then bring China's export-oriented strategy to a turning point?

The large-scale labor intensive industry transformation has still not happened in China, as it did in the Asian Tigers and Japan in the mid 1980s, but sporadic and small-scale restructuring of such industries has already begun to emerge, especially in the coastal provinces. Obviously, such a transformation in China will be a process, taking several years to complete.

1) Moving to inland China. Restructuring of labor intensive industries in China took such a form as moving from coastal regions to the middle and western parts of the country. An initial transfer into the inland provinces of China is a wise choice. On the one hand, it avoids the inconvenience experienced in dealing with foreign customs and people if moving industries out to other countries. On the other hand, it is much easier for firms to integrate with each other in trade and investment within a country.

   As a result of this transformation in recent years, the trade growth in China's inland provinces was much higher than the growth in its coastal areas. For example, according to the trade data released by the General Administration of Customs, during the first five months of 2012, China's exports increased by 8.7 %, to $ 774.4 billion. Of this total, Guangdong exported $ 218.52 billion, with an increase of 6.9%. The exports from Jiangsu, Zhejiang and Shanghai were $122.99 billion, $85.89 billion and $82.49 billion, respectively, with an increase of 2%, 5.3% and 3.1%. However, in the central and western provinces of China, export growth rates were much faster. For example, Sichuan, Jiangxi and Guangxi grew their exports respectively by 78.7%, 57.2% and 22.7%, with Chongqing up to 2.3 times and Henan up to 1.1 times. This performance is just the result of business migration to the central and western provinces in recent years.

2) Moving up or upgrading the trade structure. Besides moving inland, moving up or upgrading was also an option for many companies. This is mainly reflected in the following ways: (1) mechanization, in replace of labor and increasing production efficiency. This has already happened in many Chinese factories; (2) product quality improvement and brand building; (3) innovation, accumulating more patents and other intellectual property rights; and (4) upgrading from low skilled products and industry to high skilled ones, or from low functions to high value-added functions along the same value chain.

3) Moving out. The greatest uncertainty in the transformation lies in the destinations of outward industry transfers. According to the classification of export products in China, the typical labor-intensive products such as textiles, clothing, shoes, furniture and travel goods account for more than 20%[6] of total exports; furthermore, the proportion of processing trade is probably 50%. Processing trade refers to processing and manufacturing activities using cheap production factors, especially labor, and importing raw materials, with output almost all exported to foreign markets. Processing trade can be seen as the representative of labor-intensive products. If these products will one day transfer outwards, then which country or region can absorb such a large-scale production and processing capacity?

To some extent, this challenge in the trade transformation in China is also the biggest challenge faced by the East Asian export-oriented strategy. The key to export strategy reform lies in whether the East Asian region can co-ordinate among its member economies, and intraregional integration is a feasible option.

In short, large-scale trade transformation in China is yet to take place. A small transformation has however already begun to emerge, such as the mechanization efforts of many factories, and so on. The Chinese trade strategy adjustment is only part of the adjustment of export strategy and the development model in East Asia. This adjustment will include not only inward transferring and internal upgrading, but also outward transferring and intra-regional coordination and cooperation. During this process, the direction of labor-intensive manufacturing industry's transformation in the next round will be a test for the East Asian countries and regions to manage and overcome the challenges of the regional development model.

[6]In 2011, China's export trade was $ 1898.6 billion, and imports amounted to $ 1743.459 billion.

6. Conclusions and Policy Recommendations

Based on the previous analysis, the following conclusions can be drawn.

First, the export oriented development strategy in East Asia has been the most successful and most advanced model of development after World War II, and even over a longer period. It has succeeded against the background of an open global economy, and in particular, of economic globalization.

Second, after the recent financial crisis, adverse reflections on globalization and the doubts about the market mechanism appeared in developed countries. However, as the most efficient mechanism in the history of mankind, the market economy will continue to exist, and the process of globalization will continue - perhaps being expanded or further developed.

Third, after the financial crisis, the implementation conditions of the export oriented strategy in East Asia have changed greatly. Demand from the U.S. and Europe has declined, because of the prolonged slump in these countries' economic growth. The US and Europe have also forced adjustments and changes in other countries, such as the global economic rebalance. In addition, the global climate change negotiations and the sharp volatility of raw material and energy prices are also affecting the normal operation of the strategy. However, these are only changes in the external environment, and will neither reverse the entire trend of the globalization of market economy development, nor rule out the choice of an export oriented development strategy in East Asia.

Fourth, China's trade strategy restructuring and upgrading is currently the most important part of the export oriented strategy adjustment in East Asia, and will remain so in the immediate future. China has adopted the strategy of relocating industries first to internal regions, then to foreign countries, and has obtained preliminary results. At the same time, many Chinese companies are building their own brands and marketing networks and are actively engaging in technical

innovation, promoting the upgrading of trade structure.

Given this analysis and consequent conclusions, the following policy recommendations are proposed.

First, East Asia should unequivocally support globalization and oppose trade protectionism; actively support the reform of the global trade statistics system based on added value; promote the economic recovery process in developed countries.

Second, East Asia should actively promote the regional integration process. East Asia is both a global dynamic production and processing base and the world's largest potential market. The regional integration process can tap enormous internal market potential, thus making up for the lack of external demand, also can improve the export competitiveness of East Asia and stabilize the foundation of export strategy.

Third, East Asia should promote internal economic reforms and provide more support to the less developed East Asian countries so as to build economic growth on a broad and solid foundation.

Past accomplishment cannot guarantee future success. In the next 10 years or even further into the future, if East Asia cannot conduct the reform and restructuring successfully, and also make real progress in regional integration, then the foundation of competitiveness inherited from the past may be lost, and the dream of the Asian Century will not be realized.

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Appendix

Table A1: East Asian (EA) Intraregional and External Trade, 1980-2011

	Intraregional Trade		External Trade						Export, million	Import, million
	EA, Export	EA, Import	EA-USA, Export	EA-EU, Export	EA-USA, Import	EA-EU, Import	EA-Non USA and EU, Export	EA-Non USA and EU, Import	Export of EA	Import from EA
1980	34.56	32.88	22.16	16.60	17.11	10.44	26.68	39.57	280958.42	303066.04
1981	33.82	33.93	23.11	14.53	16.89	10.51	28.54	38.67	315309.49	322571.07
1982	34.45	34.02	23.65	14.07	17.63	10.49	27.83	37.86	301243.07	307366.89
1983	34.01	35.48	27.27	14.15	17.79	11.36	24.56	35.37	317643.56	308588.44
1984	33.82	37.54	31.36	12.88	17.87	11.46	21.95	33.13	366978.86	332238.74
1985	34.20	38.13	32.72	12.85	17.02	12.24	20.23	32.61	373857.20	335537.15
1986	31.56	40.24	34.23	15.63	17.76	14.88	18.58	27.13	427673.63	341011.85
1987	34.00	42.60	32.31	17.07	16.90	14.87	16.61	25.63	513736.08	416197.42
1988	36.95	42.64	29.50	17.73	18.17	14.73	15.82	24.46	614898.11	533050.52
1989	38.38	42.52	28.98	17.22	18.40	14.69	15.42	24.39	665998.07	601271.11
1990	39.94	42.22	26.13	18.33	17.58	15.44	15.60	24.76	727797.05	686251.11
1991	42.25	46.32	24.12	18.40	17.30	14.26	15.23	22.12	815622.85	747679.76
1992	43.13	47.99	23.90	17.61	16.69	14.13	15.36	21.19	907641.80	814342.15
1993	44.53	48.73	24.75	16.17	16.41	14.19	14.54	20.67	992450.76	896306.25
1994	46.92	49.58	24.38	15.20	16.24	14.41	13.50	19.77	1147553.77	1043703.71
1995	48.68	49.07	22.33	15.40	16.22	14.50	13.58	20.21	1361674.84	1294164.52
1996	49.68	48.40	21.81	15.13	16.39	14.35	13.38	20.85	1369896.50	1349050.048
1997	48.50	49.18	22.09	15.46	16.21	13.87	13.95	20.74	1446521.54	1358091.077
1998	43.25	50.90	24.45	17.83	16.73	13.69	14.47	18.68	1352009.40	1119353.946
1999	44.92	52.31	24.83	17.40	15.75	12.95	12.85	18.98	1445670.95	1228726.098
2000	47.72	52.67	23.96	16.23	14.17	11.66	12.09	21.50	1717078.28	1532016.309
2001	48.09	50.98	23.18	16.21	13.70	12.63	12.51	22.69	1559726.44	1425029.561
2002	49.74	52.71	22.51	15.36	12.54	12.21	12.39	22.54	1688614.30	1512258.563
2003	51.59	53.48	20.16	15.85	11.29	12.00	12.41	23.24	2003865.36	1799687.986
2004	52.26	53.28	19.00	15.97	10.35	11.60	12.76	24.77	2491051.62	2274680.53
2005	51.93	52.08	18.54	15.85	9.59	10.76	13.68	27.57	2869721.00	2633101.6
2006	51.21	51.02	18.05	15.92	9.26	10.41	14.82	29.31	3356123.60	3051420
2007	50.57	50.22	16.33	16.16	9.01	10.68	16.94	30.09	3895663.40	3501934.1
2008	50.02	47.89	14.67	15.93	8.34	10.18	19.38	33.59	4398944.20	4166825.2
2009	51.48	48.97	14.29	15.04	8.54	11.13	19.19	31.36	3639283.90	3376074.4
2010	52.46	49.26	13.85	14.42	8.10	10.15	19.28	32.49	4738268.80	4483413.2
2011	52.62	47.74	13.21	13.83	7.40	10.14	20.35	34.71	5568770.00	5523052.6

Source: IMF, DOT database, May of 2012.

CHAPTER 3

Asia's Environmental Problems: Common Features, and Possible Solutions

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Asia's developing economies are faced with serious environmental problems that threaten to undermine future growth, food security, and regional stability. This chapter considers four major environmental challenges that policymakers across developing Asia must address in the coming decade: water management, air pollution, deforestation and land degradation, and climate change. These challenges, each unique in their own way, all display the features of "wicked problems". First developed in the context of urban planning, and now applied much more broadly, wicked problems are dynamic, complex, encompass many issues and stakeholders, and evade straightforward, lasting solutions. Detailed case studies are presented in this chapter to demonstrate the intricacy and importance of Asia's environmental challenges. The fundamental implication of this finding is that there will be no easy or universal solutions to Asia's environmental problems. This is a warning against over-optimism and blueprint or formulaic solutions. It is not, however, a counsel for despair. We suggest seven broad principles that may be useful across the board. These are: a focus on co-benefits; an emphasis on stakeholder participation; a commitment to scientific research; an emphasis on long-term planning; pricing reform; tackling corruption, in addition to generally bolstering institutional capacity with regard to environmental regulation; and a strengthening of regional approaches and international support.

Keywords: Asia, environment, policy, wicked problem, air pollution, water, deforestation, climate change.
JEL Classification: O44, Q58, Q56, O10, O53, Q28, Q53.

1. Introduction

Towards the end of the 20th century the economic discipline began to seriously acknowledge the central importance of environmental sustainability to the process of economic development (see Arrow, *et al*. 1995, Dasgupta 1996). It is now widely accepted that long-term economic growth requires not just accumulation of technology, physical capital, and labour, but also the preservation of the natural capital base (Brock and Taylor 2005, OECD 2011).

Whereas other factors of production may be replaced and are often substitutable, the ecosystem services provided by waterways, forests, and fertile land are an essential and largely finite resource. Once damaged, they may become unusable for long periods, and their repair is often an expensive and protracted process. As these natural systems are the primary source of economic inputs such as food and clean water, their degradation through pollution and over-use is an enduring brake on economic development. For this reason, academics and policymakers have become increasingly concerned with national accounting procedures that include measures of environmental capital (see Stiglitz, *et al*. 2009).

In 1987 the United Nations report on sustainable development foresaw the need for "a new era of economic growth, one that must be based on policies that sustain and expand the environmental resource base" (WCED, 1987). It has taken a long time for that message to sink in. As the Commission on Growth and Development (2008, p. 135)—chaired by Nobel Laureate Michael Spence and constituted predominantly of senior developing-country economic policymakers (including from China, India, and Indonesia)—put it:

It is only a slight exaggeration to say that most developing countries decide to grow first and worry about the environment later. This is a costly mistake… The poor suffer the most from many kinds of pollution… Early attention to environmental standards serves the interests of equity as well as growth.

There could be no more important message for the world's economic powerhouse, the Asian region[1]. The rising Asian economies are incredibly successful when judged by their rapid growth, but less so when environmental damage is accounted for.[2] They are now confronted by the prospect of a dwindling supply of environmental capital to support the growing demands of a more numerous, wealthier, and urbanized population. Clean and ample water, arable land, and unpolluted air are just some of the vital ecosystem services necessary to maintain Asia's emergence as the engine of the global economy. Yet recent economic expansion has largely been pursued at the expense of the environment, undermining delivery of these ecosystem services in the future. This unsustainable trajectory will, if allowed to continue, progressively hinder future development.

Environmental damage not only undermines the sustainability of growth, putting future welfare at risk, but also exacts a large welfare cost here and now. Low-income groups, particularly in rural areas, disproportionately subsist on environmental services. Poverty limits the ability of poor households to find alternatives to a contaminated water source or harmful cooking fuels. Where the capacity to earn income or receive education is affected, such as health problems related to pollution and food insecurity, environmental problems reinforce poverty. Consequently, environmental degradation is a fundamental development issue in Asia today, as well as to 2030 and beyond.

Recognizing these risks, policymakers throughout Asia are giving increasing weight to environmental concerns. The economic imperative for environmental protection is now a principal policy issue. China's 12th Five Year Plan (2011–2015) places "green growth" at the centre of the country's development path, with ambitious targets for renewable energy, carbon intensity, water and energy efficiency of production, emissions of major pollutants, among others (see NDRC 2011). The Indian government has similar goals, and views water security in particular as

[1]In the present study, we focus on the major developing economies in Asia, namely China, India, and the Association of Southeast Asian Nations (ASEAN).

[2]China's one-off attempt to calculate a "Green GDP" found that environmental pollution cost 3.05% of GDP in 2004, or around one-third of GDP growth in that year (GoC, 2006). Although such estimates are unavoidably speculative, it is indicative of the true magnitude of damage that this particular figure encompassed only direct economic losses (such as agricultural production and health) and not natural resource degradation or long-term ecological damage (see GoC, 2006).

fundamental to economic development (GoI, 2009, ADB, 2007), whilst ASEAN members formally recognize the necessity of environmentally sustainable growth (ASEAN, 2007). All through Asia, there is now talk of the need for "rebalancing," a wide-ranging agenda which includes giving greater attention to environmental problems.

However, progress will not be easy. Asia faces a range of diverse environmental problems and threats, which this paper's case studies illustrate. What they have in common is their complexity. We have argued elsewhere (Howes and Wyroll, 2012)[3] that it is useful to think of these complex environmental challenges as "wicked problems", a concept taken from the social planning literature, and now deployed more broadly. One characteristic of wicked problems is that there are no easy solutions. Certainly, one cannot expect any of these problems to lessen, let alone disappear, as Asia grows. To the contrary, without sustained policy effort, they will persist if not worsen. While in general an automatic relationship between environmental quality and income per capita does not exist (Stern, 2004, Carson, 2010), the sort of problems which Asia is facing will not, by and large, reduce with growth. Growth will help make more resources available to direct at these problems. However, without effective environmental management, growth will simply heighten the divergence across many facets of economic activity between private and social cost.

More broadly, however, it is not only growth that will not solve Asia's environmental problems. Their nature as wicked problems means that there *are* no straightforward solutions. The set of proposed solutions is dominated by ones which are politically impossible and/or untested. The message of this paper is that green growth and rebalancing will be needed, but will not be easy. This paper attempts to move the debate forward by proposing some general guidelines which go beyond the aspirations of green growth and rebalancing, and which might help us move towards a solution for Asia's complex environmental problems.

This is not the first survey of the environmental problems facing Asia. Coxhead (2003) analyzed the features of the relationship between economic growth and

[3] This paper draws on the analysis of Howes & Wyrwoll (2012), but without the detailed demonstration that Asia's environmental problems are indeed wicked ones. It extends the analysis to consider "green growth" and "rebalancing" as policy responses to these environmental problems.

environmental resources in different parts of the region. Zhang (2008) reviewed environmental degradation due to burgeoning energy demand across Asia, and recommended several policies to address the increasing prominence of this issue as economic expansion continues. Bawa, *et al*. (2010) discuss the competitive use of resources by India and China, the need for inter-state cooperation over environmental issues, and the impact of these major players on the broader region. The present analysis differs from these studies by drawing out the common features of Asia's environmental problems in terms of their complexity, and formulating a range of policy responses across the major environmental issues. This study also takes a combined thematic and case-study approach which enables us both to look across the breadth of environmental problems which Asia faces and to consider some key problems in depth.

The following section demonstrates the importance of Asia's natural resource base to economic development, through an analysis of four major environmental challenges to 2030. Section 3 presents seven in-depth case studies. Section 4 explores the implications and presents some general strategies for environmental reform, and links the issue of environmental management to development policy. Section 5 concludes. Note that throughout the paper Asia is defined as India, China and the ASEAN countries.

2. Major Environmental Issues for Asia to 2030

The major environmental problems that confront Asia are grouped in the present study under four themes: water management, deforestation and land degradation, air pollution, and climate change. Marine ecosystems and resources, biodiversity, waste management, and other issues are also important, but in our judgement the four areas above present the most pressing challenges to Asia's development over the next two decades.

For the purpose of analyzing these four broad themes, we present seven related case studies.

- The challenge of water management is illustrated by dam construction on the Mekong River and groundwater extraction in India.
- The challenge of deforestation and land degradation is illustrated by case studies on deforestation in Indonesia and afforestation programs in China.
- The challenge of air pollution is illustrated by regulatory reforms of air pollutants in Delhi, indoor air pollution and improved cookstoves, and the Indonesian deforestation case.
- Climate change crosses all of the above challenges and associated cases, and is also the focus of a section covering climate change mitigation in China.

Before turning to the detailed case studies, the four themes are briefly introduced in the following subsections.

2.1. Water Management

Fresh water is essential to agricultural and industrial production. It is a basic requirement for human life, as well as for other organisms and biological processes. Water resources generally have multiple uses and users, and inadequate management of competitive use has frequently facilitated their over-exploitation and degradation. The depletion and contamination of these resources generates large economic costs, not just by increasing the cost of obtaining a direct input to production, but also through damaging impacts to environmental systems and human health. Consequently, water management is viewed not only as an environmental issue, but as a major challenge to economic development, particularly in Asia's larger economies (see ADB, 2007, NDRC, 2011, GoI, 2009).

Excessive groundwater extraction, pollution from human waste and industry, poor infrastructure, and dam-building are among the factors contributing to degradation of the region's fresh water sources. Major improvements have occurred with regards to water access and sanitation in Asia over the last two decades, but as large numbers still have inadequate facilities (see Table 1 below). Supply- side issues such as these are set to be compounded by altered rainfall patterns due to climate change, particularly with respect to weakening of the Indian and East Asian monsoons (IPCC, 2007). Within the next three decades, the peaking of glacial melt rates during the dry season is likely to transform the major rivers originating in the

Himalayas—such as the Brahmaputra, Ganges, and Yangtze—into seasonal rivers (Asia Society, 2009, Immerzeel, *et al*. 2010).

On the demand side, United Nations projections to 2030 estimate that the total population of ASEAN, China, and India—currently comprising 46% of the world's total population—will rise by another 462 million people (UN, 2010). The attendant rises in agricultural, industrial, and urban usage will place even greater strain on dwindling supplies throughout these economies. The scale of this challenge is emphasized by the estimate that by 2030, under current management policies, water demand will exceed supply in China and India by 25% and 50% respectively (WRG, 2009).

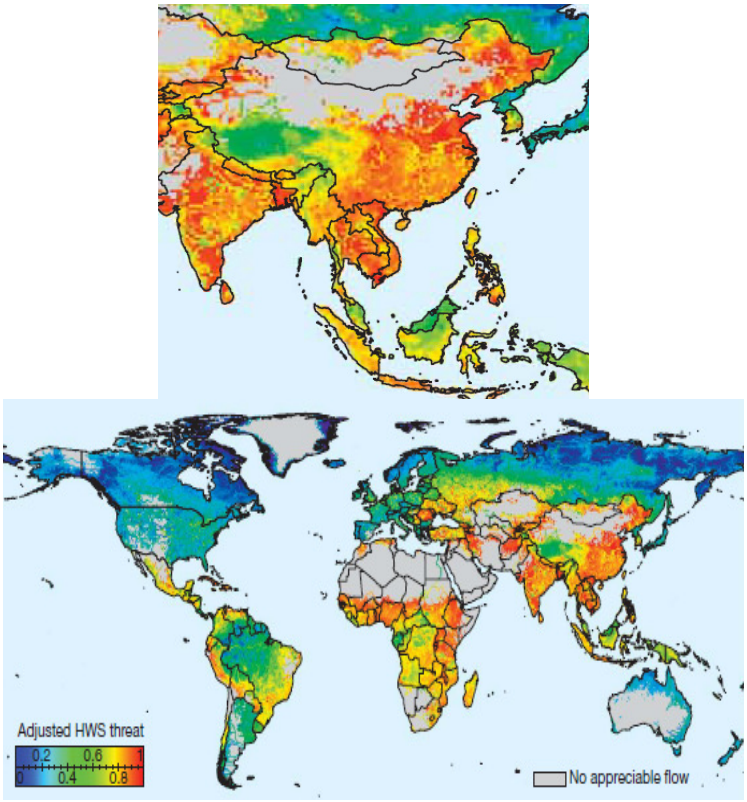
Although access to a secure and clean supply of freshwater resources will be a common challenge across Asia to 2030, the nature of this issue will vary in different settings. Increased demand may play a large role in some locations, for instance growing mega-cities like Shanghai. In others, supply-side concerns, such as lower dry-season rainfall or polluted water sources, may dominate. In most settings, some combination of both demand and supply factors will be present. Consequently, the term "water management" used here encompasses a broad mix of water-related issues which also includes: efficiency of water usage; degradation of water resources through pollution or over-use; allocation between competing uses such as agriculture, drinking-water, natural ecosystems, and industry; flood control; coordination between users at a local, national, and international level; treatment of waste water; and water storage, among many others.

The welfare implications of degraded water resources in Asia are substantial. As approximately 70% of water is currently used in agriculture (ADB, 2007), water shortages undercut food security and the incomes of rural farmers. Illness associated with contaminated water reduces labor productivity and causes other health related costs. If supplies continue to deteriorate as demand rises, the costs of obtaining usable water, such as drilling for groundwater, will rise accordingly. Without improved management of pollution, expansion of industrial water usage, particularly in China (see WRG, 2009), may diminish availability for human consumption and other uses. Furthermore, conflict over access to this increasingly scarce resource could arise between and within states (Asia Society, 2009); plans for several China

dams on the Tsangpo-Brahmaputra River upstream of the Indian border are perceived as a key threat to the stability of bilateral relations between the two countries (Morton, 2011).

Figure 1 below is a map of human water insecurity which demonstrates the extent of Asia's current water scarcity problems from a global perspective. Table 1, underneath the map, presents statistics highlighting the importance and scale of water management issues in Asia.

Figure 1: Water Security in Asia and the World



Notes: Human water security (HWS) threat index (on a scale of 0 to 1) adjusted for the level of existing technology investment in water infrastructure. This adjustment is made to account for the fact that water security is not simply a function of rainfall patterns (or 'physical scarcity'), but also the level and quality of water infrastructure, such as transmission facilities and storage dams. For further details see Vorosmarty, *et al*. (2010).

Source: Vorosmarty, *et al*. (2010).

Table 1: Selected Water Management Statistics for Asia

Issue/Variable	Location	Description/Value	Source
Water resources per capita[1] (m^3/inhabitant/year)	China	2,112	FAO (2011b)
	Beijing, China	230	World Bank (2009)
	India	1,618	FAO (2011b)
	ASEAN	11,117	FAO (2011b)
	Global Median	4,042	FAO (2011b)
Water pollution	China	28% of rivers and 48% of lakes unfit for any use (including industrial).	World Bank (2009)
	China	~ 300 million rural inhabitants rely on unsafe drinking water	World Bank (2009)
	India	Over 200 districts in 19 states have severely contaminated groundwater	GoI (2009)
Population gaining access to improved water source[2] (1990–2008)	China	425 million	WHO/UNICEF (2008)
	India	419 million	
	ASEAN	173.5 million	
Population without access to improved water source[2] (2008)	China	147 million	WHO/UNICEF (2008)
	India	142 million	
	ASEAN	80.2 million	
Deaths/year of children < 5 years attributable to water source, poor sanitation.	China	49,200	WHO (2011)[3]
	India	403,500	
	ASEAN	74,600.	
Excess water demand by 2030 (as % of demand)	China	25% (199 billion m^3) (2005: - 35%)[4]	WRG (2009)
	India	50% (754 billion m^3) (2005: 18%)	WRG (2009)

Notes: [1] The Food and Agriculture Organization (FAO) standard for water scarcity is 1,000m^3 (FAO 2011b). National or broad-scale aggregates can conceal local or seasonal shortages. For example, ASEAN overall has a relatively high level of per capita water resources, but some cities, such as Manila, or particular areas commonly experience shortages. [2] "Improved water source" refers to: household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collection (WHO/UNICEF 2008). Although the implication is access to a safer water source, this measure does not involve a direct assessment of water quality. [3] Refers to data from 2004. [4] -35% indicates that in 2005 China as a whole was estimated to have an excess supply of water equivalent to 35% of total water demand at that time.

2.2. Deforestation and Land Degradation

Widespread deforestation and land degradation are highly visible examples of the unsustainable use of natural resources in Asia. These issues are intrinsically linked. Unsustainable tree removal practices, such as clear-felling, lead to erosion and soil salinity, as well as disturbance of the groundwater table. In dry-lands, deforestation facilitates the transformation of fertile areas into barren land, a process known as desertification[4]. Once land is sufficiently degraded, it may be unable to support forests again, or even the agricultural use that often drives deforestation in the first place.

[4] Other drivers of desertification include climate change, natural weather variability, and unsustainable farming practices such as intensive cropping and excessive irrigation in lands with poor drainage.

Deforestation and land degradation throughout Asia are caused by various factors, including: demand for timber products and palm oil, intensive farming, and urban sprawl. Poor regulation and, in some cases, corruption have commonly allowed unsustainable practices. However, it has become increasingly apparent throughout the region that the enduring economic costs from unsustainable land-use ultimately overwhelm the more immediate gains. Once sufficiently degraded, woodland ecosystems require time and large expense to recover, effectively eliminating future sources of wood and causing other problems that curb the productivity of the natural resource base. Over-cultivation of agricultural land is increasingly leading to declining soil productivity and, consequently, lower output and, in some areas, food insecurity.

At a regional level, the situation with regards to deforestation is clearly improving. This is due, in large part, to concerted afforestation and forest protection efforts in China, and also, to a lesser extent, India and Viet Nam.[5] China now has the largest area of planted forest in the world and, if anything, the government is elevating its level of ambition in this area. Yet these promising trends are at odds with those in Indonesia, Malaysia, Myanmar, and Cambodia, where deforestation continues on a massive scale (see Table 2). In fact, it would seem that improved regulations elsewhere in Asia, particularly China, are contributing to continuing deforestation in the latter ASEAN countries (Demurger, *et al*. 2009). For example, the expansion of palm oil plantations is a major driver of deforestation in Indonesia and Malaysia (Fitzherbert, *et al*. 2008), and these two countries alone produce over 85% of global palm oil exports. China and India account for 45% of global imports (FAO, 2011b). Limits to expansion of agricultural land in the latter are, to some degree, "exporting" former deforestation problems. Similar trends in the Asian timber trade have also emerged from recent analysis (see Meyfroidt, *et al.* 2010).

Land degradation is a major economic issue primarily because, like sufficient water, productive land is a necessary determinant of food security. Access to food not only supports labour participation, well-being and, hence, development and economic growth, but also other factors such as political stability. At present, the

[5]See Table 2 for recent estimates of deforestation for particular countries.

quality and quantity of arable land across Asia is continuing to deteriorate, affecting large swathes of the population (see Bai, *et al*. 2008).

In India, the government estimates that nearly half of the country's land is degraded (GoI, 2009). Poor management practices, particularly in agriculture, have caused soil erosion, rising salinity and contamination by pesticides, amongst other issues (see GoI, 2009, p. 10–15). In China, despite extensive land restoration projects, the area of arable land continues to fall as erosion and pollution spread (Liu and Raven, 2010). Of particular concern is the advance of desertification in the north, which, although driven principally by climate change and geomorphological processes, has been directly exacerbated by human activities and threatens the livelihood of over 200 million people (Wang, *et al*. 2008b).

Throughout South East Asia, draining of swampy peatland, usually intended for agricultural purposes, has caused land to subside, become highly acidic, and, hence, be unfit for any use (ASEAN, 2011). Beyond peatlands, an array of problems, including intensive farming, has contributed to high rates of decline in agricultural soil quality, particularly in Viet Nam and Thailand (Coxhead, 2003). The Food and Agriculture Organization estimates that in two-thirds of ASEAN nations (excluding Singapore) 40% of land is suffering either severe or very severe degradation due to human activities (FAO, 2011b).

Table 2: Selected Deforestation and Land Degradation Statistics for Asia

Issue/Variable	Location	Description/Value	Source
Annual rate of change in forest area (2000–2010)	China India Indonesia Malaysia Cambodia Myanmar	1.6% (2,986,000 ha) 0.5% (304,000 ha) -0.5% (-498,000 ha) -0.5% (-114,000 ha) -1.3% (-145,000 ha) -0.9% (-310,000 ha)	FAO (2011a)
Percentage of national territory subject to land degradation (1981–2003)	China India Thailand Indonesia	22.86% 18.02% 60.16% 53.61%	Bai et al. (2008)
Percentage decline in area of arable land (1990–2008)	China India Thailand	14% (~15 million ha) 2.9% (~4.6 million ha) 15% (~2.2 million ha)	FAO (2011b)

2.3.Air Pollution

Access to clean air is a principal determinant of human health, as well as the overall condition of other organisms and environmental processes. Outdoor air pollution is a common by-product of industrial production, motorized transport, and,

in fact, the central processes underpinning global economic growth over the last century or so. On the other hand, indoor air pollution is often associated with a lack of development. Absence of affordable alternatives encourages the burning of solid fuels such as dung and timber for energy, despite their harmful effects. Consequently, air pollution is a primary cause of illness and death in both the growing cities and the poorer rural areas of Asia. The widespread nature of this problem undermines the productivity and income of the labor force, exacting a heavy economic toll. For example, a recent study estimates that in 2005 the annual welfare loss associated with air pollution in China amounted to US$ 151 billion (2010 dollars)[6] (Matus, *et al*. 2011).

Air pollution commonly exceeds safe levels across the cities of developing Asia (see Figure 2 and Table 3). Emissions of noxious gas and particulate matter from motor vehicles, industry, and other causes—plus the rising urban population exposed to them—are increasing the regional burden of respiratory illnesses and cancer (HEI, 2010). On a global basis, it is estimated that 65% of urban air pollution mortality occurs in Asia (Cohen, *et al*. 2005). At an aggregate level there have been significant improvements in recent times (CAI, 2010), but without renewed mitigation efforts, such as tighter emissions standards and stronger monitoring programs, the situation across the region could deteriorate substantially. And this may already be occurring in some major cities. The United States Embassy in Beijing reports hourly air quality readings for PM 2.5 (or very fine particulate matter) and ozone; readings indicating 'hazardous' or 'very unhealthy' air quality (the most dangerous ratings) have become increasingly frequent during winter months (see Beijing Air, 2012).

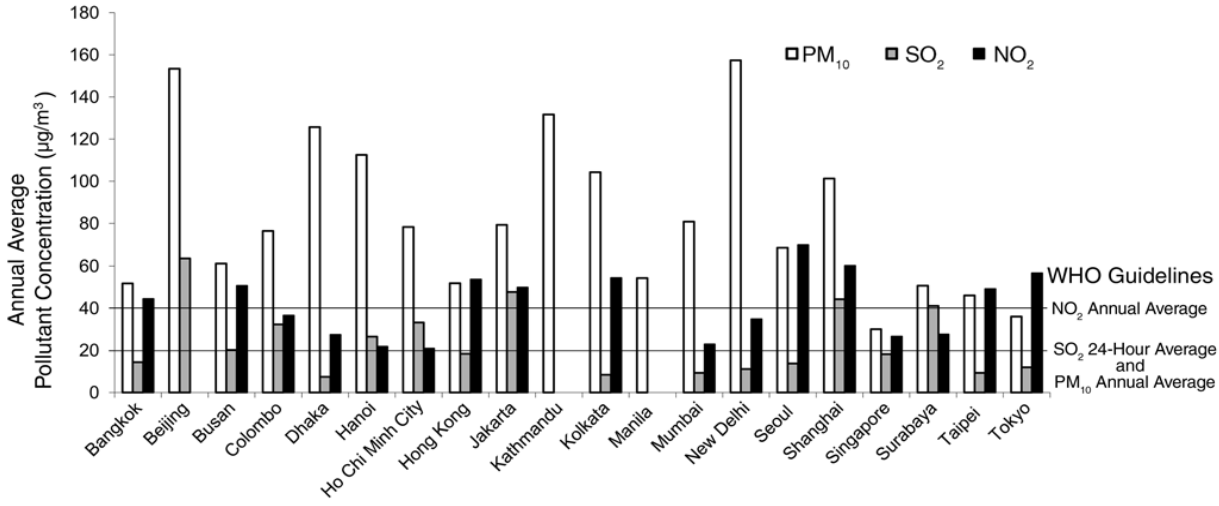
The urban population of China, India, and ASEAN is set to increase by 50% between 2010 and 2030 (UN, 2009). This rapid urbanization and a growing middle class are causing an explosion in motor vehicle ownership in Asia, which, on recent trends, is projected to create a rise in vehicles on China's roads of 130 to 413 million between 2008 and 2035, and a corresponding increase of 64 to 372 million in India (ADB/DFID, 2006). Higher incomes will also raise demand for energy intensive consumer goods, such as air conditioners, and, where industrial and energy

[6]Present authors' conversion of reported estimate of US$ 111.5 billion (1997 dollars).

production occurs in proximity to cities, potential pollution from these sources increases accordingly.

Urban air pollution in large cities is not simply a localized or a health issue. Air transport of urban pollutants causes problems further afield. For example, acid rain originating from sulfur dioxide emissions in cities degrades farm land in regional areas, as well as contaminating groundwater. Air pollution problems in one city may be compounded by activities in others. Major incidents of air pollution in Hong Kong, China over the last two decades have coincided with northerly winds transporting pollutants from the major industrial areas on the mainland (Huang *et al*., 2009). Other activities or events outside cities, such as forest fires, can add to urban problems. At a regional level, air pollution from cities has mixed with that from other sources (including indoor air pollution) to form atmospheric brown clouds (ABCs) over Asia. These combinations of aerosols and partially combusted (or black) carbon have been shown to affect regional and global climate, crop production, as well as health (see UNEP, 2008).

Figure 2: Air Pollutant Concentrations in Major Asian Cities (2000–2004)



Notes: PM_{10} refers to particulate matter <10 µm in diameter, SO_2 is sulfur dioxide, NO_2 is nitrogen dioxide. WHO Guidelines for annual concentration averages is 20 µg/m^3 for PM_{10} and SO_2, and 40 µg/m^3 for NO_2. Data is a five year average from 2000-2004.

Source: HEI (2010, Figure 24).

Whilst ABCs are a shared outcome of urban and indoor air pollution, and both are a significant regional health risk, the latter is distinct as a symptom of under-

development. Poverty causes over 2 billion people in developing Asia to use solid fuels (including biomass and coal) for cooking and heating (IEA, 2010). Particulate matter, carbon monoxide, and other harmful airborne substances damage the lungs of householders, causing a variety of illnesses including cancer. Exposure to particulate matter has been estimated to be 8 to over 100 times daily World Health Organization (WHO) safe levels (Rehfuess, *et al*. 2011). As a consequence of such exposure levels, the WHO estimates that over 1 million deaths in China, India, and ASEAN are directly attributable to indoor air pollution each year (WHO, 2009).

The disproportionate impact upon women and children of this problem impedes the workforce participation of the former group, and limits the prospects for the latter. Although this problem has been long recognized, widespread change in Asia is yet to take place (IEA, 2010). Indoor air pollution is a major development issue because it not only affects the welfare of poor households in the present; it affects their prospects for the future. Whilst promising developments are on the horizon, particularly as the co-benefits of black carbon mitigation and improved cookstoves gain prominence (see UNEP/WMO, 2011), indoor air pollution will continue to afflict a large proportion of poor households in Asia over the next two decades (IEA, 2010), despite regional economic growth.

Table 3: Selected Air Pollution Statistics for Asia

Issue/Variable	Location	Description/Value	Source
Average PM_{10} concentration	230 Asian cities	89.5 μg/m^3 (WHO standard is 20 μg/m^3)	CAI (2010)
Percentage of Asian cities exceeding WHO SO_2 concentration standards	230 Asian cities	24%	CAI (2010)
Acid rain	China	258 of 488 cities experienced acid rain in 2009. In 53 of these cities >75% rainfall was acidic.	MEP (2010)
Proportion of population using solid fuels (2007)	China India Indonesia Laos, Myanmar, Cambodia Thailand, Viet Nam	71% (rural), 48% (total) 88% (rural), 59% (total) 79% (rural), 58% (total) >90% (total) >45% (rural)	WHO (2011)

Notes: The 230 Asian cities referred to in rows 1 and 2 are from China; India; Indonesia; Thailand; Malaysia; Philippines; the Republic of Korea; and Taipei,China. See CAI (2010) for further details. PM_{10} refers to particulate matter <10 μm in diameter.

2.4. Climate Change

Asia is highly vulnerable to the effects of climate change. With a large population in low-lying and coastal areas, widespread water insecurity, and around two thirds of the world's poorest people, the region is likely to suffer extensive damages in the future (see IPCC, 2007). Whilst the full force of development impacts will not be realized for many decades, climate change adaptation is already a contemporary issue. Rising maximum temperatures and changing rainfall patterns are affecting agriculture and food security today, and the effect of these changes will escalate to 2030 (Lobell, *et al*. 2008). For example, it is estimated that yields of important crops will decline in parts of Asia by 2.5% to 10% by the 2020s (IPCC 2007). Greater intensity of extreme weather events, incidence of flooding and tropical disease, and decline of marine ecosystems are also concerns for the proximate future (see ADB, 2009, IPCC, 2007).

Climate change will worsen the ill effects of Asia's current environmental problems, such as water insecurity, but these problems also contribute to climate change. Deforestation and black carbon emissions in Asia are important drivers of global warming, both in terms of contribution and also because their mitigation could be a low-cost option with short-term benefits. Energy demand in Asia is expected to explode with ongoing economic expansion and, accordingly, so will coal use and greenhouse gas emissions (see Table 4). Asia is set to be the dominant source of expansion in global emissions. Recent projections of global emissions estimate that, under a 'business as usual' scenario, China's share of global fossil fuel emissions will be 34% by 2030, and the figure for developing Asia as a whole will be 51.9% (Garnaut, *et al.* 2008). Unsurprisingly, International Energy Agency (IEA) projections indicate that China will need to be a large source of the mitigation necessary to restrict global warming to 2°C in a cost-efficient manner (see Table 4).

Whilst the scale of climate change damages to 2030 alone may not warrant the substantial mitigation investment required in Asia over the next two decades, it will be in the longer run. At a regional level, Asia is both highly vulnerable to climate change and will play a decisive role in its limitation. Therefore, extensive climate change mitigation activities are a matter of self interest. It is clear today that the process of lifting the standard of living throughout Asia cannot follow the carbon-

intensive trajectory laid out by today's high-income economies: the limits of the climate system render such repetition infeasible. Switching to a "green growth" development pathway will reduce the impact of potentially major stumbling blocks arising from climate change, such as food and water insecurity, environmental refugees and conflict, among others. Not only does avoidance of major climate damages provide a firmer base for growth beyond 2030, but there are significant economic opportunities in the short-term from leading the way in, for example, renewable energy generation, and also increasing energy security. Indeed, China and, to a lesser extent, India and ASEAN countries are moving towards exploiting these opportunities.

Table 4: Selected Climate Change Statistics for Asia

Issue/Variable	Location	Description/Value	Source
Crops estimated to decline in yield by 2030	South Asia SE Asia	wheat[1], millet[2], groundnut[2], rapeseed[2] rice[1], soybean[2]	Lobell et al. (2008)
Projected energy demand increase to 2030 (above 2008 levels)*	China India Non-OECD Asia[3]	67% 94% 70%	IEA (2010)
Proportion of global emissions reductions to reach 450ppm target from IEA modeling	China India	19% (2020), 36% (2035) 7% (2020), 8% (2035)	IEA (2010)
Projected increase in coal-based energy production to 2030 (above 2008 levels)*	China India Non-OECD Asia[3]	41% 83% 52%	IEA (2010)

Notes: [1] High statistical probability of decline (>95% confidence) and highly important crop for food security. [2] Potentially large decline (between 5 and 10%), but with low or moderate statistical probability. Millet, groundnut, and rapeseed considered highly important crops and soybean classed as important. Further details see Lobell et al. (2008). [3] Indicates all Asian countries not belonging to the OECD (i.e. all expect Japan, Australia, South Korea. This estimate includes China and India. *See IEA (2010) for assumptions underlying projections.

3. Case Studies of Environmental Problems in Asia

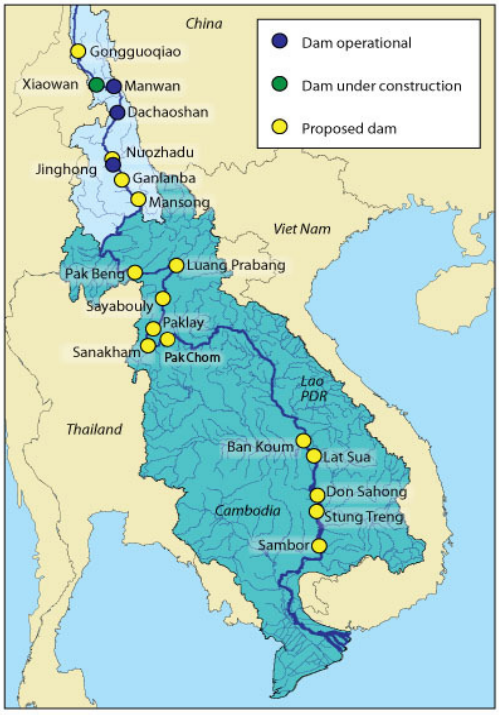
This section presents seven case studies of environmental issues affecting the economies of Asia.

3.1. Regional Management of Hydropower Development on the Mekong River

The Mekong is one of the world's few major rivers whose hydropower potential remains largely unexploited. This relative absence of dams is set to change at a rapid

pace. Eleven mainstream dams are planned in the Lower Mekong Basin (LMB), an area encompassing Laos, Thailand, Cambodia, and Viet Nam (Figure 3).[7] The environmental and social impacts of the proposed dams will endure for decades, yet, due to the complex processes involved, any prior assessment of costs and benefits is riddled with great uncertainty.[8] Outcomes will be broadly and unevenly distributed across stakeholders, time, and countries. In recognition of the scale of potential transnational impacts, a regional forum, the Mekong River Commission (MRC), was created during the 1990s to facilitate collective and mutually beneficial management. However, meeting this fundamental objective, whether through the MRC or otherwise, is likely to be a major challenge during both planning and operation of these projects, should they proceed.

Figure 3: Planned Mekong River Dams - Lower Mekong Basin and Upper Mekong Basin



Source: ICEM (2010).

[7] Away from the mainstream, a further 56 tributary dams are in various stages of design or construction through the LMB, mainly in Laos (MRC, 2011b). Although tributary dams can have a major impact on the mainstream river, they are outside the auspices of the MRC.

[8] A recent study by Costanza, *et al.* (2011) demonstrates that cost-benefit analysis of Mekong mainstream dams can produce highly variable results across a credible range of values for economic and environmental parameters.

Dam construction on the Mekong addresses two important economic issues in the LMB: the need for an abundant and cheap supply of electricity to meet the burgeoning demands of the Thailand and Viet Nam economies (Middleton, *et al*. 2009); and, enduring poverty in Laos and Cambodia. Proponents claim that the dams represent a major opportunity for the host countries: the 9 mainstream projects in Laos and 2 in Cambodia are expected to increase annual state revenues by 18% and 4% above 2009 levels respectively (Grumbine and Xu 2011). In fact, the national government of Laos aims to become the "battery of ASEAN" and views hydropower as the key driver of poverty alleviation in the country (see Powering Progress, 2011). In the context of climate change, hydropower is often presented as a clean alternative to fossil-fuel intensive energy generation, and this attribute is also commonly invoked by the Laos government.[9]

On the other hand, dams also threaten major environmental degradation that would have a disproportionate impact upon low-income rural communities (ICEM 2010). Whilst benefits will be distributed between countries in the Lower Mekong Basin (LMB), the transboundary course of the river ensures that the costs will be as well. Among the most prominent of these is the barrier created for upstream migration of species belonging to what is presently the world's largest inland fishery (Sarkkula, *et al*. 2009). The MRC commissioned a strategic environmental assessment (SEA) of all mainstream proposals that estimated an annual loss of 340,000 tonnes of fish by 2030, equating to US$ 476 million per year (ICEM, 2010, p. 59). As fish account for 47–80% of animal protein consumed within the LMB (Hortle, 2007), and are a major source of rural income (Dugan, *et al*. 2010), this factor alone could have a major impact on food security and poverty (ICEM, 2010). In addition, substantial blockage of sediment transfer would cause significant downstream erosion and undermine the productivity of riverside and flood plain agriculture (Kummu, *et al*. 2010). Although prior assessment of the damages caused by LMB mainstream dams are unavoidably estimates, disastrous experiences in China (Economy, 2010) and on Mekong tributaries (see Amornsakchai, *et al*. 2000) indicate their potential scale.

[9]Mitigation of carbon emissions through hydropower expansion is however debatable. Dam projects may involve road construction that provides access to areas previously inaccessible for logging, and dam reservoirs are significant sources of methane.

The major recommendation of the MRC commissioned SEA was a 10-year moratorium on any construction decisions, pending further scientific study into uncertainty over large environmental and social costs (ICEM, 2010). This and other MRC technical reports (see MRC, 2011c), as well as associated planning processes (see MRC 2011a, 2011d), have significantly contributed to dissemination of information on the mainstream proposals. However, the future effectiveness of the MRC as a forum for LMB countries to collectively pursue hydropower development sustainably is an open question (Grumbine and Xu, 2011). The MRC has frequently been marginalized in states' decision making (Dore and Lazarus 2009, Campbell, 2009). Despite the recommended delay, the Lao government has consistently demonstrated a determination to proceed in a much shorter timeframe (Hirsch, 2010). Although other member countries—particularly Viet Nam—have recently used the MRC framework to voice objections to progress in the first mainstream project at Xayaburi (near Luang Prabang in Laos) (see MRC, 2011d), and subsequently secured a temporary suspension on the sidelines of the ASEAN summit, the MRC remains in principal a consultative body which affords no veto power for members to prevent construction of a mainstream dam in another country. This lack of oversight was demonstrated during the MRC consultation process for the Xayaburi dam, when construction activities were already taking place (Bangkok Post, 2011), and also during the supposed suspension, when the Laos Ministry of Energy notified the dam developer that it was authorized to proceed (Reuters, 2011).

It is important to note that regional management is not simply a case of deciding whether the mainstream projects are built or not, but also minimizing their negative impacts should they proceed. Planning tools such as those pursued by the MRC inform the need for dam design measures that incorporate environmental river flows. The latter include: variable water outlet capacity, sediment bypasses and flushing outlets, re-regulation reservoirs, and fish passages (Krchnak, *et al*. 2009). However, such measures can entail significant additional costs to dam developers across all phases of the project, including operation. What's more, their utility will always be site-specific; for example, there is no scientific evidence to suggest that fish ladders will work for most species in the Mekong mainstream (Dugan, *et al*. 2010). Minimizing environmental and social damage entails significant financial investment

and a lengthy planning period to allow sufficient scientific study, yet dam developers are unlikely to meet such requirements if they impinge on short-term profits.

Outside of the MRC, other means for managing environmental risks exist, but appear limited. Where domestic environmental regulations exist on paper in Laos and Cambodia, the institutional capacity or willingness to enforce them is often deficient (Foran, et al. 2010). Similarly, the prospects for regulation through corporate social responsibility standards (such as the World Commission on Dams principles (WCD, 2000)) are constrained by the primacy of profit to private-sector financiers and developers from Thailand, Viet Nam, China, and Malaysia (Foran, *et al*. 2010; Middleton, *et al*. 2009). These sources of new finance have supplanted the prospect of direct involvement, and hence significant oversight, by multilateral institutions such as the World Bank in the mainstream projects.

The task facing LMB governments within the MRC framework is complicated by the existence of competing domestic interests. Aside from the importance of electricity imports to growth of the Thai and Viet Nam economies, dam developers and financiers from these countries stand to make large profits from mainstream dams (Foran, *et al*. 2010). However, substantial community opposition exists both in Thailand, where NGOs have effectively harnessed anti-dam sentiment from previous domestic projects, and in Viet Nam, where farming productivity and food security is likely to suffer in the Mekong Delta. From the perspective of the Cambodia and Laos governments, elite groups stand to gain personally if the dams proceed, yet the broader development impacts for many of their citizens from, for example, resettlement and lower fish catches could potentially be overwhelmingly negative, especially in the short-term. Whilst the Cambodian government seeks to mitigate the detrimental impacts from dams upstream in Laos, it does not oppose mainstream dam construction more generally due to plans within its own territory (see MRC, 2011d).

Although China has only a loose affiliation with the MRC, it is playing a major role in the mainstream projects. Dams on the upper reaches in China provide not only a moral case for Laos (i.e., dams are already having impacts in the LMB), but have changed the river's hydrology so that the run-of-river projects planned in Laos are

commercially viable (Hirsch, 2011)[10]. Aside from the four mainstream projects led by China interests (ICEM, 2010), it is estimated that up to 40% of all hydropower development in the LMB (including tributary dams) will be undertaken by China companies in the coming decades (Hirsch, 2011). More broadly, China has been heavily expanding economic investment in both Cambodia and Laos, in projects such as the forthcoming high-speed rail link between China's Yunnan Province and Vientiane.

Regional governance through a purpose built institution like the MRC is essential because mainstream dams are such a multi-faceted issue with wide ranging impacts (Grumbine and Xu, 2011, Campbell, 2009). In addition to the issues discussed above, future transboundary damages have the potential to undermine long-term cooperation and security in the region (Cronin, 2009). Even if the current plans do not proceed in the near future, the prospective financial gains for some stakeholders ensure that demand for dams will always be present. If they do proceed, strong mechanisms will have to be developed within the MRC framework to ensure that they are operated to the benefit of the region's inhabitants. The perpetual yet dynamic nature of the issue, as well as the great risks involved, will require adaptive and strong regional governance in the years ahead. A crucial first step to achieving such governance will be large investments in scientific studies to inform the planning process and, in doing so, to achieve an understanding of the full range of potential impacts, some of which could be disastrous for regional development.

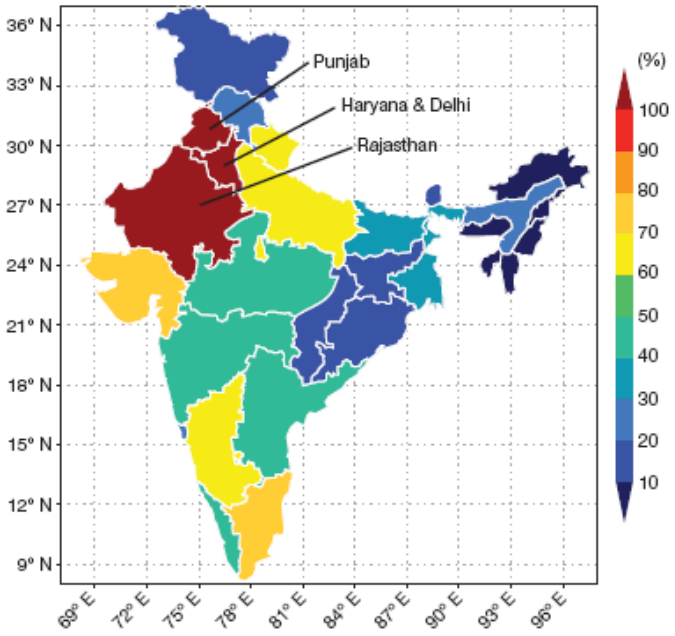
3.2. Groundwater Depletion in India

The impending water crisis in India is widely acknowledged as one of the major environmental and economic issues facing the country (see ADB, 2007, Briscoe and Malik 2005, GoI 2009). A principal component of this problem is the unsustainable depletion of the nation's groundwater aquifers (Figure 4). Groundwater is a crucial resource in India, accounting for over 65% of irrigation water and 85% of drinking water supplies (World Bank, 2010). However, on current trends it is estimated that

[10] Run-of-river dams typically have small reservoirs and require a steady flow to operate year-round. The high fluctuation of the Mekong's flow across the seasons in northern Laos, site of several proposed run-of river dams, is now regulated by the mainstream dams in China increasing flows outside of the monsoon and vice versa.

60% of groundwater sources will be in a critical state within the next twenty years (Briscoe and Malik, 2005). In the most seriously affected north-western states, the nation's centre of irrigated agriculture and site of economic hubs such as Delhi, recent satellite measurements indicate an average decline of 33 cm per year from 2002 to 2008 (Rodell, *et al*. 2009). At a more localized level, observations of annual water table decline exceeding 4 metres are common throughout India; even exceeding 10 metres in some cases (see GoI, 2010)[11].

Figure 4: Groundwater Withdrawals as a Percentage of Recharge in India



Source: Rodell, *et al.* (2009).

Groundwater depletion is driven by a diverse range of demand-side factors. Utilization of this resource facilitates irrigated agriculture in areas far from rivers; groundwater was a key component of the "green revolution" that occurred from the mid 1960s (Briscoe and Malik 2005). In regions where surface water is available but unsafe for drinking or farming—over 70% of India's surface water resources are polluted by human waste or toxic chemicals, rendering many of them unfit for consumption (GoI, 2009)—groundwater has often been seen as a safe alternative

[11] A consequence of India's monsoonal weather patterns is that groundwater levels can vary greatly between the seasons. To avoid discrepancies arising from this inter-seasonal variability, the source of these figures, the Central Ground Water Board, takes local measurements during different months of the year (see GoI, 2010).

(Chakraborti, *et al*. 2011). Water supply infrastructure in urban areas is commonly poor and unreliable, therefore rendering well drilling the most economical means of obtaining household water (World Bank, 2010); the local government estimates that 40% of the water transmitted through Delhi's mains system is lost through leakages (GoNCTD 2010, p. 58).

In rural areas, the electricity subsidies allowing farmers to pump groundwater cheaply have become entrenched in the political landscape (Shah, 2011), and are likely to become more so as energy requirements increase to extract water from greater depths (Briscoe and Malik 2005). Low cost encourages excess water withdrawal, an inefficient pattern of usage commonly exacerbated by ineffective application to crops and the wastage of agricultural produce between farm and market (Kondepati, 2011). In order to feed a growing and wealthier population, it is projected that by 2030, and under current usage patterns, agricultural water demand will double to 1,200 billion m^3, comprising 80% of total water demand (WRG, 2009, p. 54).

The state of groundwater quality in India is a major health issue from both a contemporary and long-term perspective (Chakraborti, *et al*. 2011). As wells are drilled deeper in pursuit of the falling water table, the water which is extracted frequently displays higher levels of arsenic, fluoride and other harmful chemicals. The attendant health effects have been well documented throughout India (e.g., Mandal, *et al*. 1996, Chakraborti, *et al*. 2011), particularly in poorer rural communities where there is no alternative for drinking water. Geological contamination is often compounded by the broader hydrological effects of a falling water table. Over-depletion of a freshwater aquifer can induce leakage from a contaminated external source (Konikow and Kendy 2005), such as saline water in coastal areas or surface water polluted by sewage, agricultural fertilizers, or industry (see Ramesh, *et al*. 1995, Chakraborti, *et al*. 2011 for examples in India). It follows that depletion of groundwater is not simply a case of drawing down a replenishable resource, but one of lasting and proximate degradation.

The impact of climate change in India adds a further dimension to this issue. Greater incidence of drought in some regions and an eventual reduction in dry season river flow (once glacial melt decreases) will position groundwater as a crucial buffer

stock of water (World Bank, 2010). A deficiency in alternative water sources will increase the pressures for exploitation in the future, thus rendering sustainable management under present conditions even more important.

The public good characteristics of groundwater aquifers in India render their governance a major challenge. Consider an agricultural area with many farmers. All users have access to the groundwater supply and, though all suffer from over-depletion, the farmers have strong incentives to unsustainably deplete the resource. More efficient usage of groundwater would likely involve some small to moderate private cost in the short term, such as installing improved infrastructure. If all users bore this moderate cost the long-term social benefit, healthy groundwater resources, would improve all users private welfare. But the actions of an individual farmer cannot prevent the water table falling. Unless all users cooperate, more efficient usage patterns merely inflict a personal burden on the individual farmer pursuing them, and there exists a strong private incentive to respond to over-depletion by simply digging a deeper well. Even if users agree to cooperate, each farmer has an incentive to "cheat" and not bear the cost of more efficient extraction, whilst still reaping the benefits of neighbor's sustainable usage patterns.

These circumstances, an example of the "prisoner's dilemma problem" from game theory, typically require some form of official regulation to produce beneficial social outcomes. In India however, there are very large transaction costs associated with national governance of an estimated 25 million groundwater extraction structures (Shah, 2011). This difficulty is compounded by institutional incapacity and the fragmentation of responsibility for groundwater management throughout different departments of the national government (World Bank, 2010, p. 54). What's more, India's state governments have primary jurisdiction over groundwater usage and, in many cases, state agencies are even more poorly equipped than their national equivalents. Both underground aquifers and rivers traverse state borders; competition over use of water is already a major source of inter-state conflict (Briscoe and Malik 2005), as well as between users at a local level (World Bank, 2010). To date, the difficulties of regulation and collective management of India's groundwater resources have been overwhelming, and are a fundamental cause of India's groundwater crisis (World Bank, 2010, Briscoe and Malik 2005).

The link from water to food security in India compels urgent solutions to the unsustainable levels of demand for its dwindling groundwater supplies. But given the multiple levels of the problem outlined above, this is no simple task. A comprehensive World Bank study concluded that high-level policy reform in the shape of regulatory measures, economic instruments, or tradable groundwater extraction rights is simply not a credible way forward (World Bank, 2010). Instead, this report proposes that some form of "bottom-up" community management may be the only hope. Other studies have supported this proposal (see Shah, 2011), with particular focus on community level groundwater recharge and use of communally managed alternatives to groundwater such as small dams.

3.3. Afforestation and Land Restoration in China

Although deforestation and land degradation have been common throughout China's history, the unsustainable use of the country's land-based resources has become most apparent in the last two decades of rapid economic growth. By the late 1990s, soil erosion was degrading 20% of the country's landmass, the area of cropland and forested land per person had declined to one half and one-sixth of the global average, and desertification affected 25% of China (Liu and Diamond 2005). In addition to the pressures of population growth and urban development, these problems were symptomatic of the national government's earlier willingness to pursue economic expansion at the expense of the environment. However, multiple factors prompted the government to initiate urgent action during the late 1990s, including: major flooding; dust storms affecting urban areas, particularly Beijing; and concerns over food security, as well as the future of the nation's forest resources.

The government response was to design and implement several land-based ecological restoration programs (ERPs) which have, since 2000, entailed an unprecedented financial investment in China's forestry resources of approximately US$ 100 billion (Wang, *et al*. 2008a).[12] Key focus areas include: forest conservation (including wholesale logging bans in many areas), prevention of slope erosion and desertification, afforestation of degraded land, and re-vegetation of agricultural land. The primary mechanism of these programs has been an extraordinary rise in

[12]See Wang et al. (2007, Table 2) for a detailed description of each program.

afforestation activities[13]. The official statistics are impressive to say the least. Chinese government figures indicate that forest coverage has been increasing at 1.6% per year since 2000, or approximately 3 million ha annually (FAO, 2011a). It has been estimated that within the first eight years of the ERPs: 8.8 million ha of cropland was converted to forest; soil erosion and desertification of land had been reversed, and were declining annually by 4.1% and 1283 km^2 respectively; and 98 million ha of natural forest were placed under effective protection (Wang, *et al*. 2007).

Aside from the finances dedicated to the ERPs, contributing factors to their success have included: payments to local communities, particularly for farmers through the Sloping Land Conversion Program (SLCP) (Yin and Yin 2010); ownership and tax reform at a state level that has encouraged the growth of commercial plantations (Wang, *et al*. 2007); and national government programs that have resettled or retrained workers previously engaged in logging (Wang, *et al*. 2007).

There are however a number of caveats to this success story. The term "forest" in China has changed meaning over the last decade, and can now describe scrub and grass land, as well as orchards and other types of "economic forests" (Demurger, *et al*. 2009, Si, 2011). Thus, definitional alterations may account for some of the statistical expansion. Monitoring and assessment is a major challenge; the political system ensures that regional governments and the bureaucracy at all levels have a strong incentive to state that central government targets are being met, even if that is not the case (Guan, *et al*. 2011, Yin and Yin, 2010). A field study of afforestation programs in a small township of Sichuan province demonstrated this problem, finding that local government statistics had grossly misrepresented reports of success (Trac, *et al*. 2007).

Another issue pertains to the desirability and permanence of tree plantations, particularly in the arid and semi-arid lands of China. Large-scale afforestation in these areas, particularly of non-local tree species, has frequently lowered the water table and actually advanced land degradation (see Cao, 2008, Jiao, *et al*. 2011, Sun,

[13]Formally, afforestation refers to tree-planting on land that did not previously support forests and reforestation applies to planting that occurs on land where forests did exist but were removed or degraded. For simplicity, we use the term afforestation to describe tree-planting in both cases.

et al. 2006). As they are simply not suited to the environment in these regions, survival rates of planted trees in China's dry northern provinces have been as little as 15% in some cases (Cao, 2011). Although using revegetation of local grasses and shrubbery would produce better long-term results (Jiao, *et al*. 2011), the "top-down" nature of ERP design and implementation means that the central government has been slow to recognize that afforestation alone will not produce favorable outcomes (Cao, *et al*. 2010). Across a wider range of geographic areas, forestry management practices that encourage higher survival rates and better quality of plantation forests (such as thinning and tending of branches, as well as site selection) have been insufficiently incorporated into afforestation programs to date (Yin and Yin, 2010).

A further component of the permanence issue is the long-term maintenance of reforested land by private land-owners. Uncertainty over the duration of compensatory funding—5 to 8 year periods are typical—provides a disincentive to quality stewardship and, in the case of the SLCP, analysis of surveyed participants responses indicated that a large proportion will simply return forested land to cropping once funding ends (Bennett, 2008). Moreover, the level of support and resources available for implementation of ERPs on the ground has often been lacking (Wang, *et al*., 2007, Bennett, 2008).

A common thread to critiques of the ERPs is the inefficiency of their "top-down" design and the multiple levels of bureaucracy required for implementation (Demurger, *et al*. 2009; Cao, 2011; Yin and Yin 2010). Obviously this is not a problem specific just to forestry and environmental management, but a wider issue pertaining to governance in China as a whole. Although vast resources have been dedicated to afforestation and land degradation since the turn of the century, it would appear that the efficacy of these efforts has been hindered by China's political system. Official estimates of China's forest coverage and related statistics have improved, but they are rarely corroborated by independent evidence (Yin and Yin, 2010).

The government has stated plans to further increase official forest cover to 23% by 2020 and 26% by 2050 (up from 22% in 2011); hence, large-scale afforestation activities are set to continue. A major component of this increase will be plantations to fulfill the growing demands of China's economy, particularly the manufacture of

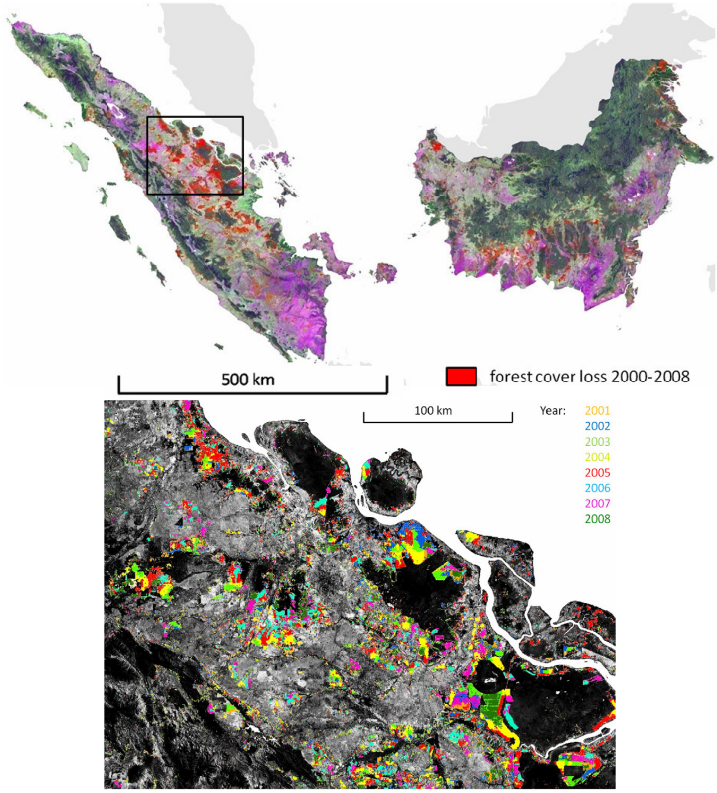
timber products. In light of the issues outlined above, actual future increases in domestic supply are unlikely to meet burgeoning domestic demand (White, *et al*. 2006). Another pressure on China's forestry resources will be conversion to agricultural land as the population and incomes grow. However, given the central government's commitment to reversing deforestation, rather than a widespread return to unsustainable domestic practices it is more probable that the recent "exportation" of China's deforestation problems to its neighbors will escalate (Liu and Diamond, 2005, Demurger, *et al*. 2009).

3.4. Deforestation in Indonesia and transboundary haze pollution

Although estimates differ over the precise scale of deforestation in Indonesia, they all tell the same story: the country's forestry resources are being degraded at a massive rate[14]. Satellite-based observations of Indonesia's largest land-masses, Sumatra and Kalimantan, between 2000 and 2008 have revealed 5.39 million ha of deforestation, comprising 5.3% of the land area and 9.2% of forest cover in 2000 (see Figure 5). Deforestation in Indonesia is driven primarily by demand for timber and conversion of land into palm oil plantations (mostly for export overseas), as well as the expansion of subsistence farming which also plays a lesser, though still significant, role (Verchot, 2010).

[14]For example, Verchot, *et al*. (2010) quote government statistics of 1.2 million ha per year. The FAO (2011a) report 498,000 ha per year. Such discrepancies are common and arise from the difficulties of measuring such a dynamic and geographically disperse issue.

Figure 5: Deforestation in Sumatra and Kalimantan 2000–2008



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Notes: Forest cover loss calculated from satellite observations. Right-hand side of the figure is the inset of the larger map showing both islands.

Source: Broich, *et al*. 2011

Central to the problem is that weak institutional capacity and corruption at a local level limit the strength of national laws aimed at reducing deforestation; illegal logging in government managed areas is common.[15]Further drivers include: the short term financial gain in regional income and employment associated with deforestation activities, particularly given that Indonesia exhibits relatively low-income levels (Tacconi, *et al*. 2008); government policies in the 1980s that encouraged land-use change (Herawati and Santoso 2011); and the move to decentralization of governance after the fall of the Suharto regime (Arnold, 2008). More broadly however, much of the demand for timber and palm oil originates from overseas, where surging economic growth and more stringent domestic regulation in countries

[15]For example, the Broich, *et al*. (2011) study found that 20% of deforestation occurred in legally protected areas.

such as China have caused Indonesia to "import" some of its deforestation problems from elsewhere (see previous section of the present study).

Whilst deforestation in itself is a major environmental issue—Indonesia's remaining forests support extensive animal and plant biodiversity, as well as providing vital ecosystem services to rural communities—the manner in which it occurs greatly accentuates its ill effects. Land-clearing for logging and agricultural purposes is commonly pursued by means of fire simply because this is the cheapest method available (Tacconi, *et al*. 2008). The smoke and air pollution associated with fire clearing is exacerbated by its frequent occurrence on Indonesia's vast expanse of tropical peat land; peat is organically rich and highly combustible, thus fire clearing, combined with the accompanying practice of draining swampy peat land, causes the land itself to burn. The consequent haze is transported by monsoonal winds over to Indonesia's neighbors, of which Malaysia and Singapore are among the worst affected. In 1997 a major incidence of regional transboundary haze pollution (THP) from forest fires in Indonesia exacted a short-term economic impact across the three countries of around US $4.5 billion, including US$1.4 billion from air pollution related health costs (EEPSEA/WWF, 2003).

Once again, THP and deforestation are not just an important issue in terms of their regional impacts, but also because of their direct link to the greatest environmental challenge at a global scale: climate change. The drainage and burning of peat land releases large volumes of carbon dioxide trapped in soil. Forest clearing eliminates a major carbon sink. The combination of these two factors, plus the scale at which they are occurring, renders deforestation in Indonesia an issue of global importance. The forest fires causing the aforementioned THP incidence in 1997 have been estimated to account for 13–40% of global carbon emissions in that year (Page, *et al*. 2002). In fact, Indonesia is considered the third highest source of carbon emissions by country, though 80% are caused by the land-use change discussed here, and not the energy and industrial production that are major emissions sources elsewhere.

From a domestic perspective, the Indonesian government has to weigh up many competing interests within the country. Deforestation represents a short-term economic opportunity locally, particularly in peatland areas where there is a high

incidence of poverty (Harrison, *et al*. 2009), but it adversely affects national health and unsustainably degrades Indonesia's natural resources; 41% of remaining forest land is considered to be degraded (Verchot, *et al*. 2010). Decision-making in the interests of long-term sustainability are made more difficult by logging and palm oil companies, both domestically and foreign owned, which use their influence over regional economies to extract favorable treatment from politicians.

Within Malaysia, Singapore and other neighbors affected by THP, costs are borne from air pollution but benefits also accrue from deforestation, such as a ready supply of cheap timber to manufacture wood-based furniture. Further afield, consumers and companies in countries not affected by THP, such as China, suffer in the long-term if Indonesia's land-based resources are degraded to the point where they are no longer available.

The twin issues of deforestation and THP have been, and continue to be, the focus of potential solutions at a domestic and international level. Numerous legislation and other regulations have been devised, but largely failed due to the incapacity or unwillingness of local authorities to enforce them (Herawati and Santoso 2011); corruption has commonly exacerbated the difficulties of enforcement (Palmer, 2001). As a response to THP, a regional haze agreement was formulated under the auspices of ASEAN in 2002. However, the Indonesian parliament has not ratified it, partly as Indonesia would have to foot the majority of the cost of compliance (Tacconi, *et al*. 2008), but also because poor air quality in Singapore lies well outside the political compass of a politician representing a region where there are many pressures for land clearing.

More recently, the Norwegian and Indonesian government signed an agreement in 2010 whereby the latter would institute a two year moratorium on the issuance of new permits to log or set up palm oil plantations in government managed forest and peatland. As part of this agreement Norway will help build institutional capacity for improved forest management and, if deforestation rates decrease, Indonesia will receive up to US$ 1 billion. In May 2011 a presidential instruction (PI) to regional authorities brought the moratorium into effect. However it contained numerous exemptions as a result of lobbying by business entities. For example, projects where the application was received prior to the PI can still proceed, as can those which are

up for renewal and also those related to mining (Wells and Paoli, 2011). The Norwegian funding is seen as laying the groundwork for future expansion of Reducing emissions from deforestation and forest degradation (REDD) in Indonesia as part of international climate mitigation policy. If successful, the two-year freeze in the increasing rate of deforestation will enable data collection and other activities that aid successful implementation of REDD. Despite the potentially large sums involved in future REDD based activities in Indonesia (up to US$ 5.6 billion (Clements, *et al*. 2010)), they will only be effective if they address the key impediments to previous attempts at stopping deforestation: local-level incentives and a deficient institutional capacity for effective monitoring and enforcement.

3.5. Regulation of Air Pollution in Delhi

In the 50 years to the end of the twentieth century the population of Delhi increased from just under 2 million to around 13 million people (Firdaus and Ahmad 2011). Rapid population growth, urban sprawl and rising incomes in one of India's major economic hubs have come however at a major environmental cost. By the 1990s air pollution from a burgeoning vehicular fleet—registered vehicles doubled to 4 million between 1991 and 2001 (World Bank, 2005, p. 81)—and industrial activity suffocated Delhi with the highest level of suspended particulate matter in Asia (World Bank, 2005). Unsurprisingly, the health impacts were substantial. Given that up to 25% of non-trauma deaths were associated with air pollution in the earlier 1990s, and the peak impact was on Delhi residents between the ages of 15 and 44, Cropper, *et al*. (1997) found that there would be major benefits to stronger air quality regulation.

Intervention by the Indian Supreme Court beginning in 1996 compelled the government to reform the state government's existing suite of poorly targeted and even more poorly enforced air quality regulations.[16] As vehicular emissions were the major cause of air pollution (approximately 60–70% during the 90s (Foster and Kumar 2011)), they were the primary target of the new regulations, although forced closure or relocation of polluting industries also occurred. The central component of the reform was the conversion of all commercial vehicles (including buses, taxis and

[16]See Bell, *et al.* (2004) for a comprehensive exposition of the judiciary's role in the reform process.

motorized rickshaws, or "three-wheelers") to using compressed natural gas (CNG), a much cleaner fuel than diesel or gasoline. Other measures included: retirement of old commercial vehicles, reduction of sulfur content in diesel and gasoline fuels, emissions standards for private vehicles, and enhancement of the public transport system.[17]

Despite the challenges of broad reform involving so many road users, the program has been a major success. Statistical analyses of air quality measurement have indicated that the results of these policies have been highly beneficial, significantly reducing, or at least arresting the rapid rise, in concentrations of particulate matter, sulfur dioxide, carbon monoxide and other pollutants (Firdaus and Ahmad, 2011; Narain and Krupnik, 2007; World Bank, 2005). Similarly, the respiratory function of Delhi's inner city residents has substantially benefited, particularly amongst low-income households (Foster and Kumar, 2011). As a direct result of the reforms, it has been estimated that nearly 4,000 deaths in Delhi have been averted each year (World Bank, 2005).

Despite the success of the government reforms, air pollution remains a major problem in Delhi (GoNCTD, 2010), and the concentration of many pollutants commonly exceeds national quality standards, particularly in the winter months[18] (Guttikunda, 2010; Firdaus and Ahmad 2011; CSE 2011). In fact, the benefits of recent regulation are being rapidly eroded as pollution levels approach record levels once again. This deterioration is being driven, quite literally, by the sheer scale of the rise in private vehicle use. Around 1100 new vehicles are added to Delhi's roads each day, an increasing proportion of which are cars; from 2000 to 2008 the number of cars more than doubled (GoNCTD, 2010). With an extra 10 million inhabitants projected over the next decade, car volume is likely to increase further. A major concern associated with this expansion is that the market share of diesel cars is approaching 50% (CSE, 2011). This trend, caused by government subsidy of diesel, is generating substantial growth in nitrous dioxide pollution (Firdaus and Ahmad, 2011; Nahrain and Krupnik, 2007).

[17] See GoNCTD (2010, Table 2.5) for a timeline of state government air pollution reduction measures.

[18] Local weather conditions during winter months prevent the dispersion of Delhi's air pollution. Burning of biomass fuel for heating also tends to increase the amount of particulate pollution at this time.

A further consequence of a rising population and economic boom in Delhi is urban sprawl and, coupled with the concentration of economic activity in the city centre, a greater number of commuters travelling further distances (Firdaus and Ahmad, 2011). Though improving, the present state of public transport in Delhi is insufficient to meet spiraling transport needs—buses comprise only 1% of all vehicles and much of the underground rail network is still under construction—and the local government sees expansion in this area as a major focus of air quality improvement (GoNCTD, 2010).

Despite their achievement, the major reforms did however suffer from a lack of planning in certain areas. Although the CNG program was a success overall, poor technology used in the conversion of Delhi's three-wheelers reduced its effectiveness (Nahrain and Krupnik, 2007). Also, regulations within the city simply shifted many polluting vehicles and industry just outside the city boundaries, thus dispersing the problem to areas that will become more populated as the city grows (Firdaus and Ahmad, 2011).

It is clear that the present trajectory of the air pollution issue in Delhi is unsustainable. Rising incomes and more people are a toxic cocktail for more and more cars to be added to Delhi's roads. It would appear that the reforms initiated in the 1990s may have only picked the "low-hanging fruit", and have just delayed the worst of the problems. Today, Delhi ranks globally amongst the cities most affected by poor air quality (Guttikunda, 2010). Certain measures present as potential solutions, such as removing diesel subsidies and continued investment in public transport, but their implementation are likely to be complex challenges in themselves, and, in any event, are unlikely to provide long-lasting solutions on their own.

3.6. Indoor Air Pollution, Black Carbon, and Improved Cookstoves

In the developing countries of Asia more than 1.9 billion people rely on biomass fuel (e.g., wood or dung) for cooking (IEA 2010).[19] The use of these fuels on inefficient

[19]The term "biomass fuel" is not analogous to solid fuels as the latter also includes coal. The International Energy Agency (2010) points out that around 400 million people, mostly in China, use coal as a fuel for traditional stoves, also producing major health damage, air pollution, and carbon emissions.

traditional cooking stoves causes heavy indoor air pollution which commonly exceeds safe limits by a factor of ten, or even hundreds. The resulting health effects include respiratory infections, lung cancer and eye diseases, among others (Rehfeuss, *et al*., 2011). As noted earlier, the World Health Organization estimates that 1.15 million deaths in China, India, and ASEAN each year are directly attributable to indoor air pollution (WHO, 2009), almost all those fatally affected are children and women. Aside from the direct welfare impact of disease, indoor air pollution impairs labor productivity, educational opportunities and, more generally, the prospects for poor households to emerge from poverty. Moreover, inefficient cookstoves that produce large volumes of smoke also require large quantities of fuel, and the burden of collecting it largely falls on women. Despite rising incomes, the IEA predicts that 1.77 billion people in developing Asia will still be using traditional biomass stoves in 2030 under existing policies (IEA, 2010).

A broader consequence of indoor air pollution is its role in a major cause of climate change, namely black carbon emissions.[20] Black carbon, or soot, is a form of particulate air pollution arising from fossil fuel combustion and biomass burning[21]. It contributes to climate change in both global and regional dimensions.[22] At the global scale, warming of glaciers and ice cover at high altitudes (the part of the atmosphere where black carbon accumulates and traps solar radiation), reduces the overall reflectivity of the earth's surface. Deposition of soot on these same surfaces at all altitudes accelerates ice and snow melt, further reducing reflectivity. Regionally, black carbon combines with other aerosols in atmospheric brown clouds (ABCs) to dim the amount of light reaching the Earth's surface, altering the temperature gradient from surface to top of atmosphere and, consequently, breaking down regional weather patterns. These ABCs are prominent throughout Asia, and have been shown to cause weakening of the Indian monsoon and shifting rainfall patterns in China (Ramanathan and Carmichael, 2008).

Although its precise contribution is subject to uncertainty[23], black carbon is considered to be a significant cause of present and future climate change (Ramanathan and Carmichael 2008; Levy, i. 2008). As it has a large effect across a much shorter time span than

[20] In addition to black carbon, burning of solid and biomass fuels contributes to climate change in other ways, such as deforestation (for wood fuels) and emissions of carbon dioxide and nitrous oxide.

[21] Gustafson, *et al*. (2009) estimate that biomass burning is responsible for two-thirds of black carbon emissions in South Asia.

[22] See Ramanathan &Carmichael, (2008) for an exposition of the influence of black carbon on climate.

[23] This is due to the sheer complexity of the processes involved. For example, black carbon can also encourage cloud formation, thus partially increasing the earth's overall reflectivity to solar radiation.

greenhouse gases, black carbon offers rapid returns on investments in its mitigation (Grieshop, *et al*. 2009). Moreover, approximately half of black carbon emissions in Asia arise from the household usage patterns responsible for indoor air pollution (World Bank, 2011a) and, consequently, there are substantial co-benefits associated with their mitigation. For these reasons, reducing black carbon is gaining increasing prominence as a strategy to address near-term climate change (for example see UNEP/WMO, 2011).

There are many options to concurrently reduce indoor air pollution and black carbon emissions, such as increasing access to electricity and modern fuels. In the context of poor households in Asia however, more expensive measures, such as universal electricity access, are longer-term solutions requiring higher incomes and significant infrastructure to achieve sufficient coverage on their own. Hence, the IEA's most recent survey of global energy focuses on the adoption of three technologies to increase access to clean cooking facilities by 2030: improved biomass cookstoves, biogas digesters[24], and liquid petroleum gas cookstoves (IEA, 2010). Whilst the others will surely play a significant role, particularly expansion of biogas facilities in China[25], improved biomass stoves are likely to be a major focus in the future because they are less expensive to deploy (UNEP/WMO, 2011; IEA, 2010), and have been the subject of ongoing efforts in this area for several decades.

Traditional biomass stoves range from very basic "three stone" open fires to more sophisticated set-ups with a chimney, or made of brick. Past and present generations of improved cookstoves have come in a variety of forms to reduce users' exposure to smoke and improve fuel efficiency. The large numbers of different models include various features to alter the combustion of wood and other fuels, such as fans to increase air flow into the stove and improved chimneys. As the type and moisture content of fuel, household setting, construction materials, and practices of users vary, there is no single design of improved cookstove that is universally applicable (World Bank, 2011a).[26]

The need for setting-specific designs is just one of the issues that has hindered previous efforts to disseminate improved cookstoves. Slaski and Thurber (2009) identify three broad problems. First, consumers must be motivated to adopt the new technology because they value it above their existing stoves. Education concerning health benefits has been largely ineffective. Secondly, affordability is a major barrier because improved stoves generally

[24] Biogas is a technology where cow dung, crop wastes, or food scraps are placed into an airtight compartment (or digester) containing water and methane producing bacteria. The resulting gas is extracted as a cooking fuel for households. Large-scale operations exist in developed countries adjacent to farms and waste treatment plants.

[25] China government has set a target of 80 million households using biogas as their main fuel and 3GW of industrial energy generation from biogas by 2020 (NDRC, 2007).

[26] See McCarty, *et al*. (2010) for an overview of different cookstoves' performance under testing.

involve a significant upfront cost beyond the means of the poorest households. However, subsidized provision can undercut the local manufacturers required to sustain widespread dissemination. Thirdly, cooking is a traditional practice and changing it involves a major disruption to daily routine. Where motivation is not strong, the requirement of significant behavioral change diminishes acceptance further. In addition to these problems involving household participation, insufficient support services for ongoing maintenance, under-development of local supply-chains, and poor quality stove construction have obstructed previous efforts (World Bank, 2011a).

Given these difficulties, it is unsurprising that earlier activities to disseminate improved cookstoves have had mixed success. The National Improved Stove Program (NISP) was introduced in rural areas of China during the 1980s, initially to encourage more efficient use of wood fuel and prevent deforestation. Despite initial setbacks, the NISP became extremely successful, largely as a result of targeting locations where demand for improved stoves was high (Smith, *et al.* 1993). In fact, China today has around two-thirds of the world's improved cookstoves, or 115 million (IEA, 2010), due to the success of this program. However, Chinese households typically use a mix of fuels and the initial benefits of the NISP have been eroded over time as portable coal stoves have become more widely used indoors (Sinton, et al. *2004*). Consequently, China currently has the largest population of any country afflicted by disease from indoor air pollution (WHO, 2009).

In India, where nearly 90% of the rural population rely on biomass fuels (WHO, 2010), a national program was abandoned in 2002. Although up to 35 million improved stoves were disseminated, they were often poorly designed or installed and had short life-spans (Kishore and Ramana, 2002). Underdevelopment of maintenance services and local manufacturing, as well as program monitoring and evaluation, saw most households simply revert back to traditional stoves once "improved" versions failed (Aggrawal and Chandel, 2004; Chengappa, *et al.*, 2007). With the lessons from previous experience in mind, the Indian government launched a new initiative in 2009 which has a stronger emphasis on stove quality and testing (see IIT/ERI ,2010 and Venkataraman, *et al.* 2010).

Primary impetuses for the new Indian program are design and technology advances over recent years and the increasingly strong prospects for their commercialization (Adler, 2010). New varieties of advanced cookstoves are now becoming available in markets across the world, and this process is being facilitated by major manufacturing companies such as Phillips, as well as non-government organizations (NGOs) and research centers (see World Bank, 2011a, Appendices 3–4 for an overview of some commercial programs). Global efforts to increase commercial distribution are becoming more coordinated as well. The

recently formed Global Alliance for Clean Cookstoves (GACC) is one such example (see GACC, 2011). This United Nations-led partnership of governments, multilaterals, NGOs, and private companies aims to facilitate the uptake of improved cookstoves by 100 million households to 2020.

One of the principal issues motivating the GACC is the opportunity arising from the linkage between indoor air pollution, health, household poverty, climate change, and empowerment of women (GACC, 2011). As improved cookstoves have large benefits across a range of development topics, many sources are available to support an expansion in their usage. These opportunities are especially pronounced in the broader context of climate change policy. International finance for mitigation activities is scheduled to expand significantly, and "win-win" situations involving mitigation and development are desirable targets for funding. As mentioned above, black carbon mitigation involves short term returns that could buy some time, particularly with regards to glacier melt in the Himalayas, if progress continues to be slow in other aspects of global action (Grieshop, *et al*. 2009). Aside from black carbon, the link between greater fuel efficiency and reduced deforestation provides a basis for improved cookstoves to be a part of REDD activities (World Bank, 2011a).

A recent World Bank report on the prospects for proliferation of improved cookstoves states that "the building blocks are falling into place" (World Bank, 2011a, p. 35). The technology, finances, and impetus are clearly accumulating. From a global perspective, it is in the developing economies of Asia that indoor air pollution exerts the greatest health burden, the largest number of people lives in poverty, and the greatest action will have to be taken to avert major climate change. Improved biomass cookstoves positively address all three of these issues. Therefore, it would appear that Asia is the region where the greatest opportunity and the greatest need exist for these building blocks to develop further.

3.7. Climate Change Mitigation in China[27]

China is now the largest emitter of CO_2 (from fossil fuels), with 25% of the global total in 2009, considerably ahead of the second largest annual emitter, the US with 17% (PBL, 2010). China has been responsible for 72% of the world's growth in CO_2 emissions (from fossil fuels) between 2000 and 2009, a period during which China's emissions grew at an annual average rate of 9.4%, and the rest of the world's at 0.8% (PBL, 2010).

[27]This section draws on World Bank (2011b).

Of course, in per capita or cumulative terms, China's emissions still greatly lag those of the United States. However, one can safely say that there can be no satisfactory global response to climate change without the active participation of China.

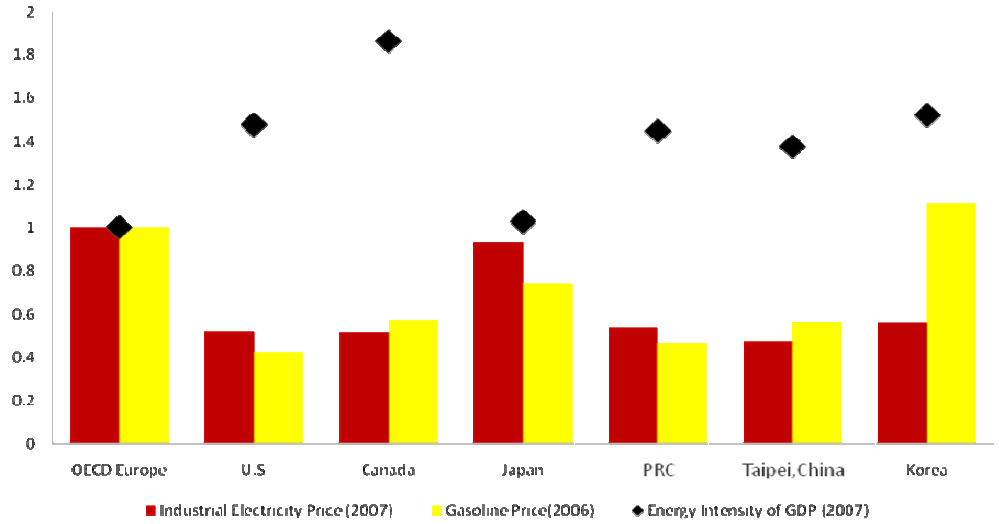
In 2009, China announced that it would, for the first time, subject itself to an emissions constraint. Its aim is to reduce CO_2 emissions intensity in 2020 by 40–45% compared to 2005. This is an ambitious target which will not be met without considerable policy effort.

China already has a large range of instruments in place to achieve its new emissions target. There are already a number of policies to improve energy efficiency (see Zhou, *et al*. 2010; Price, *et al*. 2011).Then there are a number of feed-in tariffs and special tax and tariff concessions to promote renewable energy. UNDP (2010, p. 82) summarizes the situation as follows: "There are few, if any, developing economies that have promulgated as many laws, policies and other measures to support low carbon development as China." This is probably true not only in relation to developing economies.

What we have not seen so far in China is the introduction of a nationwide carbon price. However, the Twelfth Five Year Plan for 2011–2015 commits to "start a pilot carbon emissions trading project, and gradually set up a carbon emissions market" (Xinhua, 2011). In fact, pilot projects have already been initiated in seven provinces and cities, including major centers such as Beijing and Shanghai (see Han, *et al.* 2012).

Carbon pricing would certainly seem to be a critical part of the mitigation challenge. Figure 6 compares China (and Taiwan, province of China; and Korea) to two sets of developed economies: the US and Canada on the one hand, and the EU and Japan on the other. The US and Canada have cheap energy (low electricity and petroleum prices) and a high energy/GDP ratio. By comparison, the EU and Japan have expensive energy and a low energy/GDP ratio. China, with relatively low energy prices and high energy intensity, currently looks much more similar to the US and Canada than it does Europe and Japan. But China's mitigation objective requires that it ends up looking more like the Europe and Japan in terms of its energy to GDP ratio. It will not get there without higher energy prices.

Figure 6: China's Future: Low Energy Prices or High Energy Efficiency? Cross-Country Comparison of Electricity Prices, Gasoline Prices, and Energy Intensity (ratio of energy use to GDP)



PRC = The People's Republic of China; Korea = The Republic of Korea.
Notes: Energy prices measured in current USD, using market exchange rates. Energy intensity is the ratio of energy consumption to GDP measured using PPPs. All OECD Europe values are normalized to one.
Sources: IEA (2009, 2010).

Introducing an effective system of carbon pricing into China would, however, be a major and difficult economic reform. Suppose that China did introduce a carbon price. What impact would it have? Would it actually lead to higher energy prices and lower emissions? Clearly, a carbon price would send a signal, the strength of which would depend on the level of carbon price, to commercial consumers of coal, such as steel manufacturers that they should use coal less and more efficiently. But much of the energy sector in China is regulated, and here matters are more complex.

One key problem is that cost pass-through mechanisms in the electricity and petroleum fuel sectors need further strengthening. Coal is the dominant fuel for electricity in China. In recent years, the price of coal in China has risen sharply. Through a series of electricity tariff increases, China greatly reduced electricity subsidies over the 1990s. However, China has found it difficult to pass on the increase in coal costs it has recently experienced. China has a formula in place for adjusting the electricity price every six months if the coal price changes by more than 5%. However, since the end of 2004, when the formula was introduced, although this condition has been met 10 out of 12 times (in relation to coal market prices), the price of electricity has only been changed thrice, and by much less than the formula

mandated. In nominal terms, coal prices rose 40% between the first half of 2006 and 2010, but electricity prices only by about 15%. In fact, over the last few years, electricity selling prices have not even kept pace with inflation.

A good illustration that effective carbon pricing requires pricing reform comes from attempts already made to try to influence the fuel mix, or dispatch order, in the electricity sector. Under the Energy Saving and Emissions Reduction in Power Generation or ESERD pilot introduced into 5 provinces, provinces have been instructed to dispatch generators, not on an across-the-board basis as in the past, but rather according to a mix of economic and environmental criteria. To simplify, the dispatch order is: renewable, nuclear, gas, and then coal, with coal plants ordered by their thermal efficiency, from highest to lowest. Note that this is roughly the order that one would expect with a high-enough carbon price, and, indeed, simulations show implementing ESERD would cut emissions by 10%. However, the pilot provinces have only been able to partially implement this reform, because of the negative financial implications full implementation would have for less-efficient coal-fired units. These units are still valuable as reserve capacity, but, under China on-grid tariff system, plants only receive a payment if they are dispatched, and so have no incentive to provide stand-by capacity. Instead, if not regularly dispatched, they would simply shut down, thereby depriving the system of valuable spare capacity, in case of an emergency or a spike in demand. Or, put differently, the policy-induced lack of flexibility in dispatch has undermined the impact of the introduction of a carbon price (or, in this case, a carbon price equivalent).

Carrying out the reforms needed in the power sector in China to make carbon pricing effective will not be easy. Power sector reforms in developing economies are generally difficult. While there are some success stories, a World Bank (Besant-Jones, 2006) review of power sector reforms concludes that overall “political forces are difficult to align for reform” (*ibid*, p.14), that interest groups “constitute a major impediment to reform” (*ibid*, p. 16), and that “successful reform requires sustained political commitment” (*ibid*, p. 2). Not surprisingly therefore, “Power market reforms in developing economies are generally tentative and incomplete, and are still works in progress” (*ibid*, p. 4).

China is no exception to this generalization. It has made slow progress with electricity reform. In 2002, China split its single, vertically integrated utility into two grid companies (a large one covering most of the country, and a small one in the south) and a number of generation companies (including five large ones). It experimented with wholesale electricity markets in 2002, but that was short-lived and generators no longer bid for dispatch, but sell at centrally-fixed prices. China also established in 2002 a State Electricity Regulatory Commission, but it focuses on technical rather than economic regulation. Prices are still set by government (though the SERC can offer its advice) and, as noted earlier, mechanisms for cost pass-through have been established but are not used. The IEA's conclusion that in the energy sector "China is caught between the old planning mechanisms and a new approach" (2006, p.16) is probably as relevant today as when it was written.

It also has to be admitted that the direct impact of power sector reforms might be to increase emissions. Though it is often claimed that such reforms are "win-win" (IEG of the World Bank, 2009), in fact this will vary from country to country. China's elimination of subsidies in the 1990s laid the groundwork for its rapid electricity growth over the last decade. If China does allow for greater cost pass-through in the electricity sector, this will put upward pressure on electricity prices. But it will also remove one of the underlying forces which is current leading to electricity shortages, namely the unwillingness of coal producers to supply the electricity sector.

Reforms to support mitigation need to go beyond the energy sector to the economy as a whole. It is not cheap energy that is driving China's massive expansion of its energy-intensive sectors. Energy prices are low in China compared to Europe and Japan but not compared to the US (Figure 6). The search for what Rosen and Houser call "the root causes of (China's) structural over-allocation into energy-intensive industry" (2007, p. 37) must extend beyond the energy sector. As they argue: "the pervasive revealed comparative advantage of heavy industry manufactured goods from China is generally rooted in distortions other than energy inputs" (p. 38).

China is characterized by both an exceptionally high investment rate (some 45% of GDP) and an exceptionally high share of industry in value added (about 50%): see

He and Kuijs (2007). The reasons for this are complex, but include, as argued by Huang (2010), limited liberalization of China's factor markets. Low interest rates, high re-investment rates by state-owned enterprises and low land prices in particular have all encouraged capital-intensive industrial production.

Rebalancing the economy should not only lift economic welfare, but also reduce emissions. Table 5 illustrates this point by comparing the share of GDP for China's different sectors with their share of energy use. Industry (the secondary sector) is responsible for 49% of China's GDP, but 84% of its energy use. Rebalancing implies, among other things, faster growth in services than industry. A ten percentage point switch in GDP composition away from industry towards services (the tertiary sector) would, everything else being equal, result in a 14% reduction in energy intensity.

Table 5: A Switch from Industry to Services Would Help Reduce China's Energy Intensity.

Sector	Share of GDP	Share of energy	Energy intensity index
Primary (agriculture)	11%	3%	0.3
Secondary (industry, construction)	49%	84%	1.5
Tertiary (services)	40%	14%	0.3
Total	100%	100%	1

Notes: The year is 2007. Construction is included with industry in the secondary sector. Household energy use (about 11% of the total) is included in the secondary share of energy use.
Source: NBS (2010)

Slower economic growth would also of course help reduce the growth in China's emissions. Its average economic growth between 2005 and 2010 was 11.2%. This is not only well above the 7.5% target embodied in the 2006–2010 Eleventh Five Year Plan, it was also China's highest 5-year average growth since the reforms began. This is a remarkable result considering that the period encompasses the global financial crisis. It seems heretical to suggest that China would do better by growing more slowly, but it is possible that slower growth would actually improve welfare. For example, a switch in government spending from infrastructure to health could reduce growth but still be welfare-enhancing as well as emissions-reducing. Whether China will be able to slow growth to the 7% target announced in the new Twelfth Five Year Plan remains to see seen.

As with energy reform, rebalancing will not be undertaken to reduce emissions. Its primary motivation will be economic. But emission reduction efforts will be more successful if rebalancing occurs.

Of course, the measures already in place, such as support for research and development, and other regulatory and technology-specific-promotion measures, are also important. But these are already at the heart of China's mitigation efforts. What is now needed is a broader response to the mitigation challenge, one which embraces pricing reform, energy sector reform, and structural economy-wide reforms. Neither the importance nor the difficulty of the path ahead should be underestimated.

4. Managing Asia's Environmental Problems

A fundamental characteristic of human society has been the ability to adapt over time to complex problems that undermine economic and social systems. The environmental issues facing Asia are examples of such major challenges. They are examples of 'wicked problems' which are complex, multidimensional, hard to solve, and often harder to define. Rittel and Webber (1973, p. 160) contrasted such challenges to "tame problems", for which the task is more straightforward, even though the impacts may be considerable. For example, consider the contrast between dealing with air pollution in an entire city and preventing the discharge of harmful air pollutants by a single factory.

There are various characterizations of wicked problems.[28] Table 6 summarizes the characteristics of wicked problems in contrast to tame problems. By and large, all of the case studies presented in the previous section and many of their counterparts within the broader issues can be classified as wicked problems. They evade precise definition, are ever-changing, and present a moving target for policy. Often there is no final resolution. Many stakeholders are involved in a dense web of competing interests and interdependencies. Solutions are neither right nor wrong, but better or

[28] Rittel and Webber (1973) considered eleven defining characteristics of wicked problems. Subsequent studies have either followed this original specification directly (see Levin, *et al*. 2010), presented a subset of the eleven characteristics (see Kreuter, *et al*. 2004),or reformulated the initial definitions (see APS 2007, Batie, 2008). The present study belongs in the final category.

worse depending on how one weights (or measures) the welfare of particular groups, and their potential outcomes are difficult to estimate ex ante.

Howes and Wrywoll (2012) provide a detailed analysis showing that Asia's environmental problems are indeed wicked ones. For the purposes of this paper, an illustrative approach will suffice. Consider groundwater exploitation in India. There are millions of stakeholders, largely small farmers, but also urban households, and some businesses. The problem can be defined as an agricultural one, or an environmental one, or an energy sector one. Various solutions have been proposed, but none are obviously dominant. Increasingly electricity prices is very problematic; defining water rights seems a formidable task; and community management, while promising, would have to be introduced on an unprecedented scale to be effective.

Table 6: Wicked and Tame Problems Compared

Characteristic	Tame Problem	Wicked Problem
Problem formulation	A clear and objective definition is readily available. The sources and underlying processes are simple and widely understood.	No definitive formulation due to extreme complexity. The problem is perceived through personal judgement and/or preconceived notion of solution.
	The nature of the problem does not change significantly over time. Problem is terminated by applying solution(s).	The problem is constantly evolving and is never completely resolved. Any solution(s) may only be temporary.
Interdependency	The problem is composed of a small number of constituent parts without extensive linkages between them.	The problem is composed of and related to many different problems. All of these different elements affect each other through a network of linkages.
	A narrow range of stakeholders is involved all of whom view the problem in a similar manner.	Many, diverse groups and stakeholders with competing interests are affected by the problem and solution.
Solution set	The effects of solutions are isolated to specific targets.	Any solution causes feedback effects. The linkage between constituent elements means that the total effect is difficult to ascertain.
	A clear and finite solution set exists. Solutions are developed from objective analysis.	A potentially infinite solution set exists. The merits of different solutions are determined by the judgement of different stakeholders.
	Outcomes are "true-or-false"	Outcomes are "better-or-worse".

Sources: Kreuter, *et al*. (2004) provides a similar presentation of the difference between tame and wicked problems using four of the characteristics formulated by Rittel and Webber (1973)., Batie (2008) adapts this approach, although using a broader set of characteristics.

If Asia's environmental problems are wicked, they will defy simplistic, pre-packaged solutions. "Green growth" and "rebalancing" might serve as useful slogans

for overall change, but themselves give little idea of what is needed to give environmental considerations greater weight and, more importantly, how this will be brought about. To help take the debate forward, we propose below a set of policy objectives that might serve as a platform from which to better address Asia's environmental problems. We offer below seven areas of strategic focus, engagement with which will facilitate management of Asia's environmental problems to 2030, and beyond. For the purposes of illustration, we refer directly to the earlier case studies, in addition to the broader environmental issues discussed in previous sections.

4.1. Co-benefits and Issue Linkage

One of the principal characteristics of wicked problems is that they are composed of and related to many problems. This presents complexity but also opportunity. The links between Asia's environmental problems, as well as to development and other issues, allows a single measure to address more than one negative outcome, or achieve co-benefits. Such a situation has many advantages. The value for money in terms of welfare and economic benefits from finance dedicated to attempted solutions is likely to be higher. "No-regrets" policies may be available; even if one goal is not achieved satisfactorily by a multi-objective solution, another is likely to be. Finance and resources available for one issue can be used to address another where the wherewithal is less prevalent. Regional policymakers should divert some resources towards identifying where these opportunities may exist and how they can be best exploited.

Opportunities to realize these co-benefits are most conspicuous where climate change is involved. For example, future REDD arrangements may enable the Singapore and Malay governments to prevent the health impacts of THP in their countries. Similarly, the distribution of improved cookstoves in the interest of climate change mitigation also addresses the health impacts of indoor air pollution on low-income communities. Energy sector reform and a shift to renewable technology can be pursued in the joint interest of energy security, sustainable economic growth, and climate change mitigation. Indeed, the development co-benefits of climate change mitigation have been a principal focus for climate policy in Asia and

developing countries more generally. To 2030, the international architecture is likely to present many more opportunities similar to the Clean Development Mechanism and REDD. These should be embraced by the governments of Asia's emerging economies, even where there are up-front costs, such as imposition of outside oversight or structural reform.

Away from climate change, a fundamental issue for Asia's policymakers is that environmental problems are also problems of development and economic growth. Environmental sustainability is not an end in itself, but a key determinant of future prosperity. Certainly, some trade-offs will still occur in the short-term, but not later or even in the proximate future. China's shift towards greater environmental protection reflects the economic downside of the "development first-environment later" mindset, even over just a decade or so of major expansion. Other economies in the region have the opportunity to avoid undergoing this correction. This is why problems such as water and air pollution, farmland degradation, deforestation, and the like are economic issues first and foremost. Hence, their engagement by definition produces "win-win" situations.

A further relevant point here is that the economist adage of "one problem, one instrument" is unlikely to work for these wicked problems. More complex responses operating across multiple issues will be required. In the energy-environment space, for example, a mix of policies will be required to reduce emissions, improve energy security, tackle air pollution, and extend energy access.

4.2. "Bottom-up" Management Processes and Stakeholder Participation

Many of Asia's environmental issues involve diffuse groups whose actions are difficult to control by centralized, one-size fits all regulation. The nature of an environmental problem is likely to differ across locations in the same country, state, or even neighboring communities. Without the participation of local level stakeholders in their formulation, attempted solutions will not be effective, especially where the incentive structure to change behavior is not addressed. Where possible, participation of stakeholders in both the decision-making process and adaptive management should be encouraged. Stakeholders will generally have the best idea of how problems and their solutions work and affect them. Even where broad-scale

strategies are required, the design of centralized measures should be place a heavy emphasis on information gleaned from "bottom-up" consultative processes.

The advantages of this approach are apparent from our earlier examples. The short-term financial incentives for communities to be engaged in logging would need to be overcome to achieve a lasting halt to deforestation in Indonesia. Similarly, improved groundwater management in rural India would require some form of cooperation between groundwater users, perhaps through community management. Rural households are unlikely to adopt improved cookstoves unless they consider them to be viable and improved alternatives to traditional methods. Impacts of dams on riparian communities in the Mekong, the management of groundwater in India, and the choice of afforestation activities in the arid regions of China are all issues that will have improved environmental outcomes by the direct engagement of local stakeholders.

4.3. Scientific Research

Comprehension of the dynamics and impacts of problems and potential solutions are essential inputs into effective management of environmental issues. The process of prioritizing certain measures from within an infinite solution set has to be informed by the best possible information. For example, a critical determinant of the welfare impacts of Mekong dams will be the effectiveness of fish ladders for migratory species. Without prior research into this issue, informed decisions on construction are impossible. Likewise, scientific assessment prior to the establishment of large-scale plantations in the drylands of northern China would have avoided the negative impacts on soil hydrology that have since occurred. Ongoing support of scientific research facilitates adaptive management as problems evolve and solutions are attempted. Increased linkages between research institutions across Asia will support knowledge dissemination on related issues.

4.4. Planning

As indicated at the start of this section, planning rather than reaction will be crucial to effective management. For example, measures addressing air pollution in major cities must account for continuing urban sprawl and a richer population in the

future and, consequently, rising demand for vehicles. Planning for rising water demand will also be crucial over the next two decades. Policies that address only the current state of an environmental issue will likely be ineffective if and when the problem expands in the future.

The importance of planning is particularly significant to climate change. Steps taken today towards a low-carbon economy in Asia to 2030 will have a great bearing on the future extent of climate change globally. Measures in the near-term, such as energy pricing reform, will reduce the level of restructuring required once these economies have grown much larger. Moreover, climate change will render water security a much bigger challenge in the future, particularly in India and China. Planning for such events ahead of time and addressing issues before they get worse will avoid the full-scale of negative impacts.

4.5. Pricing and Economic Reform

Most environmental problems are an example of "market failure". This failure usually pertains to environmental costs being unrepresented in the price of goods, services, and access to resources. Raise the price to reflect these costs and invariably there will be less "demand" for environmental degradation. Examples abound throughout Asia of large discrepancies between prices, or private costs, and social cost. In our case-studies, the link was particularly clear in the case of excessive ground-water degradation in India, and climate change mitigation in China. Indeed, when it comes to energy and water, prices often fail to reflect economic let alone environmental costs. Of course, one reason Asia's environmental problems are wicked is precisely because the pricing reforms they need to solve them are so very difficult to implement. Energy pricing reform can be one of the most sensitive reforms a government can attempt to undertake. Nevertheless, if one is looking for solutions, opportunities to rectify major discrepancies between private and social cost need to be taken.

The flipside of this argument is that environmentally beneficial activities should be supported through subsidies and other price-based mechanisms. Governments throughout the region are already investing heavily in renewable energy, both development and deployment. In other areas, such as deforestation, ecosystem

services are beginning to be valued and economic mechanisms developed to sustain them. Such activities should broaden. The prospects for this happening will increase with international and regional support in the provision of funds, expertise, technology, and other resources.

The link from economic reform to environmental benefit goes well beyond the internalization of economic externalities. This is well illustrated by China. China, if it wants to reduce emissions, needs to put a price on carbon. But, for this to influence behavior, price setting in the energy sector needs to be reformed to allow full cost pass-through, so that carbon prices can be passed on to consumers. As we have seen in recent years, this is not always the case, and consumers have often been protected from coal price increases, for example see (World Bank, 2011b). Going beyond pricing altogether, as argued earlier (see Section 3.7 and World Bank, 2011b) rebalancing of the economy is needed to slow down the rate of economic growth, and to make that growth less energy intensive, and more welfare-enhancing. Thus, environmental challenges in China and other countries are linked to fundamental questions of economic reform.

4.6. Tackling Corruption and Improving Institutional Capacity

A key determinant of effective environmental regulation is, of course, the quality of the regulator. Corruption remains a pervasive hindrance to improved environmental protection. Whether it be high-level sanction of forest “land-grabs”, misreporting of environmental statistics, or bribes for local officials not to enforce national laws, corruption involving public officials facilitates unsustainable resource use across many parts of Asia. Tackling corruption is a wicked problem in itself, but attention to this single issue will strengthen the effectiveness of all the other management strategies outlined here. Establishment of independent regulators, cooperation with an unrestricted NGO sector, greater transparency, and institutional democratization at all levels are important objectives.

Corruption is just one part, albeit an important one, of the wider issue of institutional capacity. Uncorrupted regulatory bodies can still be under-resourced or have poorly trained staff. Allocating central budget resources to environmental

regulation should increasingly be viewed as part of the economic growth and development agenda.

4.7. Cooperative Management, Regional Institutions, and International Cooperation

Cooperative management mechanisms will be important to avoid any conflict over use of shared resources, particularly between states. Forums such as the Mekong River Commission and others like it in the region must serve as important meeting places for states to share information and negotiate. The creation of shared institutions or agreements prior to the full materialization of potential flashpoints, such as the changing hydrology of rivers originating in Tibet and the Himalayas, will assist adaptive and mutually beneficial management. At a community level, cooperative management of a shared resource, such as groundwater, could help to break "public good" characteristics wherein individual users have no self-interest in personally pursuing sustainable usage patterns. Cooperative management between government departments or national governments in the pursuit of the co-benefits mentioned above will be critical to the results of a multi-objective approach.

An important component of cooperative management will be a central role for regional institutions. Batie (2008) emphasizes the importance of "boundary institutions" in addressing wicked problems. Such institutions act as a conduit between knowledge providers (e.g. scientific researchers) and knowledge users (e.g., policymakers, resource managers, and the public). In the Asian Development Bank (ADB), the region already has a major institution that fulfils this role. As Asia's environmental problems grow, the ADB should expand its activities to further engage with the management strategies outlined here. Political and economic institutions such as ASEAN and APEC will increasingly have to incorporate environmental issues within their agenda, not just in words but in actions that reflect the significance of these problems to regional growth and stability.

Looking beyond the region, international cooperation has a critical role to play. This coming century may belong to Asia, but, at this particular juncture, Asia will need considerable assistance if it is to find the resources and expertise required to address its environmental problems. This is particularly true for the poorer countries of Asia in per capita terms, such as India. More broadly, the developed countries of

the world also have a crucial leadership role to play on global issues such as climate change. Without effective action to reduce emissions being taken by OECD countries, one can hardly expect tough decisions to be made in Asia.

5. Conclusion

It is clear that the current trajectory of environmental degradation in Asia is unsustainable. Policymakers around the region acknowledge the importance of environmentally sustainable growth and are already acting, but much more will need to be done. A prosperous, growing, and safe Asia needs water, clean air, forests, and arable land. Under current trends, these components of the natural resource base threaten to decline substantially as population and per capita incomes rise. Food security, human health, and regional cooperation are all likely to weaken if natural resources are not protected. Action on climate change mitigation in the region over the next two decades will, by and large, shape the scale of damages from global warming. Both the region and the globe cannot afford for Asia as a whole to retain any vestiges of a "development first-environment later" mindset.

We have argued that Asia's diverse environmental problems share the characteristic of being "wicked". That is, they are dynamic and complex, they encompass many issues and stakeholders, and they evade straightforward, lasting solutions. Specifically, tackling environmental problems in Asia requires sustained regional cooperation, strong implementation capacity, and the ability to tackle domestic vested interests and compensate affected parties. All of these present serious challenges to even the best-intentioned government.

The six case studies presented here serve both to illustrate the breadth of problems Asia is facing on the environmental front, and the complexities involved in addressing them. These are not problems that will be solved by growth alone. Growth will help make resources available to direct towards solutions, and will reduce exposure to natural vulnerabilities. But growth will also deepen the impact of the divergence between social and private cost which underlies so many of these problems (leading to more water extraction, land degradation, and so on).

Nor can reliance be placed on technological progress to solve these wicked problems. Again, technological change can help, whether by boosting agricultural productivity or helping make cleaner energy cheaper. But there is no guarantee of a technological solution, and some technological change will make environmental problems more severe: consider the problems of water shortage faced by the Indian state which pioneered the Green Revolution.

Not only are growth and technology not the answer; the more general point is that prescriptive, simplistic solutions to Asia's environmental problems simply do not exist. There is increasing interest around Asia, and indeed worldwide, in 'green growth'. Green growth is certainly what Asia needs. As the recent UN Global Sustainability Report notes: "Green growth, pioneered in the Republic of Korea and other countries, aims to foster economic growth and development while ensuring that natural assets and environmental services are protected and maintained" (UN, 2012). But, as this articulation makes clear, green growth (like "rebalancing") is an aspiration, not a strategy. Achieving green growth means tackling the very difficult problems outlined in this paper, to which, we have argued, there are no easy solutions.

Talk of changing Asia's development model falls into the same category. Asia indeed needs a new development model, one which gives more attention to environmental sustainability. But again, this is an aspiration not a strategy. Progress can be made, but, as our examples show, it is not guaranteed, it takes time, and is not unidirectional.

Going beyond the aspirations of green growth and a new development model, the best one can hope to articulate at a general level is a set of principles that may be useful in dealing with a wide range of environmental problems. We have suggested seven: a focus on co-benefits; an emphasis on stakeholder participation; a commitment to scientific research; an emphasis on long-term planning; pricing and broader economic reform; an attack on corruption, and a bolstering of institutional capacity in environmental areas; and a strengthening of regional approaches and international support.

The above list of strategies is certainly not exhaustive and the relative importance of each will vary across different settings and problems: large

investments in scientific research will not substitute for an inherently corrupt bureaucracy. But they are a starting point, helping to explain what a green growth or rebalancing agenda might mean for the environment, while emphasizing all along that there are no easy solutions.

It is unquestionable that Asia's environmental challenge is vast and the urgency mounting. Though Asia's environmental challenges are complex and difficult to solve, this does not mean that they will not be or that they cannot be addressed. Environmental resources are a critical component of human welfare and economic activity, and, consequently, their degradation will compel responses at some stage. Pre-emptive measures avoid the far greater economic burden associated with reactive or emergency responses, such as migration from areas of extreme water scarcity or government imports of food due to failed harvests. Prior mitigation necessarily avoids some of the costs from adaptation and damages. Therefore, the degree to which these problems act as a brake on regional economic development will depend in large part upon the pre-emptive steps taken towards controlling them.

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CHAPTER 4

Challenge of the Imbalance of Economic-social Development in ASEAN

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This paper is an overview of the imbalance of economic and social development in ASEAN. Social development must be viewed as an end in itself and not just a means for attaining economic growth. Growing socioeconomic inequality often triggers crime and political and civil unrest. It discusses the evolution of socio-economic imbalances in ASEAN. Then it analyzes the causes of the imbalance and the policy and actions taken by ASEAN countries.

Keywords: Socioeconomic imbalance, development, ASEAN

JEL classification: I0, I3, J0, J11, J6.

Introduction

There is a view that economic growth is the determinant of survival of a country; therefore, the country needs to focus on economic growth. Following this concept, many countries have achieved high levels of economic growth, but now face social problems. According to many researchers, the development of China in recent years has followed this model. Policy priorities have focused on economic development for more than twenty years of reform and "opening up", and China's economy has achieved a high growth rate; indeed the country ranks as top growth economy in the world. Many issues have arisen, however, that are the social consequences of excessive concentration on economic growth in China, such as an uneven harmony between economic development and social development; benefits from the economic growth not reaching the majority of people; increasing disparity in income and living standards between social groups, and between regions; serious environmental destruction due to over-exploiting natural resources.

The biggest challenge facing many countries today is the growing imbalance between economic development and social development, leading to the potential for conflict and social crisis, and hampering development. Despite their economic achievements, socio-economic disparities still exist in ASEAN countries. The biggest challenge facing these nations is how to sustain a rapid economic growth that reduces poverty and is socially inclusive. Much work has to be done to uplift the quality of life of the socially vulnerable groups in the region. In this context, the Declaration of the Bali Concord II by national leaders during the ASEAN Summit of 2003 committed the ASEAN Community to fostering cooperation in social development, aimed at raising the standard of living, and seek the active involvement of all sectors of society, in particular women, youth, and local communities. ASEAN also puts emphasis on the need to address issues relating to poverty, inequality, ageing populations and unemployment as these issues not only need social responses, but could also have economic implications.

ASEAN cooperation in the area of social development is continuing its effort to address the social risks faced by children, women, the elderly and disabled people. This matches the objectives of the region's Millennium Development Goals (MDGs).

At the Millennium Summit in September 2000, the largest gathering of world leaders in history adopted the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty, and setting out a series of targets with a deadline of 2015.

This paper is an overview of the imbalance of economic and social development in ASEAN. Social development must be viewed as an end in itself and not just a means for attaining economic growth. Growing socioeconomic inequality often triggers crime and political and civil unrest. Section 1 discusses the evolution of socio-economic imbalances in ASEAN. Section 2 analyzes the causes of the imbalance while Section 3 examines the policy and actions taken by ASEAN countries. Section 4 concludes with a brief discussion and policy recommendations.

1. Evaluation of Socio-economic Imbalances in ASEAN

Most ASEAN countries have shown a strong commitment to rapid economic development. However, social development has been lagging behind economic development. This has given rise to distorted development in many countries. Serious development problems of poverty, inequality and unemployment have lingered even in economically advanced Singapore. These problems have been exacerbated in the wake of the economic crisis. In order to harmonize social development with economic growth, ASEAN states must to be more proactive in their development agendas.

High poverty and rising inequality could have serious consequences for the region's efforts to narrow the still astonishingly high income gaps which exist between it and the developed nations. High levels of poverty and inequality could slow the process of narrowing and eventually eliminating the income gaps by complicating reforms, reducing the quality of institutions and policies, undermining social cohesion, endangering social and political stability and making growth unsustainable.

1.1. Poverty

The Asia-Pacific region is home to about 126 million people living below the poverty line[1] (Table 1). Developing countries in ASEAN still account for the majority of the world's poor, and they also have a high proportion of undernourished people. Poverty reduction remains a significant challenge, even despite the fact that the region's rapid growth has led to a dramatic reduction in the level of extreme poverty. Poverty remains predominantly a rural phenomenon, and the poor are often concentrated on marginal lands. Sustainable productivity increases are urgently required to meet the Millennium Development Goals related to food security and poverty reduction. This will require faster and more widespread adoption of technological solutions and approaches to adding value than is currently the case. This issue raises questions about the value and sustainability of the current development in this area, where there are millions of people in a state of extreme poverty, but also where no fewer people have become rich quickly. Most of the poor are concentrated in rural areas, and agriculture is their main livelihood. Stakeholders need to work together more effectively within countries and across the region to focus on transforming the outputs of agricultural research into development outcomes.

Table 1: Poverty Index in Southeast Asia

Countries	GDP Per capita (2004)*	Poverty Index**
The Philippines	4 614	15,3
Laos	1 954	36,0
Vietnam	2 745	15,7
Indonesia	3 609	18,5
Myanmar	1 027	21,6
Singapore	28 077	6,3
Brunei	19 210	-
Malaysia	10 276	8,3
Thailand	8 090	9,3
Cambodia	2 423	39,3

Note: * Total domestic product per capita by purchasing power by $.
** The index measuring the overall shortage of health care (mortality rate from 0 to 40 years), education (adult illiteracy) and living standard (access to pure water and malnutrition in children under 5 years). The closer the index is to zero, the more positive the situation.
Source: UN and UNDP 2006

[1] UN-ESCAP; *"Statistical Yearbook for Asia and the Pacific 2011"*, UN MDG Indicators database. World Bank, World Development Indicators.

Using the $1.25-a-day poverty line (based on 2005 purchasing power parity (PPP)), the incidence of income poverty declined from 39.1% to 18.8% during the years 1990-2005 (Table 2)[2]. The decline in percentage-point terms was most pronounced in Cambodia (37.1), followed by Indonesia (32.8), Laos (30.2), Vietnam (11.4), Thailand (9.0), The Philippines (7.1) and Malaysia (1.4).

Table 2: Income Per capita and Poverty Incidence in ASEAN Countries

Economy	GDP Per capita ($2005 PPP)		Average Annual Growth Rate	Headcount Ratio (%) $1.25 a day (in 2005 PPP)			Headcount Ratio (%) $2 a day (in 2005 PPP)		
	1990	**2008**	**%**	**1990**	**2005**	**Change**	**1990**	**2005**	**Change**
Southeast Asia	**2,575**	**4,661**	**3.4**	**39.1**	**18.8**	**-20.3**	**66.0**	**44.6**	**-21.4**
Brunei	49,438	…	…	-	-	-	-	-	-
Cambodia	…	1,760	…	77.3	40.2	-37.1	91.8	68.2	-23.6
Indonesia	2,077	3,674	3.2	54.3	21.4	-32.8	84.6	53.8	-30.8
Laos	947	1,986	4.2	65.9	35.7	-30.2	89.2	70.4	-18.8
Malaysia	6,646	13,139	3.9	1.9	0.5	-1.4	11.1	7.8	-3.3
The Philippines	2,385	3,244	1.7	29.7	22.6	-7.1	54.9	45.0	-9.9
Singapore	23,855	45,553	3.7	-	-	-	-	-	-
Thailand	3,769	7,120	3.6	9.4	0.4	-9.0	30.5	11.5	-19.0
Vietnam	902	2,574	6.0	34.2	22.8	-11.4	65.3	50.5	-14.8
Total	**1,631**	**4,430**	**5.7**	**52.3**	**27.1**	**-25.2**	**79.4**	**54.0**	**-25.3**

… = data not available; - = data not available and poverty likely negligible;
Source: World Bank, World Development Indicators Online and PovcalNet Database.

It is also true that large proportions of the populations live just above the poverty lines and could easily slip into poverty given economic shocks. Assuming a mild

[2] The year 2005 is the latest year for which internationally comparable poverty data are available for a broad cross-section of countries.

slowdown due to the global economic crisis – with per capita GDP growth in 2008, 2009 and 2010 at 1 percentage point lower than the 2007 level – an additional 33.5 million would live below the $1.25-a-day poverty line in 2010 in developing Asia. Much slower growth would lead to a higher number of additional poor people[3].

An additional factor to consider is that, the poor do not live only in poor countries. The numbers of poor people are increasing in the average-income countries and in unstable countries. This reflects a downside trend resulting from globalization - it increases the gap between the segments of the population in a country, and makes the situation more volatile in countries without strong political institutions.

1.2. Inequality

An emerging issue for developing Asia is rising inequality, which has raised concern that the benefits of spectacular growth have not been equitably shared. Persistently high and growing inequality in access to basic social services, such as education and health care, exacerbated by income inequality, is also a significant concern.

The distributional consequences of economic growth and development in Southeast Asia have been the centre-piece of public and policy debates. Rising inequality has evidently posed a serious threat to inclusive growth and the accomplishment of the Millennium Development Goals (MDGs).

The region is at a critical juncture when seeking to ensure that all enjoy the fruits of growth equitably. Although the past two decades witnessed a persistent decline in poverty in the region, it has been apparent that the income of the rich has increased at a much faster pace than that of the poor. According to the World Bank's recent Gini[4] estimates, income distribution is the most uneven in Cambodia, Malaysia, the Philippines and Thailand; whereas inequality in Indonesia, Laos and Vietnam is on a par with the levels of the fast-growing economies such as China and India.

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[3] ADB 2009.

[4] The Gini coefficient measures the inequality among values of a frequency distribution (for example levels of income). A Gini coefficient of zero expresses perfect equality, where all values are the same (for example, where everyone has an exactly equal income). A Gini coefficient of one (100 on the percentile scale) expresses maximal inequality among values (for example where only one person has all the income)

In ASEAN developing countries, primary school-age children from households in the poorest quintile are almost 3 times more likely to be out of school than those from the richest quintile, and the childhood mortality rate for the poorest quintile is 2-3 times higher than for the richest quintile. In The Philippines, for example, primary enrolment and measles immunization – the latter with significant impact on child mortality – are worse today than in 1990[5]. For other developing countries in ASEAN such as Vietnam, it is widely believed that even though they are on track to meet the MDGs of halving the proportion of people living on less than the $1.25-a-day poverty line, they are unlikely to meet several non-income MDG targets. According to Economic and Social Commission for Asia and the Pacific (ESCAP), Asian Development Bank (ADB) and United Nations Development Programme (UNDP) (2010) report, while the region has made good progress in a number of indicators, considerable variations exist between urban and rural areas and across sub-regions and the 2008 global financial crisis has revealed the region's vulnerability to setbacks.

Given the economic diversity in ASEAN, with the richest country (Singapore) having a per capita GDP compared to the poorest country (Myanmar) (only about 0.6 % of Singapore's per capita GDP), and the fact that the more prosperous countries such as Singapore, Malaysia and Brunei have cornered the lion's share of trade and investment flows in the region, it is not too difficult to see which countries will benefit from a development agenda that promotes greater trade and investment liberalization, and which countries will be left behind. If the situation of uneven growth is not resolved, development based on the economic potential in Southeast Asia will soon become limited by political instability and loose societal relations.

High poverty and rising inequality could have serious consequences for the region's efforts to narrow the still astonishingly high income gaps which exist between it and the developed world. Assuming that each ASEAN developing country will continue to grow at the rate registered in 2010, to reach Singapore's per capita GDP level would take 26 years for Malaysia, 34 years for Thailand, 41 years for Indonesia, and 48 years for the Philippines[6].

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[5] Ali Ifzal (2007). *"Pro-poor to Inclusive Growth: Asian Prescription"*. ERD Policy Brief No. 48. Manila: Asian Development Bank.

[6] DBS Group Research (2011). *"Imagining Asia 2020 – Make Way for the Asia Giant"*. DBS Bank Ltd. Co. Reg. No.: 199901152M.

High levels of poverty and inequality could also slow the narrowing and eventual elimination of income gaps by complicating reforms, reducing the quality of institutions and policies, undermining social cohesion, endangering social and political stability, and making growth unsustainable in each country of the region.

1.3. Aging Populations

The aging populations in the region are growing and will continue to grow in the coming years, both in absolute numbers and as a percentage of the populations. Southeast Asia is facing the rapid aging of population among the developing countries. The relative increase of the aging population is becoming a typical feature of the aging process in the region. One other important aspect of the aging process is that the ratio of women in the older age group is increasing.

The South-East Asian region is projected to register a 435% increase in its older persons population between 2000 and 2050 – a rise from 39.5 million to 175.8 million in less than half of a century[7] (Table 3). Such a rapid increase in the population of older people has profound and far-reaching social, economic and political implications. These demographic trends have mostly resulted from decreasing fertility rates and increasing life expectancy. In addition to such demographic changes, the phenomenon raises the concern that economic transformation, with urbanization and increasing migration, might weaken the traditional family structure, which would leave increasing numbers of older people without the traditional support and care of their families. A large number of older people in the region also have to grapple with income insecurity due to the lack of social protection. In developing countries, only about 30 % of older people receive any form of pension. Most countries' health systems have limited capacity to meet the need for geriatric care services, and few have been adapted to address the range of chronic conditions facing older people; such conditions require a multidisciplinary continuum of care, including specialized diagnostic and therapeutic care. In addition, there is rising demand for age-friendly and barrier-free environments, including housing, infrastructure and public facilities,

[7] Southeast Asia Conference on Ageing 2010: Improving Well Being in Later Life; 17 - 18 July 2010, Grand Millennium Hotel, Kuala Lumpur, Malaysia.

to enable the continued freedom of movement and active participation of older people in society.

As the impact of population ageing on socio-economic conditions may be amplified by the speed at which it occurs, it is important to consider not only the degree of population ageing but also the pace of change in the age structure. When the proportion of older persons in the total population increases rapidly over a short period, as is currently the case in some developed and developing countries, it becomes particularly difficult for the institutions to adjust.

Governments will increasingly be under pressure not only devising new mechanisms to address issues emerging from the aging population, but also to ensure the long term viability of their programs' social benefits, while minimizing the negative impact on the economy. The nature and complexity of these challenges, and their level of seriousness, will depend on the stage of economic development, the aging period and the level of preparation of the country concerned.

Table 3: Population Ageing (Percentage of 60+ to Total Population) by ASEAN Country and Year

	1950	2000	2025	2050
Brunei	3.8	3.9	11.3	20.9
Cambodia	4.5	4.6	8.3	16.2
Indonesia	6.2	7.7	13.7	24.8
Laos	3.9	5.4	7.4	14.3
Malaysia	7.3	6.2	13.2	22.2
Myanmar	5.7	7.7	13.0	23.6
Philippines	5.5	5.5	10.0	17.9
Singapore	3.8	10.6	31.7	39.7
Thailand	5.1	9.7	19.0	15.2
Vietnam	7.0	7.8	15.2	29.5

Source: UN World Population Prospects 2008 Revision Vol.2.

The fast pace of the demographic transition towards an ageing population may have adverse effects on economic performance and prospects, due to a shrinking labor force, lower saving and investment rates and rising health-care and pension costs. Reforming policies and institutions would be vital for sustaining economic growth and preventing a decline in standards of living.

The "feminization" of the aging population is notable, with women constituting the majority of the older population and an even greater majority of the "oldest old"

population (80 years and older). Older women, more so than older men, tend to live alone due to the death of a spouse. Older women are also more vulnerable to poverty and social isolation, and face greater risks of physical and psychological abuse due to discriminatory social attitudes.

The predominance of women in the older and oldest old population presents itself as an ever more daunting challenge, because a higher proportion of older women than of older men are economically inactive, not literate and single. Table 4 summarizes the gender differences in economic activity, literacy and marital status. Timely policy measures are thus needed by Governments in the region in order to make the vital social and economic adjustments in preparation for the region's rapid transition to an ageing society.

Table 4: Gender Differences in the Socio-economic Circumstances of Older People

Country	Percentage of Population of 65 years in the Labor Force, 2000		Percentage of Older People who are Illiterate, 2000		Marital Status (percentage of older people who are single)		
	M	**F**	**M**	**F**	**Year**	**M**	**F**
Cambodia	39.7	26.2	35.4	85.8	2004	19	69
Indonesia	48.5	24.1	31.3	63.3	1990s	16	64
Laos	53.6	27.1	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	38.6	17.0	30.2	64.4	1990s	16	56
Myanmar	66.7	32.9	17.4	45.3	2001	24	46
Philippines	54.5	26.2	14.4	18.1	1990s	19	51
Singapore	16.3	4.3	13.8	50.0	1990s	17	55
Thailand	37.5	17.3	10.0	21.3	1990s	20	53
Vietnam	43.7	26.1	8.7	28.6	n.a.	n.a.	n.a.

Sources: For labor force participation and illiteracy UNDESA (2002a); for marital status UNDESA (2002b): except Cambodia (marital status) - Cambodia (2006); Myanmar (marital status) - Myanmar (2005).

What key challenges are countries likely to face as a result of the ageing situation seen to be emerging during the next five decades? While populations of some countries in the ASEAN, namely Singapore and, to a lesser extent, Malaysia, and Thailand, have now been ageing for a considerable period of time, it is in Europe and North America that several more developed countries have had much longer experience of population ageing. In discussing the socio-economic, cultural and

political implications of population ageing, evidence from the more developed countries is also cited wherever relevant evidence from the ASEAN is lacking.

In the light of the main features of the changing demographic scenario characterizing population ageing as outlined above, the various challenges arising as a result of the ageing of a country's population can be grouped into the following categories:

(a) Rising demand for health services
(b) Growing requirements for long-term care
(c) Declining family support
(d) Increasing needs of income and social security
(e) Extra attention during special circumstances

1.4. Young Workers and Employment

According to the International Labor Organization (ILO) the economic growth slowdown in Southeast Asia could cause the unemployment rate to rise, causing competitiveness to fall.. The unemployment rate in the 10-member Association of Southeast Asian countries is high. The average labor productivity of this sector has lagged behind China and is not much higher than India.

The Southeast Asian region has experienced some of the highest growth rates in the world, with investments in skills playing a significant role in helping national economies to adjust to changes in working practices, advances in technology, and challenges associated with globalization. In some countries this process has been more successfully managed and significant advances have been achieved in growth rates and employment levels, but in others it has resulted in stagnation of economic sectors, underemployment, rising unemployment levels and social exclusion for large sections of society (ILO 2008).

The economies of the ASEAN countries face many difficulties due to declining exports as the credit crunch has increased in the U.S. and Europe. Countries in Southeast Asia last year agreed to open their markets further to create a regional economic model similar to the European Union, in 2015. Many scholars argue that countries in this region need to increase competitiveness as China and India, two of the world's fastest-growing countries, are attracting much global capital.

In particular, in this region, the number of unemployed young people is more than that of older workers. The average is 5 young people per adult out of work. This is because older workers are experienced while young tend to prefer more work experience, also known as "leapfrogging". Young people, moreover, are vulnerable to losing their jobs in volatile, short-cycle industries. The high proportion of young unemployed workers creates disturbing problems for society, such as increased crime, the increasing numbers of drug addicts, and the cost to the state of dealing with these problems.

In case of Vietnam, the transition to a market economy involved drastic changes in the labor and job markets. It is important to note that the positive results achieved from "Doi Moi"[8] would have had both direct and indirect effects on employment, equity and social welfare. In spite of the new opportunities, and the diversification that opened up further economic opportunities, the shift toward a market economy also involved changes resulting in job losses and layoffs for many workers. In general, such a transition places new constraints on young people who find themselves caught between old and new social norms and values. As a result, their expectations and perceptions of work diverge. A "good job" is not just a source of income; it also provides economic standing, self-esteem, status and social capital. And unless girls find good jobs, their bargaining power in marriage and control over their fertility will remain limited. In addition to skills and educational achievement, the work participation of young people has significant implications for their development.

Employment has become a major concern for young people. Youth unemployment and underemployment have increased rather than decreased in Vietnam (United Nations [UN], 2003). According to official data from the Ministry of Labor, Invalids and Social Affairs ((MOLISA), 2004), the country's youth unemployment rate was over 14 % in 2003 with sharp gender and regional differentials. The age group 15–24 years old forms the bulk of the unemployed young people (26 %). Young people aged 15–24 find it more difficult to get jobs than do adults (25 years of age and above). For the country as a whole, young people in the

[8] "Doi Moi" is the name given to the economic reforms initiated in Vietnam in 1986 with the goal of creating a "socialist-oriented market economy". The term "Doi Moi" itself is a general term with wide use in the Vietnamese language. However the Doi Moi Policy refers specifically to these reforms.

labor force are twice as likely to be unemployed as the adult population. Youth unemployment accounts for 45 % of all unemployment in Vietnam. The high levels of unemployment and underemployment in rural areas have resulted in out-migration from agricultural sectors to urban centers. Young migrant workers may have special problems in obtaining employment, as they are more likely to leave school at early ages and enter low-paid and unskilled jobs.

Many out-of-school young people are working to earn a living for their families in low paid work and petty trade. Apart from low productivity, a lack of job opportunities can have significant social consequences. Experience from other countries shows that unemployment can lead to a life of violence, drug abuse, vandalism, crime and other social problems. Early school leavers without regular employment may turn to risky avenues for income and livelihoods such as prostitution and crime. Some become victims of HIV/AIDS and human trafficking.

1.5. Diseases

The latest research shows that Southeast Asia is currently one of the world's fastest growing areas. However, the 600 million people in this region also are faced with a health risk. In terms of health criteria, progress has been mixed, with a continuing lack of effective prevention programs against common diseases such as tuberculosis in many countries. New diseases such as SARS and avian flu present particular challenges. Overall HIV prevalence rates in the region are low but rising, and the absolute numbers involved are very large. Access to improved water sources and sanitation is increasing, albeit at a slow rate, and from a low baseline.

By the end of 2009, an estimated 1.58 million people were living with HIV in the region[9], although from 1999 to 2009, the number of total new infections declined by more than 20%. Equally encouraging is that wider access to services preventing mother-to-child transmission of HIV has led to a 15 % decrease in new infections of children aged 0 to 14 during the same period.

Positive developments have occurred recently, with a number of countries in the region taking steps to provide environments that decrease marginalization and stigma, including programs to address these issues specifically, lifting HIV-related travel

[9] South East Asia HIV & AIDS Statistics (http://www.avert.org/).

restrictions and decriminalizing consensual same-sex relations among adults, either through legislation or court judgments. Such developments need to be built upon in order to achieve greater success across the region in terms of access to HIV prevention, treatment, care and support.

Southeast Asia is also faced with the emergence of new diseases, of which some are able to mutate into a pandemic, spread throughout the world. This may be caused by the simultaneous effects of global warming and health surveillance system weaknesses.

In recent years there have been two examples of this risk. The pneumonia-like Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 originated in Asia and then spread round the world killing nearly 800 people. Bird flu followed. These two cases have raised concerns about the possibility of new diseases spreading in the region. Southeast Asia is a "hot spot" of emerging infectious diseases, especially from animal diseases such as avian influenza, caused by humans and animals living so close together, with the constant threat of pandemic.

2. Causes of the Problems and Challenges

Southeast Asia has been pressed by many social challenges associated with rapid economic development, driven by integration, science and technology, and innovation. Social development has behind economic, especially in poorer areas, because of poor education, health and human settlement facilities.

2.1. Causes of Poverty and Inequality

People in Asia face many risks in life. They produce without effective protective institutions, falling back into poverty as natural disasters, diseases, pests, accidents (including traffic accidents) take their toll. They face unemployment as a result of the fluctuations of world markets for both inputs, including energy, and outputs. And they may be affected by unforeseen policy changes, less than transparent administration systems, ineffective bureaucracy and corruption.

Economic development at the rates of past decades is not sustainable into the future. High growth rates have arisen mainly as a result of direct investment, Overseas Direct Assistance (ODA), remittances and income from natural resources, while domestic capital investment has been low, such as credits do not change in time, investments in people are at high levels but the effect is limited, the number of workers trained to meet the market demand is low, farmers have difficulties in accessing to credit of state banks

In some countries such as Vietnam, poverty and HIV/AIDS continue to destroy childhood life. Children do not inherit the right to a childhood love, care and protection of home and family, or be encouraged to develop their full potential. As they mature, their children in turn are at risk of deprivation because of problems repeated from generation to generation.

Some countries in the region, especially the least developed countries, landlocked developing countries, have suffered multiple effects owing to the food and energy crises and the global financial and economic crises in recent years.

The food and fuel crises that occurred just prior to the economic crisis had a devastating impact on the poor. High food prices affect the poor disproportionately, as they spend a large portion of their income on basic food commodities. Consequently, rising food prices may push more people below the poverty line. A strong and sustained growth momentum is needed to tackle the problem of poverty and food insecurity. Countries need to continue pursuing economic reforms to improve productivity, particularly that of their agricultural sector, to strengthen public institutions, improve economic governance, enhance financial inclusion and build social safety nets to protect the more vulnerable segments of the population.

The consequences of climate change are also placing tremendous stress on these countries, reversing their development gains in many instances. The agricultural sector, which is the backbone of many least developed countries and landlocked developing countries, has been neglected for almost a decade. The external environment has been equally challenging. Many of the commitments made by development partners in support of countries with special needs have remained unfulfilled. Although there have been some encouraging signs in recent years with regard to official development assistance, ODA may not be maintained at levels

sufficient to meet the needs of least developed countries, landlocked developing countries and small island developing states, as their traditional development partners face severe budgetary constraints due to the global economic crisis.

In addition, prolonged poverty and loss of equity has become increasingly serious in Southeast Asia as a result of negligence in agriculture, which has been going for decades. The analysis in the economic- social situation report in the Asia-Pacific 2008 Survey by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) showed that the development strategy and economic policies of this area have ignored the agricultural sector in a systematic way, despite the fact that agriculture is the main livelihood of the poor and provides employment to 60% of people of working age in the region.

If the agricultural sector remains neglected, it will be hard to reduce poverty significantly and loss of equity will continue. This will destroy the future economic development of the countries as well as social cohesion among communities.

Moreover, unequal access to education, particularly tertiary and vocational, is widespread, and translates into unequal access to opportunities and, ultimately, high-pay jobs. The Asian Development Bank (ADB) estimates that overall inequality would be significantly reduced by about 13-16% if educational disparities were reduced.

The other factor driving inequality in the region is the model of export-oriented growth of most Southeast Asian economies, which has often featured incentives such as tax exemptions on capital gains, establishment of industrial parks and capital account liberalization. As a result, profit has focused on the owners of capital - the minority of populations.

Additionally, social protection in developing Southeast Asia is problematic. The coverage is limited, and the levels of benefits do not suffice to shield the poor against the ripple effects of negative shocks. The arising inefficiencies are attributable largely to their limited fiscal space for social safety nets, which in turn puts sustainability of the social protection programs at risk.

The last driving factor of inequality goes with untamed corruption and deprived institutional quality. They have allowed rent-seeking among the elites and people in

power to take surpluses away from the majority of the societies through disguised policies and reforms.

If the surging issues of poverty and inequality remain unaddressed, economic potentials in Southeast Asia will soon reach their limit through deteriorating political stability and social cohesion, on top of resource misallocation and excessive concentrations of wealth. Several regional policy options need to be made to address ever-increasing disparities in the region.

2.2. Causes of Ageing Populations

The increasing proportion of older people in the region's population is the outcome of the demographic transition – the lowering of both fertility and mortality levels. Falling fertility leads to a reduced number of children while lower mortality prolongs the survival of older people. Since neither fertility nor mortality trends are likely to reverse, at least in the foreseeable future, countries will have to adjust to and cope with the ageing of their populations.

Between 1950 and 2000, the total fertility rates (TFR) at the global level almost halved with a greater decline in the less developed countries. From 2000-2050, while the decline in TFR is expected to continue in the less developed countries, though at a slower rate, it is expected that there will be an improvement in fertility levels in the more developed countries[10].

The pace of aging in countries in the 1990s was faster and stronger than the previous decades. declining birth rates will promote the aging process in about 10-20 years. The explosion of births after national liberation in countries was much higher than the number of those at war. After that period of time, due to the implementation of policies on family planning, fertility declined sharply strongly impacting on the process of aging. With birth rates is declining, while life expectancy is rising, so the population of a country in general becomes older.

Trends in mortality are reflected in changes in life expectancy and the survival rate. Life expectancy at birth is the average number of years a newborn would live if age-specific mortality rates at the time of birth were to continue. The survival rate to

[10] Some researchers argue that there can be no limit to declines in the level of fertility. See, for example, Goliani (1998). See also Coleman (2001).

age x years is the proportion of newborns who would reach that age if the age-specific mortality rates at the time of birth were to continue for the next x number of years. Declining mortality rates are reflected in improvements in life expectancy at birth and in survival rates.

In 1950 average life expectancy at birth in the more developed countries s was 66 years - 25 years more than in the less developed countries. Starting from a much lower base, the less developed countries were able to achieve greater improvements in life expectancy: adding 23 years by 2000 compared to an addition of less than 10 years in the more developed countries. The differences are projected to further narrow by 2050. Similarly, there will be a continuous improvement in the survival rate to age 60 years (Table 5). Improvements are expected to slow down during the period 2025-2050.

Table 5: Survival Rate to Age 60 years, 2000 - 2050

Region	**Percentage Surviving to Age 60 years**		
	2000-2005	2025-2030	2045-2050
World	73.8	82.1	86.7
Developed	86.0	91.3	93.5
Developing	71.7	80.8	85.9
East Asia	84.5	90.2	92.4
S.E. Asia	75.7	86.1	89.9

Source: UNDESA (2002a) – World Population Ageing 1950-2050. United Nations Department of Economic and Social Affairs Division, Population Division, New York.

As has been noted, population ageing is a consequence of fertility and mortality declines. With both fertility and mortality rates known to be lower and to decline more gradually in urban areas than in rural areas, an "a priori" assumption would be that urban populations age faster than rural populations. However, in reality population ageing has been observed to manifest itself earlier and advance more rapidly in rural areas. As younger family members move to the cities more and more of the elderly are likely to be left to look after themselves. Urbanization and the transition to industrial societies might therefore be seen as contributing to a weakening of family ties. In the absence of adequate welfare systems, those left behind in the rural areas are likely to suffer relative, if not absolute, deprivation.

2.3. Young work and employment

The reasons for the high level of unemployment among young people are two-fold. First, the rate of growth of the labor force has been high. It grew by 2.4 % in South-East Asia during the past decade due to high birth rates, an increasing trend for women to enter the labor force and an extended working age. The population bulge created by the higher fertility rates in the past is a major reason behind the increasing labor supply and high unemployment in countries. The labor force participation rate has historically remained low due to low female participation rates (Table 6). This implies that the increasing participation of women in the labor force could result in even higher rates of unemployment in the future in some parts of the region. Secondly, the rate of job creation did not keep pace with the growth in the labor force as reflected in the declining employment to population ratio.

Table 6: The 2012 Gender Equity Index[11]

Country	Education	Economic Activity	Female Empowerment	GEI 2012 Final
Brunei	0.99	0.78	0.39	0.72
Cambodia	0.71	0.73	0.21	0.55
Indonesia	0.93	0.57	0.36	0.62
Laos	0.75	0.69	0.23	0.56
Malaysia	0.98	0.40	0.31	0.56
Myanmar	0.97	0.65		
The Philippines	1.00	0.67	0.61	0.76
Singapore	0.94	0.71	0.40	0.69
Thailand	0.97	0.77	0.39	0.71
Viet Nam	0.95	0.75	0.41	0.70

Source: The Gender Equity Index (GEI), Social Watch 2012.

Some countries in Southeast Asia are more affected by the financial crisis than others. The global economic downturn, coupled with heightened risk aversion in financial markets, has begun to hurt investment in the region. However, while economic growth is generally constrained by the financial crisis, it is less so in

[11] The Gender Equity Index (GEI) measures the gap between women and men in education, the economy and political empowerment.
Social Watch computes a value for the gender gap in each of the three areas in a scale from 0 (when for example no women are educated at all and all men are) to 100 (perfect equality). The GEI, in turn, is the simple average of the three dimensions. In Education, GEI looks at the gender gap in enrolment at all levels and in literacy; economic participation computes the gaps in income and employment and empowerment measures the gaps in highly qualified jobs, parliament and senior executive positions.

Southeast Asian countries than in many other developing countries because of their high savings rates, good management of public deficits over the years and limited toxic assets on their banks' balance sheets.

The impact of the crisis has been most evident in the decline in international demand, especially for clothing, electronics and other consumer goods produced in the region. The policy lessons of the crisis are clear: countries in Southeast Asia would benefit from greater focus on domestic and regional markets, many of which have a growing middle class and a large untapped demand.

Unemployment is especially hitting young people, with rates in Southeast Asian countries on average three to four times higher than adult unemployment rates (youth unemployment in developed countries is usually 1.5-2 times greater than adult unemployment). Part of the problem stems from demographic shifts in the structure of the population and the fact that many of the jobs that formerly employed young people no longer exist. This contributes to social instability, and governments should investigate how active labor market policies can integrate young people and provide them with the competencies and opportunities for decent and productive work.

In addition young people account for around 20% of the population[12], but for half of the unemployed in the region. At the same time, the risk of unemployment is much higher for young workers than for older workers. This is because mature workers have much more experience than the young, who always like to try many different types of work. Young people are also slow to adapt to the cyclical issues such as economic cycles often be short and fast. They are the last to be chosen for work and the first to be fired when the business is in trouble. Another reason for youth unemployment is that economic development has slowed, and young people are not completing their education, for example in the Philippines and Indonesia. They thus do not have the skills to be able to secure their future.

In addition, the negative outlook of the global economy also causes an increased rate of regional unemployment. According to the ILO, the number of unemployed workers in 2012 increased by more than 4 million people compared to 2007, nearly hitting the record of 75.4 million during the economic crisis in 2009. ILO forecasts

[12] ILO, "*Global Employment Outlook"*, April *2012* projections.

that this situation will last until 2016. In East Asia, the rate of youth unemployment is set to be 2.8 times higher than the adult rate[13].

Southeast Asia has long been considered a place of abundant human resource. If no measures are taken to create jobs and sustainable works for young workers, however, the ASEAN countries will not be able to promote this human potential, and social stability will be threatened.

2.4. Causes of Diseases

The changing composition of the Southeast Asian population is occurring at breakneck speed, especially its speed of urbanization. In this region , as in other areas there is a transition from infectious diseases to chronic diseases. But because the population density in cities is so great the countries in the region still have to face the threat of infectious diseases.

Despite the broadly positive health trends, key affected populations within the region continue to be particularly vulnerable to the HIV epidemic. According to some estimates, 75 % of all HIV infections in the region are among: (a) injecting drug users and their partners; (b) female sex workers, their clients and their clients' partners; and (c) men who have sex with men[14].

For other diseases, there are many factors that are likely to spread diseases in Southeast Asia: Growing populations, many of them mobile, rapid urbanization, environmental change, promotion of agricultural livestock and deforestation exacerbated. The phenomenon of global warming can also promote the spread of emerging infectious diseases in the region, particularly those diseases transmitted by insects, such as dengue. High temperatures and heavy rainfall are conditions for the insects to thrive.

The region facing is another problem, in that there are considerable differences in the economies and health systems of 10 countries in Southeast Asia, thus control of the spread of the disease face many difficulties. For example Singapore is urban, and has

[13] ILO, "*Global Employment Outlook"*, April *2012* projections.

[14] South East Asia HIV & AIDS Statistics (http://www.avert.org/).

a per capita GDP of 34500 USD, while a Laos is agricultural, with per capita GDP of only 904 USD in 2008 (World Bank database)

Countries need to act promptly and resolve the problems of infectious diseases such as HIV, SARS, and H5N1 bird flu in this region.

3. Policy in and Actions in ASEAN Countries

What measures have countries in ASEAN taken to address the challenges arising as a result of the socio-economic imbalances? This Section provides a brief review of the main policy responses and measures taken by the countries, particularly since the turn of the century. As almost all the countries have contributed to as well as benefited in terms of policy guidance from relevant initiatives at the regional level, an overview of these initiatives is provided before reviewing the policy initiatives of individual countries.

3.1. Policy and Actions against Poverty and Inequality

By international standards, South-East Asia has done remarkably well in both economic growth and poverty reduction. For 20 years, the Southeast Asian region (comprised of Cambodia, Indonesia, Laos, The Philippines, Thailand and Vietnam) made continuous progress in reducing income poverty and enhancing achievements towards the Millennium Development Goals (MDGs). Historically, growth has been accompanied by rapid poverty reduction, especially in Indonesia, Malaysia, Thailand and Vietnam.

These achievements have not, however, been uniform across countries in the region. Indonesia, Thailand, and Viet Nam have posted rapid economic growth and are well on their way to achieving their MDGs. The same cannot be said for Cambodia, Laos, Myanmar, and The Philippines where rates of growth of output were comparatively low and population growth rates were high. Even within countries, economic growth and poverty reduction exhibit diverse performance levels (Balisacan, 2004; Balisacan and Fuwa, 2004). The nature of growth, not only its speed, matters to poverty reduction. Economic growth in South-East Asia during the

past 20 years has been quite impressive. This growth was accompanied by sharp declines in the share of agriculture in national output and employment. The poverty response to the growth and structural transformation was equally remarkable.

Agriculture contributes to development as an economic activity, as a livelihood, and as a provider of environmental services. These contributions differ in the three rural worlds:

a) agriculture-based countries, where agriculture accounts for 32 % or more of GDP growth on average;

b) transforming countries, where agriculture contributes on average only 7 % to GDP growth; and

c) urbanized countries, where the contribution of agriculture to GDP growth is only 5 % or less on average.

In the ASEAN region, three countries, namely, Cambodia, Laos, and Myanmar belong to the first category of agriculture-based countries with agriculture accounting for 33.1 %, 50.2 %, and 42.9 % of GDP, respectively.

Five countries, namely, Indonesia, Malaysia, The Philippines, Thailand and Viet Nam, belong to the second category of transforming countries with agriculture accounting for 15 %, 7.7 %, 19.1 %, 9.3 %, and 20.2 % of GDP, respectively.

Two countries, namely, Brunei and Singapore belong to the third category of urbanized countries with agriculture accounting for 2.1 % and 0.1 % of GDP, respectively.

Overall, agriculture remains a significant sector of the economy of the ASEAN region as a whole and continues to be an important factor in sustainable development and poverty reduction.

A total of 23 projects in agriculture (including agro-forestry and fisheries and aquaculture) have been funded by the ASEAN Foundation for a total amount of US$3.8 million or nearly 22 % of the total amount of all the projects funded by the Foundation[15]. Of these, 18 projects have been completed amounting to US$2.41 million while five projects are still ongoing with a total funding of US$1.39 million. All of these projects have been funded from the Japan-ASEAN Solidarity Fund, a

[15] The financial support of the Government of Japan, through the Japan- ASEAN Solidarity Fund, to the twenty-three projects in agriculture and related areas listed in this paper, is gratefully acknowledged.

contribution from the Government of Japan to the ASEAN Foundation amounting to $20 million.

There are three effective instruments in using agriculture for development: first, by increasing access to assets, namely, land, water, and human capital; second, by making smallholder farming more productive and sustainable; and third, by moving beyond farming by creating a dynamic rural economy and developing the skills to participate in it (The World Development Report, 2008).

Farmers and agricultural workers are important stakeholders in the region. Rural poverty remains one of the important challenges to governments and the international community. For this reason, farmer organizations, agricultural workers, and rural communities will remain an important focus of the work of the ASEAN Foundation in promoting ASEAN identity and awareness, addressing socio-economic disparities and alleviating poverty in the region.

After 20 years of sterling growth in Asia, which has had a dramatic impact in reducing poverty, rising inequality is now at the top of the public policy agenda. For developing Asian economies as a whole, their Gini coefficient—an income-inequality measure—rose to 0.46 in 2010 from 0.33 in 1990. A reading of zero means income equality, while a reading of one means complete inequality.

In Indonesia, a major social safety-net program was initiated to strengthen the ability to cope among those people affected by the 1997-98 Asian financial crisis. The main objectives of the program include: ensuring the supply of basic staples at affordable prices through subsidies; creating employment opportunities by promoting labor-intensive production and reinvigorating economic activities, especially through small and medium-sized enterprises; and guaranteeing basic health and education services at prices that the general public can pay. In the area of health, drug prices were kept under control by fixing the exchange rate for the import of drugs and their raw materials far below the market rate. The government developed a program of scholarships for poor students as well as providing block grants to schools serving predominantly poor populations in order to prevent dropouts.

The Government of Malaysia has introduced direct and indirect measures aimed at minimizing the adverse social impact of the economic crisis. The objectives of the social programs are to prevent rapid inflation, ensure an adequate food supply and

minimize retrenchment. Measures to control inflation included direct subsidies for selected basic food items, the liberalization of food imports and the imposition of price controls on selected basic food items. Budget allocations for the social sector have been increased. Existing social safety nets have been widened and improved, and welfare payments to the hard-core poor have been increased.

In the Philippines, the government provided training grants for workers who lost jobs, and extended assistance in finding new jobs. The government also carried out various measures concerning food and health-care assistance to vulnerable groups affected by the crisis. The poor were provided with cash transfers. Stores were also set up to sell basic food commodities at below market prices. The government also distributed rice discount cards to poor families with a large number of children so that they could benefit from a significant discount on the price of rice.

Thailand launched a major "social investment project" by providing the poor with comprehensive assistance in the form of job creation, training and improved access to social services. In addition to providing help to the poor during the crisis, the project is designed to help build up long-term social capital. The project cost is estimated at US$ 462.2 million, a very large share of which is to be used to create employment opportunities and improve access of the population to certain social services such as health. In addition, a social investment fund has been established under the project. Amounting to US$ 120 million, the fund has gained much attention and will be used to develop community-based projects initiated, planned and implemented by the local population. Projects can be in the area of education and training, social welfare and community security, environmental protection and natural resources, and the development of culture and communities.

3.2. Policy and Actions Concerning Aging Populations

Most developing countries with low per capita income and widespread poverty are suffering from high population pressure. Thus, they require comprehensive population policies and programs for improving their growth and equity.

In the case of the ageing issue, it appears that overall the countries of ASEAN are aware of the need to face the challenges and many of them have taken some measures to address the situation.

Overall, as reported in a recent UN review[16] – three countries (Singapore, Thailand and Vietnam) view population ageing as a "major" concern.-, whilst the remaining countries of ASEAN cited population ageing as a "minor" concern,

Of all the countries in ASEAN, Cambodia has the lowest proportion of older people in its population, but faces a very high rate of growth in the older population which is projected to continue until 2050. The Government is cognizant of the emerging challenges and has identified the Ministry of Social Affairs, Labor, Vocational Training and Youth Rehabilitation (MoSALVY) as the coordinating national agency for issues relating to the elderly. The Ministry has formed an Older People's Association to encourage the participation of the elderly in the formulation of policies and programs. The Government's growing concern has been reflected in a variety of policies and plans.

The UN and other development partners, as well as an NGO (HelpAge International), have assisted particularly in capacity building and research. The National Committee for Population and Development is undertaking a literature review on the elderly in Cambodia.

In 2000 the older people constituted 7.6 % of Indonesia's total population. This proportion is going to increase to 12.8 % in 2025 and to 22.3 % by 2050. While the proportion of the elderly is not much higher than the average for South-East Asia, the number of older people exceeds 15 million. The Government has therefore taken a number of steps to address issues relating to the older population.

In 1993 the Government formulated the "Coordinating Minister for People's Welfare" Decree which made the Minister for Social Affairs responsible for promoting the status of older people. Highlights of policy on older people are (1) The enactment of Law 13 in 1998 on Older People's Welfare; (2) National Plan of Action for Older Person Welfare (2003-2008); and (3) Presidential Decree on the formation of the National and Regional Commissions on Ageing in 2004. The task of the National Commission on Ageing is to assist the President in coordinating the implementation of national policies and programs, as well as rendering professional advice and recommendations.

[16] UNDESA (2006). "World Population Policies". Department of Economic and Social Affairs, Population Division, New York.

Presently, older people's program development is focused on community-based home care (PUSAKA) and older person empowerment in the rural areas. The main focus of these programs is on poor and neglected older people; the majority are older women. Specific health programs for the elderly have been implemented, among others by establishing integrated geriatric services in hospitals and Community Health Services (PUSKESMAS).

With older people currently constituting less than 6 % of its population, Laos is still in the early stages of population ageing. The older population is however growing at a faster pace than total population, and the pace of ageing is projected to increase further during the second quarter of this century. Though for the immediate future the Government of Laos considers ageing to be a "minor" concern, it recognizes the inevitability of the population ageing process in the foreseeable future and has initiated measures to address the expected challenges. Ageing-related issues are dealt with by the Division of Older Persons in the Department of Social Welfare of the Ministry of Labor and Social Welfare. The Lao National Front is also involved in older people's issues. The Front is organized from Central to village level. Older people are considered as influential members of the community and family, and their active participation is sought in the activities of the Front and its development agenda.

The Government has undertaken a revision of the 1999 National Population and Development Policy (NPDP). The revision, now in its final stages, has been directed by the need to reflect emerging issues, one of which is population ageing. Care of the elderly has been added as an objective. UNFPA, the United Nations Population Fund assisted the Government in its efforts and has provided support for revision of the NPDP and the formulation of the national policy for the elderly (NPE).

At the turn of the century, Malaysia was faced with the population ageing scenario common to several other countries of the East and South-East Asian Region (ESEAR) – a relatively low proportion of older people in the population growing at a rapid pace. From 6.6 % in 2000, the proportion of older people in the population is expected to more than double to 13.4 % in 2025 and to exceed 20 % in 2050. Realizing the gravity of the emerging challenge, the Government has put in place several initiatives including a unified, holistic and multi-sectoral National Policy for the Elderly, and a Plan of Action for its implementation. The Policy was formally announced in October

1995 and the Plan of Action was published in 1998. The coordination of the implementation of the Plan of Action has remained the responsibility of the Department of Social Welfare, now under the Ministry of Women, Family and Community Development (previously the Ministry of National Unity and Social Development). Government's approach reflects its efforts at integrating older people in the mainstream of development efforts rather than being concerned with providing welfare assistance.

The population of older people in Myanmar is increasing at an annual rate of over 3 % and its proportion in total population is expected to increase from 6.8 % in 2000 to 12.1% and further to 21.6 % in 2050. Due to strong cultural traditions and the influence of religious teachings which inculcate a high regard for the older people, the Government does not feel the pressure of having to address the issue on a priority basis. Nevertheless, the Government has taken measures aimed at improving the welfare of the elderly. Through its Department of Social Welfare in the Ministry of Social Welfare, Relief and Resettlement, it provides rice, funds for food, clothes and the salaries of the administrators of the Homes for the Aged that have traditionally been established by religious and voluntary social organizations, for those who are aged 60 and above and in need of care for various reasons.

At the turn of the century, the proportion of older people in the population of The Philippines was less than 6 %. However, with the older population increasing at a high rate of 4 %, it is projected to exceed 10 % during the first quarter of this century. Though the ageing issue is not among its highest priorities, the Government has been aware of the situation and has taken a number of steps to enhance the well-being of older people and promote their positive contribution to society.

The Department of Social Welfare and Development (DSWD) is the agency responsible for coordinating ageing-related activities. In 2000 the Government approved and adopted the Philippine Plan of Action for Older Persons (1999-2004).

Singapore experienced the fastest growth in the proportion of older people in the region with an unprecedented annual rate of change of 4.2 % during 1975-2000. The older population is projected to increase at an annual rate of 5.2 % during 2000-2025. In the early 1980s, the Government began to recognize the likely impact an ageing population would have on society and set up the Committee on the Problems of the

Aged. The Committee commissioned the first National Survey of Senior Citizens in 1983, the results of which were published in 1984. An Inter-Ministerial Population Committee was set up in 1984. In 1988, the National Advisory Council on the Aged was formed to undertake a comprehensive review of the status of ageing in Singapore. Among the many recommendations implemented was the establishment of a National Council on Family and Aged (NACFA), located in the Ministry of Community Development.

The rate of growth of Thailand's older population during the last quarter of the 20th century at 3.7 % per annum was among the highest in the ESEAR. At the turn of the century, with older people constituting 8 % of its total population, Thailand had the second most aged population in South-East Asia. It is projected that Thailand's older population will continue to increase at a rapid rate, and its proportion of total population will increase to 17 % in 2025 and 27 % in 2050. The Government's growing awareness of the emerging challenges is reflected in the increased priority given to issues relating to older people. Following the Vienna Assembly on Ageing (1982), Thailand established the National Committee for the Elderly which developed the National Long-term Plan of Action for the Elderly (1986-2001).

The older population constituted 7.6 % of Viet Nam's population in 2000 and is projected to increase at a sustained annual rate of over 3 % until 2050. Within the next ten years, older people will constitute more than a tenth of Viet Nam's population and by 2050 almost a quarter. The Government has been fully conscious of issues related to population ageing and has introduced several measures to address the problems related to the elderly.

The Government has enacted a number of elderly-related policies and laws, such as the Law on Health Protection and Care for Vietnamese citizens (1994) and the Ordinance on the Elderly (2000). MOLISA has coordinated the formulation of the National Programme of Action for Ageing Care, 2003-2010. The Programme applies a multidisciplinary approach in order to create an enabling environment for improving care for the elderly, which will be implemented by different ministries and concerned agencies in Viet Nam. It provides for integration of issues and concerns of the elderly into socio-economic development plans from central to commune levels.

3.3. Policy and Actions to Promote Young Workers and Employment

ASEAN recognizes the challenges it faces in ensuring that its workers have access to productive employment while at the same time enjoying social protection. ASEAN is also faced with the challenge of aiming for universal coverage of social security and protection for its labor force, considering that most of the insurance schemes cover the formal sector only and are built on a narrow membership base. Lack of social security coverage is largely concentrated in the informal economy which provides significant employment in the region.

Since 2000, ASEAN's work on labor and human resources has been guided by the ASEAN Labor Ministers (ALM) Work Program. The Work Program provides the framework to prepare the region's labor force to face the challenges of globalization and trade liberalization. The five broad priorities initially set in the Work Program are in the areas of employment generation, labor market monitoring, labor mobility, social protection, and tripartite cooperation (representatives of employers, employees and the Government). In May 2006, the ASEAN Labor Ministers agreed in their Joint Statement of 2006 to add a sixth priority area, occupational safety and health (OSH), in the ALM Work Program. From the six priorities under the ALM Work Program, two area-specific work programs have been adopted by the ASEAN Senior Labor Officials as priority areas on tripartite cooperation and OSH capacities and standards in ASEAN.

Apart from the priorities set in the ALM Work Program, ASEAN made a groundbreaking move to address the issue of migrant workers on 13 January 2007, when its leaders signed the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers. The Declaration mandates ASEAN countries to promote fair and appropriate employment protection, payment of wages, and adequate access to decent working and living conditions for migrant workers. As a follow-up to the Declaration, an ASEAN Committee on the Implementation of the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers was established in July 2007.

In collaboration with its Dialogue Partners, a number of activities and various studies have been completed, are on-going or are being prepared by ASEAN. These activities and studies come under the purview of the ASEAN Senior Labor Officials

Meeting (SLOM) and its subsidiary bodies. The ASEAN Labor Ministers' Meeting (ALMM), which meets every other year, oversees the overall work under the ASEAN cooperation on labor. In addition, the ASEAN Plus Three Labor Ministers' Meeting (ALMM+3) was established in 2001 under the framework of ASEAN cooperation with China, Japan, and the Republic of Korea (the "Plus Three" Countries), and is now convened back-to-back with the ALMM.

Relations between the International Labor Organization (ILO) and ASEAN have been ongoing since 2003 and have led to several joint initiatives and projects. A Cooperation Agreement between the ASEAN Secretariat and the ILO was signed in March 2007.

In the particular case of Vietnam, the government understands that investing in young people is investing in the future. As a part of the Socio-economic Development Strategy for Vietnam (2001–2010), the *Vietnam Youth Development Strategy* by 2010 has outlined the government's approach to tackling youth issues (Vietnam Youth's Union, 2003). The main objective of the strategy is to strengthen education and support for young people in Vietnam. The first phase identifies five key programs: (i) employment for young people; (ii) enhancing the education level and professional skills of young people; (iii) developing young scientific capability in order to upgrade the science and technology qualifications of young people; (iv) fighting crime and social evils among young people; and (v) building up the political stance, revolutionary ethics, and socialist patriotism of young people. In addition to the Vietnam Youth Development Strategy, a number of other laws and policies are in place, focusing on youth development, employability and encouragement of support for young talents. They include the Comprehensive Poverty Reduction and Growth Strategy (CPRGS), the implementation of the New Enterprise Law, vocational training programs, and others which aim directly or indirectly at entrepreneurship, vocational training, job and income generation, and poverty reduction for young people. Despite these sound policies and programs, Vietnam is still characterized by a high unemployment rate in urban areas, serious underemployment in the countryside, a very high proportion of agricultural labor, a remarkably low ratio of skilled labor, and a large amount of manual labor, even though Vietnam successfully completed the first Decent Work Country Programme 2006-2010.

According to the ILO, the world is facing a worsening youth employment crisis: young people are three times more likely to be unemployed than adults and over 75 million young people worldwide are looking for work.

The ILO has warned of a "scarred" generation of young workers facing a dangerous mix of high unemployment, increased inactivity and precarious work in developed countries, as well as persistently high working poverty in the developing world.

4. Policy Recommendation

The greatest challenge facing the ASEAN countries, particularly the less-developed countries, is to reduce poverty, narrow the inequality gap and improve the quality of life of their people. That requires measures to strengthen social protection along with a focus on agriculture and rural development, and enhanced financial inclusiveness. The persistence of low per capita incomes in the regional developing countries results in a vicious circle where large transport investments remain economically unviable due to low demand for transport services on the one hand and inadequate infrastructure constraining economic activities on the other, which results in low revenue generation for investment in social sectors.

These countries successfully weathered the global economic crisis by adopting prudent and timely policies emphasizing short-term responses to the external shocks. In order to sustain their growth momentum, they now need to find new sources of demand, mainly through the rebalancing of their economies in favor of greater domestic and regional consumption. More specifically, they need to focus on several major imbalances that characterize the process of their economic growth.

4.1. Promoting more Inclusive Growth and Adjusting to Global Imbalances

The import demand from other markets in the world is not likely to play the buoyant role that it did in the past decade. The Asian countries will have to identify new drivers of growth to compensate for the anticipated reduction in demand in traditional export markets. Each country will have to address its own specific needs

and constraints and exploit opportunities for strengthening growth and achieving its Millennium Development Goals.

In order to become more resilient, these countries need to spend more on basic social services, social protection and basic infrastructure, as well as measures to boost the income of the poor. It is crucial to promote intraregional trade and investment flows that benefit especially the landlocked developing countries. Measures are needed to promote integrated markets and lower tariff and non-tariff barriers; to invest in physical infrastructure; to create robust transportation networks and information platforms; and to install better regulatory structures.

If inequality can be reduced or at least held constant, then poverty and other social deprivations could be reduced more rapidly. These countries need to promote the growth of activities that provide the poor with more benefits, such as agricultural and productive employment in small and medium-sized enterprises and in the informal sector. In order to create wider opportunities for the poor, their Governments also need to adopt policies to promote greater employment generation and to invest more in education, health and other basic services.

4.2. Mitigating Social Imbalances and Bridging Infrastructure Gaps

Social imbalances are pervasive in many countries in the region, where a large majority of people live below the poverty line. Thus, reducing poverty and ensuring equitable sharing of economic prosperity constitute an important agenda for mitigating social imbalances in these countries. Moreover, the sheer number of the poor can provide potentially large markets if additional demand can be created, especially through social and infrastructural investments that provide employment and business opportunities for the poor.

The limited availability of infrastructure constrains the contribution of infrastructure to economic growth. Closing the infrastructure gaps is thus a necessary condition for balanced and inclusive development. The resource requirements for bridging or even narrowing the infrastructure gaps are substantial and, hence, appropriate financing mechanisms are needed.

4.3. Sustaining the Private Sector

Export-led growth has been central to development and poverty reduction in Asia. Governments have been able to put in place many of the institutional conditions necessary for strong growth, including stable exchange rates and monetary regimes, appropriate regulatory frameworks, facilities for vocational training, and so on. However, there is scope for strengthening the enabling environment further. One approach entails reinforcing financial regulation in order to prevent a recurrence of the 1997 crisis. Another is to foster improvements in the investment climate through better regulatory regimes and improved functioning and regulation of labor markets, which can enhance competition and encourage poverty reduction through increased employment and improved opportunities for farmers and small producers.

4.4. Closing the Infrastructure Gap

Infrastructure investment plays a crucial role in getting growth moving, not only enabling the poor to travel in order to participate in the benefits of growth, but also allowing improved delivery of and access to services such as health and education, and social protection. Infrastructure policy faces a number of challenges including developing national and regional networks (transport, energy, ICT in particular) to create growth and help to reduce inequality, responding to the challenge of rapid urbanization, integrating lagging and remote regions through both national and regional infrastructure investment, getting the balance right between public and private investment, and rationalizing subsidy policies, many of which are inefficient, environmentally insensitive and discouraging to private investment.

4.5. Promoting Food Security and Strengthening Social Protection

Food and energy price rises are again emerging as an issue of serious concern across the region. The regional developing countries are among those that will be most affected. Policies that provide social protection in times of adversity and reduce unacceptable levels of deprivation are important those countries.

Poverty remains a rural phenomenon in regional developing countries and hence policies that promote employment and income opportunities and improve access to basic social services, especially in rural areas, are essential in reducing poverty and rural-urban imbalances. Since the rural poor derive most of their income from

agricultural activities, policies to facilitate the access of smallholder producers to land, agricultural inputs, finance, extension services and markets would contribute to enhancing food security and reducing poverty.

4.6. Making the Best Use of Resources and Energy, and the Environmental Impact of Rapid Growth

In most countries in the region, energy demand has already outstripped domestic resource availability. Current aims in several countries are to guarantee energy supplies and seek enhanced efficiency. For the longer term, international research is being undertaken into alternative sources of energy. There is considerable scope to modify taxation/subsidy policies to encourage more sparing use of non-renewable energy, or to reduce negative environmental impacts. The environment is an asset for growth, particularly for the poor, but misuse of environmental assets and environmental hazards represent increasing threats. Poorer Asian countries and groups are especially dependent on environmental assets and natural resources. Linking the use of these resources in a sustainable manner to demand from fast-growing countries in the region will enable the benefits of rapid growth to be spread more evenly.

4.7. Expanding Regional Cooperation

In view of the emerging developments, ASEAN member countries need to become more regionally integrated in order to generate rapid inclusive and sustainable growth. To boost regional economic integration, they need to address a wide spectrum of constraints in institutional and physical infrastructure, as well as in the policy agenda. This requires concerted actions for the evolution of a broader framework for economic integration at the regional level, to ensure equitable economic and social benefits, and encourage the development of regional transportation networks and the improvement of trade facilitation and strengthening of connectivity through wider use of information and communications technologies.

Donors can support ASEAN governments in deepening their commitment to a reform agenda by actively supporting domestically driven initiatives, developing aid instruments that recognize and reward positive outcomes, and facilitating exchange of

positive experience in the region. The role of regional organizations should be important. Questions of how and how far regional bodies can be made more effective, and whether their scope can be expanded to cover both developmental issues and wider concerns such as peacekeeping, for example, must be resolved.

In addition, improved business partnerships; civil society partnerships; and mechanisms for monitoring partnerships, should be taken into account.

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CHAPTER 5

China: Searching for a New Development Model

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The high growth in over the past three decades has lifted China into the ranks of the high middle income countries. However, China's path to becoming high income country is still rife with many new challenges in economic, social and environment fronts. Many factors that supported past high growth, such as exports, and abundant labor and capital supply will begin to exert an opposite effect, slowing growth. And China's growth is increasingly constrained by rising social and environmental tensions. Faced with new challenges, China needs to search for new approaches to development. The key components of the new approach may include: coordinated social and economic development strategies, an innovation-centered industrial restructuring strategy, a consumption-centered domestic demand-boosting strategy, a migrant worker-centered urbanization strategy, a resource-aware and environmentally sustainable strategy, and a balance- centered external economic strategy. To turn to begin this new approach to development, China needs to push further reform in key areas.

Keywords: middle income trap, sustainable growth, growth model

JEL classification: O10, O15, O53

1. Introduction

China has achieved very rapid economic growth since the introduction of reform and beginning the process of opening up its economy in the 1980s. Its extraordinary economic performance has lifted China into the ranks of the high middle income countries, from a position as one of poorest countries in the world. At the aggregate level, China's achievement is even more outstanding. The size of China's economy is now second only to the US, while 30 years ago it was smaller than Spain. The reform process has also transformed China from a closed economy to being the largest exporter in the world. China's growth improved its people's living standards greatly, bringing down the population in poverty from 250 million to 14 million, and the prevalence of poverty down from 30% to 1%.

China's next goal is to project itself into the ranks of the high income countries, or in China's terms, to develop into an all-round Xiaokang (well being) society. At first glance, this goal seems within easy reach. China just needs to extend its success story a little longer, say to continue current high growth levels for the next 10 years, and it will be very close to the threshold of the high income countries. However, historic experience suggests that a late developing country might easily reach middle income status, but few of them reach the high income level. In recent, post World War II history, among the big economies, only Japan and Korea succeeded. The World Bank have labeled this phenomenon "the middle income trap" and point out that the institutions and experience that have led to past success do not guarantee future success (World Bank, 2012). Social turmoil and loss of competitiveness are the most common causes of a middle income country failing in its path to becoming a high income country. China is not immune to this challenge. In recent years, especially after the global financial crisis, China is finding it increasingly difficult to hold on to its high growth rate. The government has had to stimulate growth repeatedly, rather than having to reign in runaway growth, as in times past. The global financial crisis and ensuing deleverage in developed countries, together with changing domestic conditions, may potentially derail China from the track to becoming a high income country. Or in other words, the current growth pattern of China, which premier Wen Jiabao continually characterized as uncoordinated, unbalanced and unsustainable, may

no longer live up to its task. China needs to search for a new approach to development to tackle new emergent challenges and to have its potential fully tapped. In the face of the new challenges, only a new approach to development can secure China a seat at the table of the high income countries.

2. The Characteristics of China's Current Growth Model

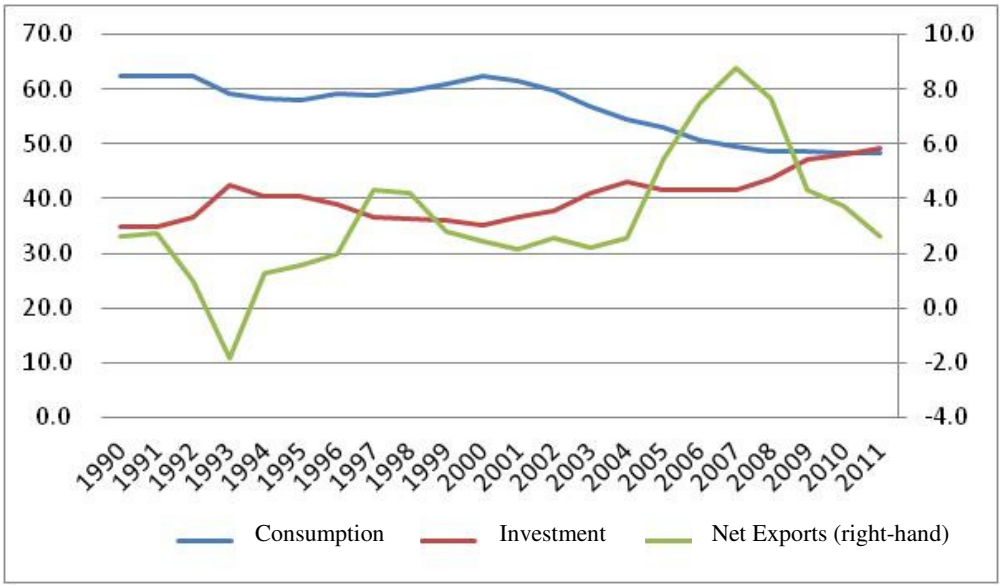
China has experienced rapid economic growth since the introduction of the reform and opening up process in the 1980s. The average annual growth rate of China in period from 1980 to 2011 was 10%, a faster rate than any other major economy in the world. The growth pattern of China's economy also evolved in this period.

2.1. The Evolution of China's Growth Pattern

From the perspective of demand, the growth pattern of China went through three stages. The first stage was from 1980 to 2000 in which the share of consumption, and investment in GDP barely changed and the current account was roughly balanced. The consumption rate was 65.5% in 1980, 62.3% in 2000; the investment rate was 34.8% in 1980, 35.3% in 2000 (Figure 1). The share of net exports was volatile but within $\pm$4% of GDP. The economy in this period was mainly driven by consumption growth. The consumption contributed 60% of growth, and investment contributed 32%. The second stage was from 2000 to 2009 in which a pronounced decline of the consumption rate took place, with a corresponding rise in investment and net exports. During this period, the consumption rate declined by 13.7 percentage points, and the investment rate rose by 8.5 percentage points. And China continued to accumulate a trade surplus. The surplus's share of GDP rose by 5.3%. Some believed that China's economy was both internally and externally unbalanced in this period, evidenced by excessively high rates of investment and trade surplus. Not surprisingly, the growth in this period was mainly driven by investment and net exports. The contribution of

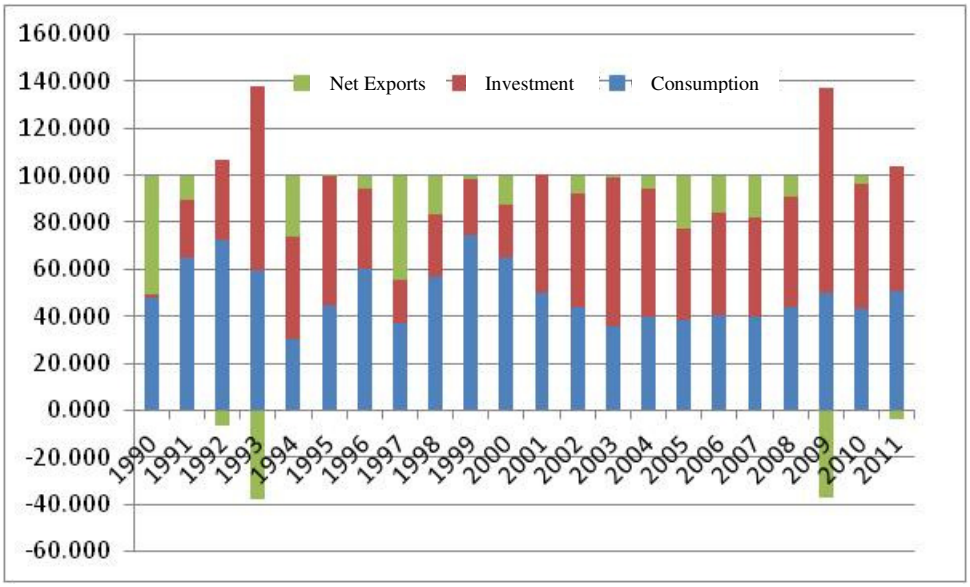
investment and net exports to the growth were 45.5% and 10.3% respectively, reducing the contribution of consumption (Figure 2). The global financial crisis marked another shift in China's growth pattern. China's exports collapsed during the crisis. In 2009, exports declined by 16%. After the crisis, China's exports recovered strongly but did not return to the level seen in the run-up to the crisis. As a result, China's trade surplus shrank significantly after the crisis and its share of GDP was down to 2.6% in 2011, much smaller than at its peak of 8.8% in 2007. Although the external imbalance has been corrected somewhat after the crisis, the internal imbalance remains largely intact or to some extent exacerbated. The investment rate rose further after the crisis, from 43.8% to 49.2% from 2008 to 2011. The consumption rate moved in the opposite direction, declining from 48.6% to 48.2%. As a result, the contribution of investment to growth expanded to 60%, while net exports were no longer the driver of growth. The average contribution of net exports in this period was -7%.

Figure 1: The Composition of GDP 1990-2011 (%)



Source: CEIC database.

Figure 2: The Contribution of Consumption, Investment and Net Exports to Growth (%)



Source: CEIC database.

In conclusion, China's growth has been increasingly driven by investment and exports in the past decade. After the global financial crisis, with withering exports, the driving force of the growth tilted towards investment. However, whether the rebalancing of is external sector is temporary or sustained is still under debate. Some institutions, like the IMF, believe the decline in China's trade surplus was temporary and expect that its share in GDP would rebound to 4-4.5% by 2017 (Ahuja, *et al*. 2012).

2.2. China's Growth Pattern in the Context of International Experience

China is not an exception in experiencing a rising investment rate in its drive to industrialization. A multi-country study has concluded that most countries have followed a reverse U shaped movement of the investment rate as income level rose (Gou Chunli, 2010). China's East Asian neighbors, for example, such as Japan in the 1970s, and Korea in the 1990s experienced dramatic structural change. But, what makes China outstanding is that China's investment rate is excessively high by international comparison. An investment rate close to 50% has not been seen in

recent history. China's investment rate is not only much higher than the average level of counties at the same development stage, but also higher than the maximum level that China's Asian neighbors ever reached. In its peak, the investment rate of Japan and Korea were only 36.4% and 38% respectively (Table 1). China has also experienced a consistent trade surplus and accumulated huge foreign exchange reserves, which are also unmatched internationally (Fukumoto and Muto, 2011).

Table 1: China's Investment and Consumption Rate Compared to Selected Economies

year	China	Japan	US	Korea	Taiwan, POC	Thailand	Indonesia	India
Investment/GDP								
2010	48.1	20.5	15.5	28.6	21.7	24.7	32.2	31.8
Historic Max	49.2	36.4	23.2	38.0	30.9	41.6	32.2	35.8
(year)	(2011)	(1973)	(1943)	(1991)	(1975)	(1991)	(2010)	(2007)
Private Consumption/GDP								
2010	34.9	58.6	70.6	52.5	58.0	53.7	56.7	61.9
Historic Min	34.9	52.3	49.5	49.1	47.2	53.2	56.7	61.7
(year)	(2011)	(1970)	(1944)	(1988)	(1986)	(1995)	(2010)	(2009)

Source: Fukumoto and Muto, 2011.

2.3. The Factors Behind China's Growth Pattern

Why are China's investment and current account surplus so high? These are still controversial issues. Some attribute more causality to the economic fundamentals, others to policy distortions. Because it is still difficult to quantitatively discern the effect of each factor, and economic theory has not been able to provide an optimum investment-consumption ratio as benchmark, the debate will continue.

For those who believe the economic fundamentals play a leading role, China's investment and current account surplus are high, but are no more than a result of the working of the market economy. China's unprecedentedly low consumption rate is therefore produced by unprecedented economic fundamentals.

China is the most populous country in the world, with the biggest surplus labor reservoir. Surplus labor shapes China's growth pattern in many ways. High investment is clearly driven by high return on investment. More often than not, China's enterprise profitability is not built on innovation and high value added, but on low cost. The surplus labor is essential to high investment. And the distributional effect of surplus labor is huge. As surplus labor has suppressed wage growth, the corporate sector has enjoyed profit growth of around 30% per annum since 2000, significantly outperforming wage growth which averaged 15% per annum (Dew, *et al*. 2011). As a result, income of the household sector, as a per cent of GDP, declined noticeably, contributing to the shrinking share of private consumption. Correspondingly, the rising proportion of corporate saving to GDP explained much of the rise of the general saving rate.

Facilitated by progress in ITC technology, improved infrastructure, and trade liberalization, the human race has, since the 1990s, experienced a wider and deeper globalization than ever in its history. China is at the very center of this globalization. The relocation of manufacturing to China has made it the World Workshop. Globalization has improved efficiency, expanded market access and prolonged product life, raising the return of investment. High investment is thus the natural result of high investment return. Globalization is also the factor behind China's high trade surplus. In China, foreign funded enterprises have higher propensities to export. As more and more export-oriented manufacturing has relocated to China to take advantage of cheap labor, the trade balance tipped into surplus. The accession of China into the World Trade Organization (WTO) in 2001, which led to a reduction in

trade barriers, facilitated this process. The flow of Foreign Direct Investment (FDI) into China has speeded-up and, not surprisingly, the trade surplus grew at a much faster pace in this period. FDI inflows to China reached $148 billion in 2008, up from $3.4 billion in 1989. Most of the FDI has gone into the manufacturing sector, as flows into the service sector have faced more restrictions (Long, 2005). Clusters of production have formed, allowing firms to take advantage of industry-wide increasing returns to scale. China has also become a hub for the production of manufactured exports, with foreign firms taking advantage of low labor costs and China's proximity to other Asian countries.

While household savings have not been the key driver behind the rise in aggregate savings, the household savings rate —standing at nearly 30% of disposable income in 2009 for urban households — is high by international comparison (Dew, *et al*. 2011). Cultural and demographic factors appear to be behind much of this. The tradition of frugality is common in East Asia. Japan, Korea and other East Asian economies are frequently the world's top savers. In China, a particularly high saving rate may also be associated with the very rapid economic growth. Within a generation, China has turned itself from one of the poorest countries into a middle income country. However, consumers' saving behaviors do not change as quickly as economic growth, since the majority of consumers grew up in hard times. Demographic factors also play an important role in the high saving rate, as the proportion of working age population, who save more and consume less in during their working lives, has risen along as fertility has declined.

On the other hand, some commentators blame policy distortions as the main factor behind the economic imbalance. Some believe local government competition is the real driver of China's investment, and therefore of economic growth (Cheung, 2008). To attract investors and undercut other regions' efforts, many local governments offer competitive preferential treatments, such as tax reductions, low

priced and even free land and subsidies to investors. Local government itself has also sponsored large-scale investment projects to boost economic growth. All these practices of local government help fuel the high investment growth.

A depressed factor price could be seen as a subsidy to investment. Among other things, the costs of land, energy, capital and pollution prices have been noticeably depressed. Low land and pollution prices are usually the result of local government competition. The energy price, inherited from the planned economy, has been still tightly controlled by the government. A mechanism that links the energy price to input prices or international prices has been established to factor in the change of cost. However, the mechanism has not been strictly implemented if it clashes with other policy goals, such as the stability of the general price level. In general, it is believed that energy prices in China are still lower than the equilibrium level and do not fully reflect the environmental damage caused by energy production and use. The cost of capital has also been held down by the financial depression. The interest paid to savers is regulated by government, and is below the equilibrium level. Low capital cost also motivates investment.

The high savings rate partly reflects concerns over the so-called 'three mountains' — education, pensions and healthcare — following declines in the provision of public services (Blanchard and Giavazzi, 2006). The old social benefit system, always sponsored by State Owned Enterprises (SOEs) and rural collectives, was dismantled in SOE and rural reform programs, and until very recently, new systems had not been established.

Like many other developing countries, China has been following an export promotion growth strategy, which helped channel its resources into the export sector. However, some have argued that China is failing to readjust its policy as productivity rises very rapidly, leading to a consistent accumulation of trade surplus. For example, despite the Renminbi's nominal appreciation between 2005 and 2009, it remains

around its 2001 level in real trade-weighted terms. By increasing the domestic price of foreign goods and reducing the foreign price of domestic goods, the weak currency exchange rate has tended to increase China's trade surplus and change the composition of internal demand (Dew, *et al*. 2011).

2.4. The Sustainability of the Current Growth Pattern

No matter what the real reasons behind China's growth pattern are, concerns are widely shared about the impact of excessively high investment and a consistent trade surplus on the prospects for China's economy. First, high investment may lead to overcapacity and inefficient investment, putting the sustainability of China's growth into question. If demand cannot catch up with the rapid expansion of production capacity, the result of high investment, growth will be stalled. Not surprisingly, the sectors with severe overcapacity, such as steel, aluminum, cement and chemicals, are experiencing a noticeable slow-down. And some are particularly concerned about investment in the real estate sector, one of the areas that have received heavy investment in recent years. In other cases, the high investment may also result in inefficient investment, especially when the investment is made by the government, as has been the case after the financial crisis. Overinvestment is not only less productive, but also may increase the risk of financial crisis. The IMF study warned China that "worryingly, it (overinvestment) is much larger and persistent than the implied overinvestment in other Asian economies leading up to the Asian crisis, or in Japan in 1980 before the onset of its 'lost decade'. Both these episodes were followed by protracted growth and investment declines". Second, China's external imbalance mirrors the global imbalance that, some believe, may have played a role leading up to the financial crisis. Astley, *et al.* (2009) argued that, before the crisis, capital flows from surplus to deficit countries contributed to a misallocation of funds and the under-pricing of risk, generating substantial vulnerabilities in the global economy.

Reducing global imbalances — together with financial sector reform — could help to prevent such vulnerabilities building up again in the future. Third, China's high investment and unusually large current account surplus is mirrored in a correspondingly low proportion of spending on consumption, suggesting that China's household sector has not benefited as much as the growth figure indicated. Together with the uneven income and wealth distribution, the justice of China's growth has been questioned. China's household consumption as a percent of GDP is lower than that of other Asian countries at similar stages of development. The changes in China's external environment and domestic conditions will also make the current growth pattern unsustainable.

3. The Changes of China's External Environment and Domestic Condition

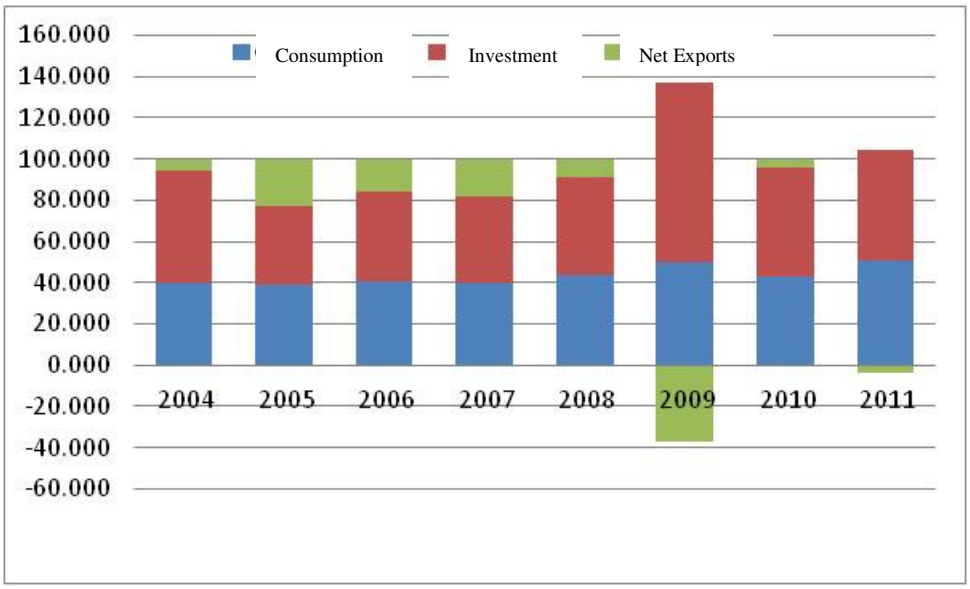
Looking ahead, many factors that supported China's high growth over the past three decades are tending to change. The global financial crisis and EU sovereign debt crisis harbingered huge changes in China's external demand environment and inevitably led to a slowdown of China's exports, once a powerful engine behind China's high growth. Domestically, the conditions for development will also experience a fundamental change. New features of factor supply, dramatically different from the past three decades will emerge, shaking the foundation of the existing growth model by weakening the comparative advantage China enjoys today. And China will also increasingly face challenges and constraints on the social and environmental fronts.

3.1. Deteriorating Trends in the External Environment

It is widely believed that the ongoing global crisis will exert long term impact on

developed countries. The developed countries are going to experience a painful deleverage process to change from their living-beyond- means model that helped foster the crisis. The process will also be accompanied a structural change toward reindustrialization. The deleveraging and reindustrialization will fundamentally change the external demand environment within which China's exports prospered over the past 30 years. To make things worse, protectionism is rising in the developed countries, as unemployment stays high. Impacts from a changing external environment have already been felt. The exports that have been an important engine behind China's growth are growing at a much slower pace than before the crisis. Gone is the double digit export growth, and China has to struggle to achieve a one-digit growth this year. As a result, exports will no longer be the important driver of growth that they once were. In their peak, net exports contributed 8% of China's GDP, and more than 20% of its growth (Figure 3). The trade surplus now only contributes about 3% of GDP and it is now a drag rather than a driver of growth. Looking forward, deteriorating external demand will slow export growth further, and in turn will depress economic growth.

Figure 3: The Contribution of Net Exports to China's Growth (%)

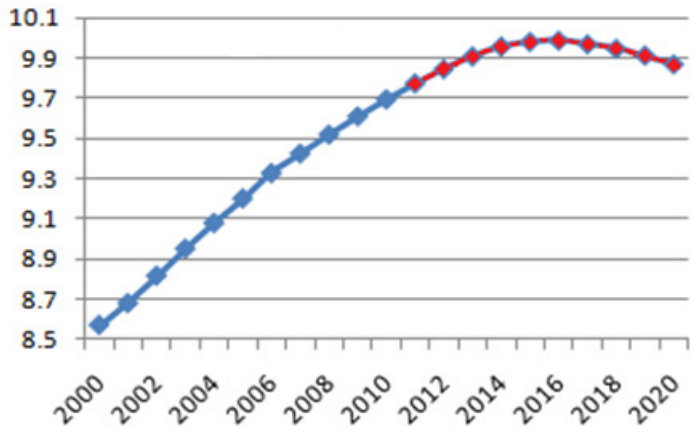


Source: CEIC data base.

3.2. The Supply of Production Factors Will Tend to Slow in the Next 10 years

China's high growth in the past three decades was driven by abundant production factor supply. An unlimited supply of labor and a high saving rate were the hallmarks of China's economy. However, with demographic change and for other reasons, the supply fundamentals are going to change and this will exert a great impact on China's future growth. First, the labor force will stop growing around 2016 and will tend to diminish after this as the working age population will peak at 999 million in 2016, and decline to 987 in 2020 (Figure 4). (IPLRCASS, 2010) This demographic change marks a fundamental shift in one of the basic factors driving economic growth. Second, the savings rate in China will be down by about 5 percentage points in 10 years as result of changes in the age structure of the population, redistribution efforts and progress in the social security system (Figure 5). Third, the reallocation of labor will come to an end as the reservoir of rural surplus labor is rapidly exhausted, leading to the loss of an important source of total factor productivity (TFP) growth. All the above three factors will be at work to slow China's growth.

Figure 4: The Dynamics of the Working Age Population of China (in Hundred Million People)



Note: the data after 2012 is projected
Source: IPLRCASS, 2010

Figure 5: The Dynamics of Saving Rate and Dependence Ratio of China

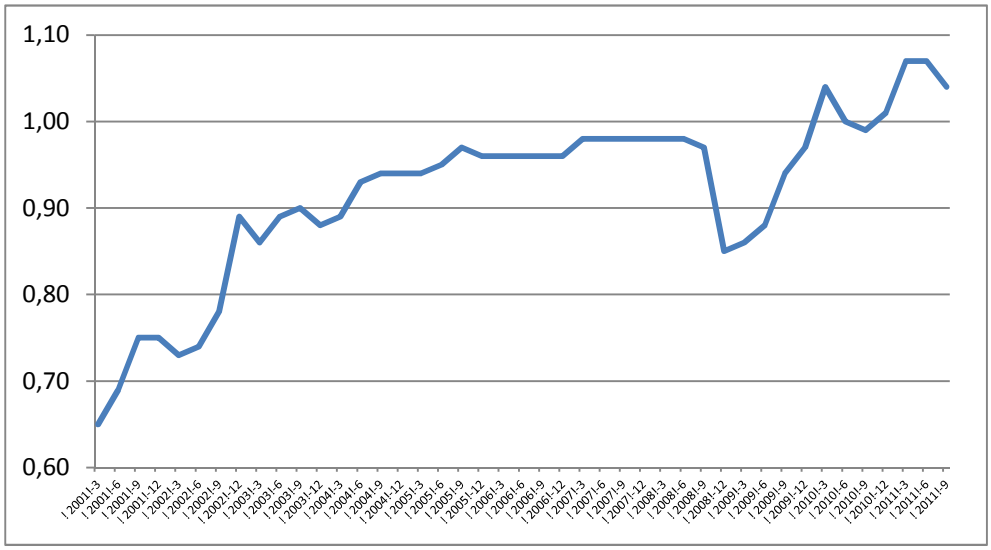
Note: the data after 2012 are projected

Source: Xuegong, *et al*. 2011(a).

3.3. Weakened Comparative Advantage to be Weakened

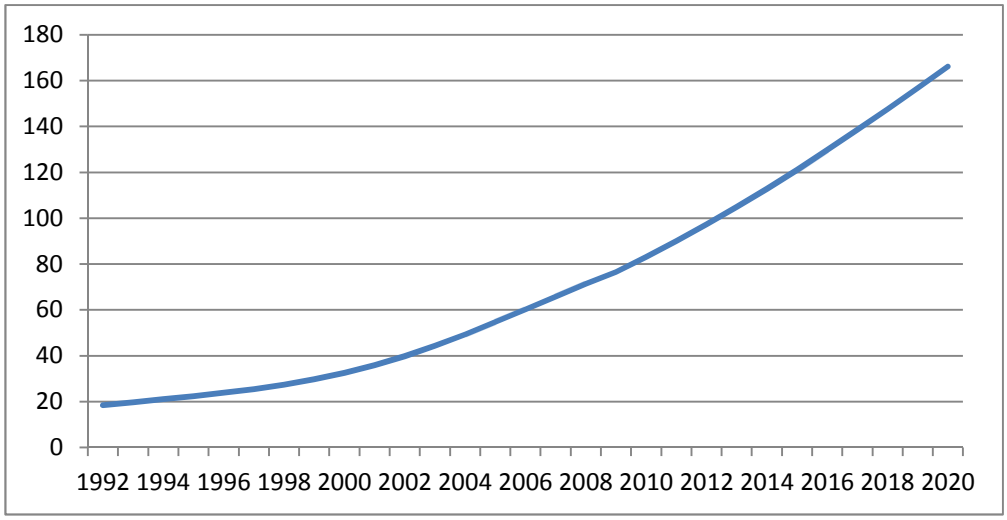
Cheap labor and the comparative advantage based on it were very much the foundation for China's high growth over the past 30 years. However, the slowing growth of the labor force, together with the accumulation of capital stock, will eventually change China's comparative advantage (Figure 6 and Figure 7). Labor will no longer be in surplus relative to capital. Since 2001, the ratio of supply and demand in China's labor market rose steadily, from 0.65 to 1.04 in 2010, suggesting there are more jobs than job-seekers. This change is inevitably leading to the end of cheap labor. This is increasingly evident as the wage increases for unskilled labor have accelerated in recent years. This trend should be welcomed, as it will help correct the structural problems of the Chinese economy as well as helping transition to more inclusive growth. However, the end of cheap labor, together with currency appreciation, will also deal a blow to the industrial competitiveness of China.

Figure 6: Ratio of Demand and Supply in China's Labor Market



Source: CEIC data base.

Figure 7: The Change of Capital Stock Per Head of Labor in China
unit:1000 Yuan RMB



Source: Xuegong *et al*., 2011.

3.4. The Social Problems and Risks Accumulate to an Uncomfortable Level

China's high economic growth has been accompanied by the accumulation of social problems and risks that it is imperative to deal with. First, the distribution of national income is biased in favor of government and the corporate sector. In the primary distribution, the share of labor compensation in GNI declined from 51.4% in

1995 to 39.7% in 2007 while the shares of government and the corporate sector increased by 2 and 10 percentage points respectively. Redistribution efforts are inadequate and do not help very much to correct the bias. This situation suggests that China's household sector did not benefit from economic growth as much as government and the corporate sector. Second, inequality of income and wealth has been rising significantly in recent years. The Gini coefficient rose from 0.2 at the beginning of the reform and opening up process to above 0.4 now, one of the highest in the world. The income disparities between urban and rural areas and between different industries and regions are also widening. The disposable income of China's urban resident was 3.2 times of that of a rural resident in 2010. In 1985, the gap was 1.86 times. The income disparities among different sectors rose to an alarmingly high level. In 2009, the ratio of highest income to lowest was 13.2, in contrast to 1.8 at the beginning of the reforms. (Zhang Yutai, 2010). And the widening is not merit-based. One prominent example is that some state-owned monopolistic sectors have abused their position to reward their management excessively. With property prices shooting up, the inequality of wealth of households also rose dramatically, as housing wealth accounts for some 60 percent of total household wealth. Third, the provision of public services is inadequate and unequal. Social development is lagging behind economic development. The public services that the general public can access are limited and not of high quality. Moreover, great disparity can be found between urban and rural communities and between eastern China and the rest of the country in access to education, health care, social security, culture and other key public services. The inequality in income and access to public services demonstrates that the growth pattern of China is not inclusive, and risks disruption by high social tension, as the experiences of some South American countries suggests. China has witnessed a rising number of social incidents in recent years, signaling an increasing dissatisfaction toward social injustice.

3.5. Environment and Resource Supply Constraints

Due to the stage of its development and drawbacks in institutional arrangements, the resource intensity of China's growth is much higher than that of many other countries. For example, the energy consumed per unit of GDP in China is 2.5 times the world average, 2.5 times that of the US, 7.6 times that of the EU, 2.6 times that of Brazil, and is even higher than that of India and some other developing countries (Zhu Zhixing, 2010). The same situation can be found in other key resource areas. China accounted for 8.5% of world total output in 2009, but its consumption of steel, coal, cement and oil and gas accounted for 46%, 45%, 48% and 10% of world totals respectively. And to make things worse, its resource endowment is poor, China's dependence on imports for resource supply is increasing very rapidly. China's resource reserve per capita is much lower than the world average. Coal, oil, gas, iron ore and copper reserves per capita are only 67%, 6%, 7.1%, 50% and 25% of the world average respectively (Xu Shaoshi, 2010). As a result, more than half China's consumption of oil, iron ore, aluminum, copper and other imported resources now relies on foreign supplies. Looking ahead, with rising scarcity of resources and intensifying competition for those that remain, China, as a late-comer in the market, will find it increasingly difficult to secure the resource supplies it needs. Without greatly reducing its industries' resource intensity, China would not be able to sustain its growth momentum, simply because of insufficient and unstable supplies of resources.

Environmental problems are also increasingly constraining China's growth. China has suffered serious environmental pollution in the drive for industrialization. 17% of China's land suffers from heavy metal pollution, 1/4 of surface water is polluted, and many cities are among the world's leaders in air pollution (Zhu Zhixing, 2010). The ecology of China is also deteriorating, evidenced by growing soil erosion, deforestation and grassland degradation. The environmental problems that gradually

emerged over 200 years of industrialization in the developed countries have emerged in China at the same time. Environment pollution has reached the point where immediate remedies are needed. Environmental clean-up is costly, however, and demands industrial restructuring. Global warming is another factor that may limit China's growth. China has committed in its 12th five-year plan to reducing the intensity of CO2 emissions by 17% during the period 2010-2015. Changing the coal-centered energy mix and resultant high carbon emissions is a great challenge, and will nudge up already rising energy prices.

4. The Major Challenges China Faces in the Coming Decade

The changing external environment and internal conditions of the Chinese economy are at odds with the goal that China is pursuing, which poses severe challenges to its sustained growth.

4.1. Weakening Growth Momentum Clashes with the Need for Continued High Growth

According to Maddison world data (Angus Maddison, 2010), China has been a middle income country since 2008; in that year China's GDP per capita reached 6725 international dollars, or 21.6% of that of the US. To project China into the high income countries group, rapid growth is still needed, as evidence from Japan and South Korea suggests. Contrary to the experience of other middle income countries which failed to reach the high income level, Japan and South Korea did not slow their growth down until their incomes had reached 10,000 international dollars. From 1966 to 1971, Japan lifted its GDP per capita from 6500 to 10000 international dollars, and its annual growth rate in this period was 9.8%. South Korea presented a similar story from 1987 to 1993. In this period, the GDP per capita of South Korea

rose from 6900 to 10000 international dollar and the annual growth rate was 8.3% (Sun Xuegong, *et al*. 2011). China is now very close to where Japan was in 1966 and Korea in 1987 in terms of GDP per capita. However, whether China can sustain its high growth rate as Japan and Korea did is in question, without change in its current growth pattern. Compared to other countries, China's growth is more factor input driven. From 1993 to 2009, factor input contributed 3.7% growth annually, 0.3 percentage points higher than other countries during their high growth periods. And the reallocation of labor contributed 40% of TFP growth. With the prospect of slower labor supply growth, a lower savings rate and a lower reallocation of labor, China's growth will slow by 3.4% if there is no new source of growth (Sun Xuegong and Liu Xueyan, 2011). If the constraints of environmental issues and resource scarcity are considered, the slowdown of growth will be even more severe. A new approach to development, which can tap the potential of efficiency improvement and domestic demand, is desperately needed to generate new sources of growth and ensure that China's road to high income will not be disrupted.

4.2. Weak Innovation Capacity Clashes with the Need for Industrial Restructuring

The shift in its stage of industrialization and its changing comparative advantage entails the industrial restructuring of China. In the next 10 years, if China can follow the path of other industrialized countries, it will shift from the middle stage of industrialization to the late stage, characterized by high value-added and a high degree of processing. On the other hand, China's changing comparative advantage calls for a move from labor intensive industry to capital and technology intensive industry. The industrial restructuring will mainly be achieved by upgrading technology and products. The challenge is that China's imports of technology, which was its main source of technology in the past, will be more constrained than ever as China approaches the

frontier of technology and is increasingly seen by developed countries as a competitor, or even as a rival. Home-grown technology therefore has to play a larger role in industrial restructuring. However, the innovation capacity of China has not yet been up to the task, because an innovation culture and supporting institutions have yet to be built.

4.3. Tightening Environmental and Resource Constraints Clash with Urbanization

China is still urbanizing. Its urbanization rate is about 50%. Even this figure may still overstate the level of urbanization because migrant workers, who are not fully entitled to the public services available to urban residents, are nevertheless counted as part of the urban population. This situation demonstrates that there is still a long way to go before China's urbanization reaches the level seen in most developed countries. The process of significant urbanization involves the construction of housing, roads and public infrastructure and in turn the expansion of resource and material industries, such as steel, cement and the non-ferrous metal industry. However, with tightening resource supply constraints, China cannot stay on its current track to achieve the expected urbanization. A new model of urbanization, which is adapted to the new reality of resource supply, should be explored.

4.4. Higher Expectations of China's International Responsibility Clash with its Low Level of Development

China has barely crossed the threshold of the high middle income countries, ranking about 100th in the world in terms of GDP per capita. However, at the aggregate level, China has become the second largest economy in the world. China has performed much better after the global financial crisis than the developed countries who still dominate the world economy. The rise of China has prompted

high expectations that China will take on larger international responsibilities in the areas of CO2 emissions, global rebalancing, security and development aid. More often than not, the expectations are beyond China's capability, and are not consistent with China's status as a developing country. Taking on international responsibilities incommensurate with China's development level will limit the space for China to grow. This is illustrated in the case of CO2 emissions. China is now the biggest emitter of CO2, but at the per capita level it is still far below the developed countries. To set too high a target for emissions cuts would stop the growth of many of China's industries. To take on proper international responsibilities without harming its growth will remain a challenge for China in future.

4.5. The Strong Government Model Clashes with the Need for Efficiency Improvement

China's economic system emerged from reform which basically met its needs and stage of development, as evidenced by the fact that it generated rapid economic growth. Among other things, strong government is an outstanding feature of China's system, and has worked very effectively in mobilizing resources to launch industrialization and to build large scale infrastructure that are usually beyond the capacity of private sectors. However, when future growth is more generated by efficiency improvement and innovation rather than resource mobilization, the drawbacks of the strong government model will come to the surface and will increasingly become an obstacle to sustained growth. For example, the efficiency of land, credit and energy use is crippled by the current system that government still commands or intervenes heavily in decisions on how the resource is to be allocated. However, further reform to give a larger role to markets in resource allocation will meet strong resistance from vested interest groups who are beneficiaries of government intervention. As efficiency improvement will be a much more important source of growth for China in the future,

the stakes are high, and breaking the deadlock of reform is definitely a challenge.

5. Searching for a New Approach to Development

With changing external environment and domestic conditions, China needs to adopt a new approach to development so as to address the new challenges and sustain a decent growth rate so as to ensure its ambitious goal of building an 'all-around wellbeing' society.

5.1. A Coordinated Social and Economic Development Strategy

An economic-centered development strategy has served China very well over the past three decades, lifting it from low income status to being a middle income country. However, in the drive towards high income status, social development should not take a back seat in government thinking. If this were to happen, the high social tensions would threaten social stability, the foundation for development. A new strategy that attaches equal importance to social and economic development needs to address the imperative social problems China faces today. China needs to adopt an inclusive development strategy. The government needs to expand and improve the key public services, such as education, health care, social housing, social security and employment, so as to enable every member of society to share the fruits of economic development. It is important to equalize public services provisions between different regions and between urban and rural communities so as to provide equal opportunity of development to all citizens. Moreover, China also needs to encourage civil society development. Government should refrain from some social affairs and allow NGOs to play larger roles in the field of consumer protection, environment, charity, etc.

5.2. Innovation-led Industrial Restructuring Strategy

Fostering innovation capacity is essential to the new development approach in China. China needs to better adapt and assimilate imported technology, so as to move quickly to the technology frontier. It is important to define appropriate roles for government and the market in motivating innovation. Market competition should be a fundamental driving force of innovation. Government needs to address market failures by sharing the risks of innovation and providing strong protection to Intellectual Property Rights (IPRs). So as not to distort the market, Government should limit its activities mainly to basic research and pre-commercial stage development. It is vital that a better allocation of R&D resources should be achieved. These R&D resources need to cluster in industry sectors to facilitate the commercialization of R&D results.

5.3. A Consumption-led Domestic Demand Boosting Strategy

China needs to tap the potential of domestic demand, especially domestic consumption, to provide a stable support to growth and help its people better benefit from economic growth. To boost consumption, the biased distribution of income needs to be corrected in favor of the low income groups. And a wider coverage and higher standard of social security would help boost consumption by strengthening consumer confidence. China also needs to improve its supply of services, which are still crippled by high entry barriers and excessive regulation.

5.4. A Migrant Worker-led Deeper Urbanization Strategy

Urbanization is a key element in China's domestic demand driven strategy. 1% growth in the urban population would induce 1.2% growth in consumption. Urbanization will also help address the problems of labor shortages and improve the quality of the labor force. The effective working hours of labor in cities will be 5

times as long as in the countryside. The speed of human capital accumulation in cities is 5-10% faster than in rural areas. China's urbanization fallen behind its industrialization by 10-15 percentage points, very much due to its system separating the urban and rural populations, and making movement between them very difficult. The current tide of urbanization is fast but shallow. More than 100 million migrant workers who live in the cities are not entitled to the benefits enjoyed by officially registered urban residents. As a result, the potential benefits of urbanization on growth have not been fully tapped. A deeper urbanization strategy should be implemented to grant the migrant workers full entitlement as urban residents thus not only improving the social structure of China but also providing the domestic demand that can offset the effect on China's growth of a slowdown of external demand.

5.5. Resources and Environmentally Sustainable Strategy

The tightening constraints of resource supply and environmental problems are a result of the extensive growth model and drawbacks in institutional arrangements. To address the challenges of resource supply and the problems of the environment, China needs to develop a array of new technologies, from renewable energy to resource efficiency. To make this happen, China should push for a broad reform in resource and environmental management systems. First, the roles of government and the business sector in resource prospecting and development should be properly defined. It would be beneficial to use market mechanisms to motivate the efficiency improvement and environmental protection. Property right reform in energy, mining, land, water and pollution emissions should be speeded up, and the property rights should be tradable for a better and higher efficient uses of resources. The pricing of resources, energy and use of the environment should be market-based, providing correct signals to guide consumer behavior. To correct the short time-horizon of markets where long term development is concerned, a resource and environmental tax

system should be put into place to factor-in the long term scarcity of resources and the impact on the environment. The implementation and decision making mechanisms of environmental standards needs to be improved, and more public participation should be encouraged to make sure that the standards meets the public interest, and that the standards are strictly followed.

5.6. Balanced External Economic Strategy

As a rising economic power, China needs to readjust its economic relations with the outside world. China needs to develop a two-way interaction with the outside world, with more imports and FDI outflow to gradually reduce the dual surplus in current and capital accounts. China should make its development more beneficial to other members of the international community, especially the developing members, by putting more attention on social and environmental consequences of growth on those countries. China should also actively participate in the reform of international economic governance play a larger role in rule-making, and take the responsibility commensurate with its development level.

To turn to the new development approach, China needs a profound reform in several key areas.

First, reform in the role of the government is required. It is undeniable that the government has played an important role in driving China's economic growth over the past 30 years. However, in the new phase of the country's development, government needs to reposition itself in the economy to facilitate transformation of the growth pattern. The government should strengthen its role in public service provision. In this regard, reform of the fiscal system is essential. China also needs to reform inter-government fiscal relations. The upper level of government should take more responsibility for the provision of basic public services, such as compulsory education, health care, and pension provision. The changed fiscal relationship will help weaken

the impetus of local government to seek economic growth. The transfer payment system needs to be improved to achieve an equalization of public service among different regions. The government also needs to change its way of running economy, refraining from direct interference and moving to a rule-based regulatory system. China needs to reorganize the regulatory institutions to correct fragmentation and the lack of coordination. The regulators should act independently and in accordance with law.

Secondly, a new round of liberalization in factor markets is required. In the past three decades, China's reform has focused on commodity markets. The market in factors such as land and financial products, remain intact and are still heavily regulated by the government. In many ways, the regulated factor markets are the source of structural problems and even social tension. They also stand in the way of the efficiency improvement that will increasingly be the source of economic growth in the coming years. Factor market liberalization is therefore imperative. Land market liberalization needs to start with clearer property rights arrangements. A farmer's ownership of land and the benefits from such ownership should be fully guaranteed. Land market reform should also end the government monopoly of urban land supply and allow the owners of land, including famers and rural collectives, to trade more freely in the land market. The quantitative control of land supply by the government should be scrapped. The supply of land should be more market-based so as to better match supply and demand. Financial market liberalization is also of significance in China's transformation to a new growth pattern. A more liberalized financial market would eliminate the bias against consumption and better allocate financial resources so as to improve the efficiency of the economy. Interest and foreign exchange liberalization are fundamental to financial market liberalization. China needs to gradually allow the interest and exchange rates to be decided by markets, so as to direct the money to its most efficient use. The liberalization of market entry to new

financial institutions is also important. With expanded entry, the financial structure would better match the economic structure. Today a small business receives very little financial service from the big-bank-dominated financial system. Expanded entry will also intensify competition, motivating financial innovation and the provision of better service. Both are weak links in China's financial system. More emphasis should also be put on the development of direct financing to encourage risk taking, which is essential to foster an innovation-friendly environment. The excessive administrative control on access to the capital market should be scrapped and replaced with a more market-based system. A multi-layer capital market needs to be established to meet the different needs of the real sector. .

Thirdly, reform of the State Owned Enterprises (SOEs) is needed. China's state-owned sector has experienced a dramatic change over the past three decades. However, further reform is still needed to get the right level of SOE, and to ensure that SOEs are good corporate citizens. China needs to have a clear demarcation for state economic activity. The unlimited expansion of SOEs in some sectors has tended to suffocate the development of private sector companies. Based on their comparative advantages, SOEs should be active in certain sectors, but not in all. The SOEs operating in competitive sectors should gradually withdraw. On the other hand, the public nature of SOEs should be strengthened. Even after past SOE reform, SOEs are entitled to retain most of their profits, and few SOEs pay dividends to their shareholder -the government. Such practices not only encourage reckless investment by SOEs, they also exacerbate income distribution problems, since SOE insiders derive disproportionate benefits from their management of state assets. In the short term, the practice that SOEs pay dividends to the government should be established, and in the long term SOEs should be limited to not-for-profit operation. The regulation of SOEs operating in natural monopolistic sectors should also be improved, avoiding excessively high cost or high margin operations, so that the interests of consumers and

suppliers may be better protected.

Fourthly, reform of the income distribution system is needed. China has to correct its biased income distribution configuration in which the household sector is disadvantaged. Measures such as collective wage bargaining systems, forced dividend distributions, liberalization of deposit interest and market based compensation to the land and resource owner should be introduced to help the income of households keep pace with economic growth. A family-based tax system should be explored. And the system that taxes different sources of income differently should be replaced by one that taxes aggregate income. The total tax burden of the household sector should be reduced and more fairly shared. A tax on wealth, such as a property tax, needs to be introduced while the tax burdens of wage-earners should be lessened.

6. Conclusion

China is at critical stage of development in projecting itself from the middle income to the high income group of countries. Historic experiences suggest that the climb could be very hard, however and only a few countries have managed it in recent history. The change in development stage also calls for a change in growth pattern. China's current growth pattern is characterized by high investment and low consumption. Because of the global financial crisis, China's trade surplus is shrinking dramatically. There is still debate on what has caused China's economic imbalance. Some believe that economic fundamentals, such as surplus labor and globalization and a tradition of high savings have played leading roles. Others blame policy distortions, such as local government competition, exchange and interest rate depression and regulated energy prices for the investment-consumption imbalance. No matter what is the cause of the

imbalance, however, the sustainability of the current growth pattern is widely questioned due to the changing external environment and domestic conditions which will be less supportive of the growth and hence clash with the goal China is pursuing. Many factors that supported past high growth, such as exports and abundant labor and capital supply will begin to exert an opposite effect, slowing growth. And China's growth is increasingly constrained by rising social and environmental tensions. Faced with new challenges, China needs to search for new approaches to development. The key components of the new approach may include: coordinated social and economic development strategies, an innovation-centered industrial restructuring strategy, a consumption-centered domestic demand-boosting strategy, a deeper, migrant worker centered urbanization strategy, a resource-aware and environmentally sustainable strategy, and a balance-centered external economic strategy. To begin this new approach to development, China needs to push further reform in key areas. Among other things, the role of government and the way government runs the economy should be reformed; the new round of liberalization of land and financial markets should be pursued; further SOE reform is also needed to strengthen the public nature of SOEs and to check unlimited expansion of SOEs; last but not least, reform of the income distribution system would help correct the bias against the household sector, and improve the fairness of the tax system.

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CHAPTER 6

Economic Growth, Exports and Domestic Demand in India: In Search of a New Paradigm of Development

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Since the 1970s, several developing countries have witnessed remarkable transformation of their economies with Export-Led Growth (ELG) as a major development paradigm. Considering the latent limitation of the ELG to meet eminent stagnation in the long run, there were strong sentiments expressed by the East Asian countries towards switching over to alternative DDLG strategy after the 'Asian Crisis'. It was debated in the literature that large countries like China and India pursued the policies of ELG and DDLG policies in different phases of global business cycle to ensure sustainability of high growth during the 2000s and after. The empirical evidence on this issue of examining ELG-DDLG hypothesis using cointegration in the VECM framework for the period 1974-2010 suggests that India has been using the twin development strategies alternatively in different periods to evade adverse effects of the global business cycle and to maintain sustained economic growth. India's new version of export-led growth stance will continue as long as it has not exhausted its global competitiveness and becoming the part of the upper middle-income country. Considering India's trade becoming 'Asia Centric', concentrating on imports for new phase of industrialisation and consolidating of its 'Look East Policy', Country's integration with the EAS process would increase its trade dependence with the region.

Keywords: Economic growth, export-led growth (ELG), domestic demand-driven growth (DDDG), new paradigm of development

JEL classification: F43, O11, O53

1. Introduction

During the last two decades India has emerged as one of the world's high-performing economies with a vibrant external sector and a rapidly expanding domestic sector. The economy made a significant shift in its growth outlook from the 'Hindu Rate of Growth' (Rodrik & Subramanian, 2004) of 3.5% on average during the post-independence period until the 1980s to a high growth economy during the reform period since 1991. Amidst stiff global competition, persistent and sound domestic trade policies have led to a resultant surge in export competitiveness in a wide range of sectors. The export sector has become the driving force to nurture and groom some of the 'new age' industrial sectors. The continuation of high growth performance has provided a new identity to India in the global economy. During the period of reforms the export sector has expanded quicker than the country's real output.

With the expansion of the Indian economy and its growing dependence on the rest of the world the relevance of the export sector, as an engine of growth, has now become more evident than during the pre-reform period. The incredible performance of the export sector may be due to the choice of an appropriate trade strategy, which has been evolving over a period of time. India's strong commitment to multilateralism and its deep engagement with regionalism have contributed to a continuous surge of trade openness during the liberalization period [1]. The sustainability of India's growth performance in the long run is closely linked to the adoption of an appropriate development strategy in the medium term. However, a more suitable strategy is required in order to sustain the present growth profile of the country that it might continue for several decades.

Global debate on the choice of an appropriate development strategy has been changing profoundly during the last few decades. In the mid 1970s[2] there was a policy-switch towards an Export-Led Growth (ELG) strategy in several countries, including those in Asia. This strategy is centered on re-orienting the structure of

[1] Ahluwalia (2002) discussed the impact of liberalisation on India's external sector since 1991.
[2] ELG strategy was successfully experimented in Germany and Japan in 50s and 60s.

domestic production to promote exports. Based on the neoclassical principles of 'efficient allocation of resources' between sectors, it is envisaged that exports would act as the engine of growth. In the changed policy environment, with a rapidly growing export sector, stimulated domestic demand would encourage savings and capital formation to expand along with exports and economic growth. In the framework of the ELG strategy, which is consistent with the principles of the 'Washington Consensus'[3], exports gradually emerged as a growth simulator for the economy. The growing demand from the export sector paved the way for introducing new and efficient technologies in exporting firms to meet the required quality and standards of various products. The spill-over effects of technological upgrading in select export sectors were felt in the rest of the economy. With a strong undercurrent of exports in the domestic economy and continuous investment in the exporting sectors the supply potential of the economy in the tradable sectors[4] increased over a period of time. This in turn strengthened the import capabilities of countries to support their increased need of the export sector.

During the post war period some of the more advanced countries within the developing world, such as the 'Asian Tigers', were practically at a similar level of development as that of India. The rapid growth of these economies over a period of more than two decades brought a new dimension to the ELG strategy as a development paradigm. Asia witnessed a 'growth miracle' in these countries during the period 1970 to the mid-1990s. However, the development gap between these countries and the rest of the developing countries has widened. A key factor for the phenomenal growth of these fast growing economies has been the 'export boom' following the adoption of the Export-Led Growth strategy, which has effectively integrated these economies with the global economy. This strategy allowed development to transmit through the external sector channel and export took the lead

[3] For detailed discussion on the linkages between ELG and 'Washington Consensus', see Palley (2003).

[4] Joshi and Little (1993) observed that the impact of trade policy reforms brought radical transformation in the production structure in India. There has been a noticeable shift in the production structure from non-tradable to tradable sectors

in shaping the growth process through a restructuring of the domestic production structure[5].

However, in the wake of the "Asian Financial Crisis", the "High Growth Profile" of the ELG as a credible strategy for enhancing growth and economic welfare was called into question and its efficacy came under scrutiny. Inconsistent performances of some of the sectors during the period of crisis raised doubts about the relevance of export led growth as a growth stimulating strategy for developing countries (Felipe, 2003). This called for a new development paradigm, which would insulate developing countries from the possibility of economic crises because of external shocks. In the post-crisis phase a gradual switching of policies towards a Domestic Demand-Driven Growth (DDDG) strategy yielded positive results and placed the economy back on the path of sustained high growth.

Under the Domestic Demand-Driven Growth hypothesis expansion in the components of domestic demand would lead to an increase in economic growth. Some of the factors contributing to domestic demand are private investment, government expenditure, consumption, etc. The hypothesis emphasizes that GDP growth can be made sustainable with the deepening of domestic demand. Therefore, growth in output can be triggered by growth of aggregate demand. The central focus of this approach would be to enhance production capacity to comply with effective demand.

There are merits in both approaches to steering an economy so as to maintain steady growth over a long period. It is often mentioned in the literature that the two approaches are not competitive in nature. Although they appear to be competitive in many cases they are, nonetheless, complementary. It is frequently seen in the literature that empirical evidence does not support the dominance of any of these approaches in a country/region because they contribute differently in diverse situations. It is the prerogative of a country to determine its future development paradigm to guide its growth process, particularly toward a high growth trajectory.

There are many issues that need to be examined in the context of India. Is the present development paradigm of India inclined towards Export-Led Growth or

[5] While restructuring the production structure, priority has been given to the production of trables and limiting the size of non-tradable

Domestic Demand-Led Growth? What is the nature of causality between GDP growth with exports on the one hand and GDP growth with domestic demand on the other? What are the linkages between GDP growth, exports, and domestic demand which would allow us to understand their long-term relationships in India? What is the possibility of the deepening of the East Asia Summit (EAS) countries' integration through regional production network and contributing to domestic demand in India?

This paper begins by analyzing the debate on ELG and DDLG strategy in the context of large countries. Section 3 discusses the choice of India in adopting appropriate development strategies with the changing situations in the global economy. Section 4 presents an overview of the current literature on the dynamism of the two development strategies. Section 5 details the model used to examine the effectiveness of these strategies for India and section 6 presents the main empirical analysis of this paper. The key findings of this paper are summarized in the last section.

2. ELG and DDLG: Which Way?

Since the 1970s the ELG strategy has remained the dominant development approach for many developing Asian countries with an outward orientated trade strategy. Within a span of four to five decades, many developing countries have graduated from Low Income Countries (LICs) to Middle Income Countries (MICs) and then to High Income Countries (HICs). According to the World Bank (1987) the outward-oriented strategy is one where the incentive structure becomes neutral between import-substitution and export production strategies. The main line of argument is that an Export-Led Growth strategy never presupposes any supportive policy inducements in the form of subsidy or other incentives. The policy environment is expected to be non-interventionist, which does not discriminate between foreign or domestic production. ELG strategies such as; uniform rates of tariffs; discontinuation of quantitative restrictions, including import licensing or quotas; market–oriented exchange rates; and the replacement of discretionary controls with market-friendly laws and regulations, are acceptable to liberal policy

regimes.. Krueger (1980) argues that when trade policies are biased in favour of exports, by way of providing direct subsidies or maintaining undervalued exchange rate, they are not sustainable in the long-run because of the heavy costs associated with these policies.

In practice the situation is different from what has been envisaged in the theoretical discourse on export-led strategy. Practically all countries that have achieved rapid economic growth sustained over a period of time using the Export-Led Growth strategy had strong export promotion policies to improve their export performance, including production restructuring in the domestic economy.[6] The liberalization of trade policies that removed domestic protection was, in itself, not the full solution needed to improve substantially their external sector performance and boost domestic growth. This has been the case for Japan, South Korea, the Chinese province of Taiwan, Hong Kong, Singapore, and the old ASEAN countries among others. Such export promotion measures were initiated at the national level and sometimes at the regional level. Such broad export promotion measures include financial incentives, fiscal incentives, and factor incentives (Lutkenhorst, 1984).

Financial incentives include long-term loans and short-term refinancing of export credit. Provisions for various forms of export credit guarantees and insurance facilities are extended to promote exports in the short-run. Fiscal incentives cover a wide range of areas including tax holidays and reduction of tax. On several occasions numerous old ASEAN countries offered various tax deduction schemes, such as the cost of export promotion, organizational costs and pre-operating expenses, reserves for exchange rate fluctuations and losses from export sales in order to promote exports. Many countries in the region offered depreciation allowances to compensate for company losses. It was a common policy strategy in many countries to have a drawback of customs duty and excise tax on imports used for export production. There are export promotion policies to provide factor incentives as well. They include the subsidy of training programs[7] and the official promotion of

[6] Country experiences point out that several countries who have adopted ELG strategy have initiated ample of standard Export Promotion Policies to promote external sector performances. For details see Jung and Marshall (1985) ; Todaro and Smith (2006)

[7] Such policies existed in Singapore. Some of these policies were Industrial Training Grant Scheme, Government-Industry Training Centre, Overseas Training Scheme, Industrial Development Scholarship Scheme.

Research and Development activities. Export Processing Zones (EPZs) exist in almost all countries that are pursuing an ELG strategy. These EPZs fall under the category of factor incentives. Financial and fiscal measures are effective in various sectors[8] including electricity, water supply, and preferential administrative treatment among others.

The introduction of non-interventionist polices to ensure that there is no policy bias against external sector versus domestic sector is not enough to launch a successful ELG strategy. Rather government must introduce several export promotion measures to ensure sufficient drive is provided to support export growth. Such a trade policy regime is sensitive to exogenous shocks. When such a situation arises ELG strategy is under threat, and failure of this strategy has led to the possibility of switching[9] to an alternative strategy. However, Export-Led Growth has its own limitations and therefore the failure of this strategy is likely at certain stages of economic development (Palley, 2011).

A long-term development strategy should put the economy on a high growth trajectory. In this context the new development paradigm of the Domestic Demand-Driven Growth stressed that over-dependence on external demand and foreign capital weakens the economic fundamentals of the crisis-ridden economies. Consequently, policies should be directed to move away from the mass production of manufacturing goods for exports and focus attention on private consumption to grow the manufacturing sector. The Domestic Demand-Driven Growth strategy is based on certain basic principles such as improved income distribution, good governance, financial stability, and a fairly priced supply of development finance (Palley, 2002). To strengthen these principles other initiatives are required to be introduced in selected areas including labor and democratic rights, financial reforms, debt relief, foreign aid, increased development assistance and others.

The Domestic Demand-Driven Growth strategy emphasizes a 'dual-track' strategy. This strategy underlines the need for stressing external demand (first track)

[8] For details, see UNCTAD (1980)

[9] Immediately after the 'Asian Financial Crisis' many countries in East Asia have initiated several Domestic Demand policies in the East Asia (See for details Mohanty and Chaturvedi, 2006)

and supporting the domestic sector (second track) to boost domestically produced goods and services (Lian, 2004).

DDLG does not oppose the principle of abandonment of exporting goods, rather, it encourages exports in a milder form[10] in order to finance imports of intermediate and final goods, which are not produced in the domestic economy. It is, nonetheless, unquestionably in favor of abandoning efforts to create a market-friendly environment in order to attract an export-oriented Foreign Direct Investment (FDI).

Some of the broad policies emanating from the DDLG strategy have been discussed in the literature[11]. Some elements of a Domestic Demand-Led strategy are as follows: 1) The tax structure is to be rebalanced in such a manner that the burden of taxation will be progressively borne by the wealthy rather than the poor; 2) Policies should aim at raising wages through productivity growth. The government's role may be to encourage the implementation of a minimum wage rate, protecting labor rights, and improving collective bargaining with various mechanisms including the formation of labor unions; 3) A sizeable investment in public infrastructure should be implemented to cover the backlog of public investment opportunities, which has been pending for a long time; 4) Social safety nets should be strengthened in order to reduce the pressure on savings diverted for precautionary purposes; 5) An increase in the provision of public benefits which fall under the domain of the social sector including healthcare and education.

The current literature provides sufficient evidence to bring home the point that an Export-Led Growth strategy is not likely to be sustained for long (ADB, 2005; Palley, 2011) because of the changing global situation. The situation will become more complex for those countries that have joined the group of Middle-Income Countries and aspire to reach the level of a High-Income Country. To accommodate a national priority of sustained growth within the framework of global norms (i.e., commitments to climate change, global standards, global governance, etc), the appropriate development paradigm suggests maximizing an effective domestic demand with the support of Domestic Demand-Led Growth.

[10] Policy priority for the export sector changes with the DDLG in comparison with the ELG. It gets less priority in the regime led by DDLG.

[11] This aspect of DDLG is extensively discussed in the writings of Palley (2002).

For some emerging economies in Asia maintaining high growth targets has been the primary objective in recent years. In order to achieve this broad goal countries like China, and to some extent India, have tried to pursue both an Export-Led Growth and a Domestic Demand-Led Growth strategy simultaneously in an attempt to avoid complicated situations. This strategy has the potential to minimize the adverse effects of a global business cycle on the growth prospects of these economies and minimize the risk of a low growth rate (ADB, 2005; Mohanty, 2012a). Between China and India, China has achieved better success in employing these strategies with appropriate policy sequencing.

Evolving Development Strategies in India

During the last two decades the export sector has contributed considerably to the recent surge of the Indian economy. As far as liberalization is concerned, India has been lagging behind China for nearly one and half decades. The coming decade will be more crucial for the Indian economy as India has already reached a threshold level where the effects of sustained economic growth will become more visible. India's growth, utilizing the ELG strategy, is expected to continue for several more years, particularly until it reaches the level of an Upper Medium Income Country. The country's demographic return has been high and the real wage rate has been much lower than in many emerging countries. With its large technical manpower pool, along with a low wage rate, continuation of the ELG strategy would ensure the country's improved competitiveness with respect to other countries of the world. The New Manufacturing Policy[12] of India emphasizes the expansion of knowledge-intensive industries with an intent to enhance the contribution of the industrial sector to the overall output of the economy. Expected expansion in the manufacturing sector's output would support the export sector to become more manufacture-oriented and create more 'white collar' jobs in the economy.

The present protracted recession has cast a shadow on the growth prospects of India. The Indian government initiated several policies which have contributed to the growth of domestic demand. The Employment Guarantee Scheme has robustly

[12] New Manufacturing Policy emphasizes rapid progress in knowledge-intensive industries.

empowered people in the country, particularly in the countryside. The incremental effective demand was such that it absorbed the adverse effects of the recent recession in the country and provided enormous support to the growing industrial sector. The new manufacturing policy would create a new capacity in the country and generate large employment for skilled and semi-skilled workers. India's FDI policies were liberalized systematically during the second generation of reforms[13]. Because of these policies, India has been the second most attractive destination for FDI after China during the last several years. The investment of 500 billion USD in the country's road infrastructure over the next decade is an initiative designed to create domestic capacity to improve production and marketing activities in the country. A new policy to develop the Special Economic Zones (SEZs) in the country has been an attempt to promote production hubs for export promotion. India's decision to improve fiscal outlay on education and R&D activities is a step forward to increase production capabilities in the country. Moreover, the government has introduced several social security schemes that benefit senior citizens, unemployed youths, and other sectors of society. These policies are part of the domestic demand-led growth strategies.

A critical examination of India's development strategy indicates that a combination of both ELG and DDLG strategies have been employed over recent years, particularly after the 'Asian Financial Crisis' (Mohanty & Chaturvedi, 2006). During the global recession development policies were more inclined towards the DDLG[14] strategy to maintain the high growth momentum. During the phase of global recovery exports are projected to be the major factor of growth with an emphasis on Globally Dynamic Products (Mohanty, 2009). This study empirically examines whether India's development strategy is ELG, DDLG, or both.

Irrespective of India's present development paradigm, DDLG will be the fundamental element of its development strategy for the long-run. The regional impact could be a major motivating force for India to adopt the new strategy. It would be more attractive if most of the East Asian Summit (EAS) countries followed

[13] With market-friendly policies, FDI has started flooding into the Indian market during the second generation of reforms.

[14] An empirical analysis of Domestic Demand Led Growth for Malaysia is examined in a cointegration framework (Lai, 2004).

the development paradigm of Malaysia[15]. For DDLG to succeed in the region countries would need to deepen the regional integration of the EAS. Such integration would go beyond trade and investment and would cover production and engagement of temporary skilled and semi-skilled workers. Recent evidence indicates that the ASEAN+3 region has progressed on account of the regional production networking (WTO and JETRO, 2011) and India was also integrated in the process (Mohanty, 2012b) but to a much lesser degree. There is a need to deepen the regional production network in the 'parts and components' sector, which would affect production and trade inter-dependency within the member countries of the EAS. Since countries in the EAS are at different levels of economic development it would be difficult for them to embrace a single development strategy. Even without a common development strategy for the member countries, EAS integration could be possible in order to achieve the desired goals.

3. Appropriate Development Strategy for India

Constraints to Economic Development

1. India has graduated from a low growth inward-oriented economy to a high growth liberal economy with a changed perception towards liberal policies.

2. While India's policy regime was dominated by the Import Substitution Industrialization (ISI) strategy, the exchange rate was under the control of the government. When the economy was short of foreign exchange in an earlier regime, the spending of hard currencies was discouraged.

3. The intellectual property rights (IPR) regime was not stringent in India and process patents were in operation. Therefore, India was lacking access to new technology due to the potential threat of impinging on IPR rights in the country.

4. Under the ISI strategy the role of FDI was minimal in supporting industrialization in the country and therefore India had a controlled FDI administration until late 1980s.

[15] Being an Upper Middle Income country, Malaysia has realised that it is gradually losing its manufacturing competitiveness in a large number of products in the manufacturing sector. It is now turning to adopt a DDLG strategy to overcome impediments to reaching the level of a HIC.

5. India's industrial development was guided primarily by the state. Public Sector Undertakings were the main influences of industrialization in the country. Therefore resources were flowing from domestic sources through the state. Since the role of the private sector was minimal during the earlier regime the capital market was under-developed before countrywide reforms in India.

6. Historically India is a net importer of essential products including crude oil. Nearly 70 per cent of India's domestic need for oil was imported and India had persistent external sector imbalances. This was the primary reason for its foreign exchange constraints.

7. ISI strategy was in operation in India and trade management was highly protected to restrict imports. This has encouraged the development of a highly protectionist system with high border tariffs. High protection in India has inhibited India from participating in the regional process in a more active manner.

Emerging Development-Related Issues

8. As India has entered into the group of Middle Income Countries, some of the advantages that India used to enjoy previously as a Low Income Country are likely to be lost in the process. This has amounted to a loss of competitiveness in both domestic production and the export sector.

9. The transition of policy switching from an ELG to DDLG strategy because of a loss of competitive edge in exports and the shrinking of the external market to absorb exports is possible.

10. However, India still has a competitive edge in several sectors globally and it will take several decades to fully exhaust this competitive advantage.

11. Present growth and exchange rate difficulties are short term in nature and these difficulties can be resolved over a period of time, since they are not structural, but rather they are induced by external shocks. Government is determined to bring in orderly reforms with a view to addressing these critical issues that endanger the economic stability of the country.

12. India has been successful in utilizing both DDLG and ELG strategies in order to maintain high growth in the presence of recurrent global business cycles. China has also pursued similar policies, achieving a significant advantage from such an experiment (ADB, 2005 and Mohanty, 2012a).

13. India will eventually switch to a DDLG strategy in the long-run, but it can only happen when the relevance of the ELG has completely subsided for the Indian economy and the domestic economy loses its global export competitiveness in major sectors.

14. India, therefore, is likely to continue managing both a DDLG and an ELG strategy in order to maintain steady growth over a period of time rather than switching over to DDLG completely in the medium term. The empirical evidence

for this trend was recently examined for India and China (Mohanty, 2012b). This has been the case for many developing counties, as evidenced by the literature.

15. The driving forces for DDLG may differ from one country to another. Any of the domestic demand factors such as consumption, investment, or government expenditure, can take the lead in pushing the growth performance of an economy, as shown from the experiences of countries in the past. It may so happen that any one or two domestic demand factors can take the lead for an economy. There are numerous cases seen in the literature where development strategy has been steered by 'consumption-led' growth or 'investment-led' growth.

16. In the case of India, domestic demand was not driven by investment during the 70s, 80s or 90s. Investment has only become significant in the income identity in recent years.

17. The size of domestic absorption is likely to grow in the future as India is embarking on knowledge intensive industrialisation. Since India's trade is being 'Asia centric', its economic expansion would provide more market access to EAS economies.

India's Trade with EAS

Since India started its comprehensive reforms in 1991 external sectors received a major impetus for quick growth and contributed to the overall growth performance of the country. During the period 1991-2010, India's external sector grew faster than its GDP, as shown in Table 1. While GDP registered more than a five and half percent increase, exports and imports grew more than 12 and 15½ times respectively during the same period. Growth performances of the GDP and trade sectors have been significant and sustainable except for certain periods affected by exogenous shocks. It is observed that external sector growth performances have been robust under the conditions of global buoyancy. The contraction of global activities has been detrimental to India's external sector performance. As India has become an emerging economy with a heavy mandate to be industrialised in the coming years import growth has been faster than that of exports, emphasising a growing need for an industrial intermediate in the domestic economy. In the process, the surging export sector has been over-shadowed by a chronic trade deficit and rising current account deficit. In this context trade in services provides a cushion to the overall trade balance. India's trade engagement with the rest of the world is tilting towards the developing countries and more specifically Asia. Therefore the direction of India's trade is sometime termed 'Asia Centric' (Mohanty and Arockiasamy, 2010).

Trade engagement of India with ASEAN has been very special and this has been expanding to the whole of East Asian Summit (EAS) countries.

Table 1: India's Trade Linkages with the EAS

(in Million US$)

Year	GDP	Exports	Imports	India's bilateral trade with EAS		Exports	Imports	Share of EAS in India's total	
				Exports	Imports	As a ratio of GDP (%)		Exports	Imports
1991	287233	17727	20448	3186	3268	6.2	7.1	18.0	16.0
1992	289708	19628	23579	3302	4440	6.8	8.1	16.8	18.8
1993	283231	21572	22788	4012	3888	7.6	8.0	18.6	17.1
1994	321553	25022	26843	4559	5829	7.8	8.3	18.2	21.7
1995	365020	30630	34707	5588	7255	8.4	9.5	18.2	20.9
1996	376220	33105	37942	6327	7666	8.8	10.1	19.1	20.2
1997	421042	35008	41432	6172	9176	8.3	9.8	17.6	22.1
1998	424435	33437	42980	4862	10465	7.9	10.1	14.5	24.3
1999	453659	35667	46979	5170	11222	7.9	10.4	14.5	23.9
2000	476350	42379	51523	6201	9986	8.9	10.8	14.6	19.4
2001	487799	43361	50392	8313	13983	8.9	10.3	19.2	27.7
2002	510285	50372	56517	8975	12310	9.9	11.1	17.8	21.8
2003	590968	58963	72558	11361	17962	10.0	12.3	19.3	24.8
2004	688740	76649	99775	15203	23994	11.1	14.5	19.8	24.0
2005	808668	99620	142842	21338	33383	12.3	17.7	21.4	23.4
2006	908465	121806	178474	26395	48065	13.4	19.6	21.7	26.9
2007	1152810	149951	228686	33343	65785	13.0	19.8	22.2	28.8
2008	1251370	194531	320785	36382	79189	15.5	25.6	18.7	24.7
2009	1253980	164921	257187	36001	78201	13.2	20.5	21.8	30.4
2010	1597950	216868	323624	49495	118513	13.6	20.3	22.8	36.6

Source of Data: IMF (2012a) Direction of Trade Statistics, IMF, Online database, Washington DC; and IMF (2012b) World Economic Outlook, World Bank, , IMF, Online database, Washington DC.

India is moderately integrated with ASEAN and has significant trade ties with other EAS countries. India is in the process of concluding a bilateral free trade agreement (FTA) with ASEAN. India has a bilateral FTA (Comprehensive Economic Partnership Agreement, CEPA) negotiation with many individual countries in ASEAN and has similar types of arrangements with most of the EAS countries outside the ASEAN region. Most of these agreements are either concluded or at an advanced stage of negotiations. The relevance of these agreements is immense for India, as India has been closely integrated with these economies since the early 1990s. In fact the import dependency of India is becoming strong within ASEAN as a result of continued reforms in the domestic economy, though bilateral export from India is not coping with its expanding imports from the region. With the rising

import bill the bilateral trade gap of India with the region has widened and the situation was aggravated further with the recent recession.

The above trends suggest that India is likely to provide wider market access to ASEAN countries including other EAS countries as long as it is continuing a sustained high growth, at least in the medium-term. This is irrespective of whether growth is the result of the ELG, the DDLG, or both. It is important to observe the appropriate strategy that India has to pursue considering its economic strength.. ASEAN countries are consistently growing because of their strong intra-regional flow in trade (Filippini & Molini 2003). For sustainable trade ties between India and ASEAN or other members of the EAS, a wider bilateral cooperation is required at regional levels in various sectors including the regional value chain.

Towards An Appropriate Development Model for India

India's recent development approach is embedded with the features of ELG and DDLG strategies to insulate the domestic economy from the adverse impact of the global business cycle. Inspired by the Chinese experience, India is experimenting with the new strategy. If the strategy performs in the desired manner, most of India's development related constraints could be effectively addressed. This would facilitate rapid integration of India with the ASEAN process.

4. Literature Survey

The Export-Led Growth hypothesis has been dominating the development literature for the last four decades. Several studies examined the relationship between exports and growth in the 1970s and 1980s. Many of these studies (Michaely, 1977; Heller and Porter, 1978; Tyler, 1981; Feder, 1983; Kavoussi, 1984; Ram, 1987; Mohanty and Chaturvedi, 2006; Wah, 2004; Wong, 2007 & 2008) have supported the assertion that export growth has a strong association with the growth of real output. However, causation between the two variables is not established with certainty among different cross-sections of countries and at different points of time.

During the last several decades such relationships were examined in the framework of time-series and a cross-section of countries.

Several studies have (Jung & Marshall, 1985; Hsiao, 1987; Bahmani-Oskooee*, et al.*, 1991; Dodaro, 1993; Love, 1994; Love and Chandra 2005; Allaro, 2012) used different time-series approaches to lend support to the Export-Led hypothesis. Their results do not conclusively support the hypothesis; rather they are mixed in nature. Taking a sample of 87 countries, Dodaro (1993) examined the causality between export growth and real income growth. Results of the study found weak support for the hypothesis that export growth promotes GDP growth. Using the Granger causality, Jung & Marshall (1985) found that the Export-Led Growth hypothesis supported ten per cent of the sample in the cross-country analysis. The results of Bahmani-Oskooee, *et al.*, (1991) demonstrated some agreement with the Export-Led Growth hypothesis, although on balance the evidence was inconclusive. Using Johansen's multivariate approach to co-integration, Love & Chandra (2005) examined the Export-Led Growth hypothesis for Bangladesh. The findings suggest that the direction of both long and short-term causality is from income to export and therefore countries with inward oriented trade strategies discriminate against exports.

In several countries both ELG and DDLG strategies are pursued simultaneously in order to insulate the domestic economy from the adverse impact of the global business cycle. Several studies have observed that empirical results do not strongly support the export-led position. This is because of the missing impact of DDLG misspecification in the model. In many other cases both development paradigms are empirically found to be important in contributing to growth, meaning that simultaneously pursuing these two strategies is important in order to optimise domestic welfare. Lin and Li (2002) studied the contribution of the external sector to GDP growth to examine the efficacy of Export-Led Growth in China. They proposed a new methodology to estimate direct and indirect contributions of exports to GDP growth. Their results indicate that a 10% increase in export growth led to 1% growth in GDP in the 1990s.

Wah (2004) tried to examine the specific paradigm of development that contributed to the high growth phase of the Malaysian economy during the period between 1961 and 2000. During the high growth period the export factor remained

an important factor in the economic transformation of the economy. However, various studies examining the Export-Led hypothesis in Malaysia found weak support for the Export-Led Growth hypothesis over the long run. This could be because of the exclusion of various factors relating to domestic demand in the models. Results of the study support a domestic demand hypothesis in the long run but the Export-Led hypothesis was not supported by the evidence. In another study Wong (2008) examined the relevance of a development stance of some of the South East Asian countries, particularly the ASEAN-5, during and after the 'Asian Economic Crisis'. The regional overview revealed that there was bilateral Granger causality between exports and economic growth and private consumption and economic growth. The findings did not reveal that the crisis in the region was due to export-led growth. The broad conclusion of the study is that sustained economic growth requires steady growth in exports and domestic demand. A similar hypothesis was examined by Wong (2007) for several Middle East countries such as Bahrain, Iran, Oman, Qatar, Saudi Arabia, Syria, and Jordan. It found the sustainability of economic growth went in conjunction with the growth of both exports and domestic demand. However, the results were less conclusive in supporting any development strategy responsible for sustained economic growth in the Middle East region.

An overview of the current literature highlights the role of both exports and domestic demand to place economic growth on high growth trajectory in a sustainable manner. The exact sequencing of policies and their impact on the growth prospects of a country are empirical issues and needs to be examined for India.

Another trend can be ascertained from the empirical studies that deal with alternative development paradigms adopted by different countries at different stages of their development. In the empirical literature, the DDLG model is represented by GDP in the income identity of the national income with one or more variables such as household consumption, investment, and government expenditure. Therefore, the choice of exogenous variables needed to examine a DDLG model is not clearly articulated in the literature. This is because the impetus for growth is different for individual countries and for distinctive periods. For example, FDI became an important growth agent in India towards the middle of the last decade having been

almost irrelevant since India's independence. Similarly for the ELG strategy most of the studies examine the relationship between income and the export variables. Others replace export variables with either imports or openness (i.e., sum of exports and imports) and sometimes with other related variables like terms of trade (Love and Chandra, 2005). Therefore, the choice of variables to represent the models of ELG and DDLG are mostly left to the researcher to take into consideration for the period of study and the relevance of variables based on their statistical significance and support from current literature.

The existing literature pertaining to the debate on the appropriate choice of development strategy highlighted in the context of China and India reveals that both countries selectively used ELG and DDLG strategies at different periods in order to minimize the detrimental effects of global business cycles on their growth performance (ADB, 2005; Mohanty and Chaturvedi, 2006; Mohanty, 2012b). In economic history since the 1970s, a shifting of development strategies has been taking place consistently in modern development thinking. This has been a well-established practice among developing countries. In large countries the low wage rate remains a driving force for maintaining export competitiveness in the manufacturing sector, leading to cheap mass production of goods, thus contributing to adoption of the ELG. Development problems surface in these large countries when structural problems arise along with the operation of global business cycles. As these countries experience rapid growth sustained over a period, there is a sudden worsening of the situation because of structural problems which is construed as an abnormal situation. Therefore, attempts to implement alternative development strategies to respond to the adverse global conditions at different periods are made, in an attempt to maintain a sustained high income growth.

In the larger emerging countries in Asia the sequencing of development strategies has become apparent during the last two decades. Low Income Countries determined to undertake irreversible comprehensive economic reforms engage in the ELG strategy. The development strategy begins to change as they become Middle Income Countries. By losing the advantages of being a Low-Middle Income Country – in terms of low wage cost, productivity, soaring land prices, and other input prices, etc. – the occurrence of external shocks in the global economy brings policy tremors

to these emerging countries. At this stage of development, where these countries are experiencing a high rate of growth, any hindrance to this growth is not welcome to these economies. In such a situation there is the need for a duel strategy to deal with the temporary abnormal situations with the DDLG, and to maintain a high growth performance despite the global slump. Countries find it difficult moving up to the Upper-Middle Income Country level of economy. These countries continue to feel that ELG has very little relevance to impel these countries to a high growth trajectory in order to place them in the group of High Income Countries. In such a situation DDLG could be the most suitable alternative to help them join the league of HICs. Empirical evidence shows such transitions taking place in the case of many countries. However, this is an empirical question, which needs to be examined further with empirical evidence.

5. Model

As is evident from the literature[16] that many countries have maintained a high growth by pursuing the policy of ELG over a long period of time. Certain countries like India and China have used both DDLG and ELG strategies simultaneously to maintain steady growth by adjusting to the global business cycle. The major objective of the study is to find the relationship between these alternative development strategies and economic growth by using certain macroeconomic variables, which are representing these strategies in an economic model for India. Therefore, our approach is to examine the relationship between economic growth and other exogenous variables like domestic consumption, government expenditure, and openness in India. The review of the literature presents ample insights to demonstrate that there is a co-integrating relationship between economic growth, domestic consumption, government expenditure, and trade. Some earlier studies have used openness in place of exports to represent ELG where the external sector is growing fast along with having a large share in GDP. Considering the expanding nature of the trade sector in India we have chosen to include openness rather than

[16] Refer Ghatak, Milner and Utkulu, 1997; Ekanayake, 1999; Herzer, *et al.*, 2004.

real exports in the model. In India, import demand is mostly driven by exports, though the component of autonomous imports has been significant. A strong correlation between exports and imports has created a strong case for the inclusion of openness as a variable in the model in place of exports to represent ELG. Similarly the DDLG strategy is represented by two variables in the model, namely private consumption and government expenditure.

Based on the review of the literature in the previous section the ELG-DDLG hypothesis is examined using four macroeconomic variables, which are as follows:

$$RGDP_t = f\ (RCONS_t, RGOV_t, ROPEN_t) \qquad (1)$$

Where $RGDP_t$ denotes real GDP; $RCONS_t$ for real household consumption; $RGOV_t$ for real government expenditure and $ROPEN_t$ for the sum of real exports and imports of India in time period t. The variables in equation (1) are in Indian local currency and also in constant prices. This could minimize the measurement error in converting them into international currencies. It is evident from the literature that while examining the relevance of an ELG or DDLG strategy for a country or group of countries, one or more explanatory variables may be included in a model to represent a strategy. In the present case the DDLG strategy is represented by two exogenous variables, namely real household consumption ($RCONS_t$) and government expenditure ($RGOV_t$), whereas the ELG strategy is represented by single exogenous variables ($ROPEN_t$) to examine their long-run relationship with the growth variable.

For estimation purpose the model specification is important, particularly the choice between linear and log linear models because they affect the explanatory power of the model. In the literature there are different tests for the selection of the appropriate model, but the dominant thinking is in favor of the non-linear model[17] because of certain advantages associated with it.

In this context the relevance of simultaneous equation modeling is important. It provides internally consistent estimates and accounts for the time series properties of variables. Co-integration methods have been normally used, as is shown in the

[17] For more discussion on the issue, refer Khan and Ross,1977; Boylan, *et al.*, 1980; and Doroodian, *et al.* 1994.

literature, to take note of the problem of endogeneity in the time series framework. The advantage of this method is its capacity to model non-stationary series in levels and generate both long run and short run dynamics. It is evident from the literature that parameter estimates of the Johansen's co-integration approach are unbiased and consistent due to the incorporation of the VAR framework in the co-integrating system.

In such cases examining the presence of a long-run relationship between the variables, the co-integration and ECM, is considered to be the better method. When the variables are non-stationary at level but are integrated of the same order there can still be a long-run relationship between them. When the variables are co-integrated there exists a stable long-run relationship between the variables. Once the co-integration among the variables is established the ECM is estimated to examine the short-run dynamics of the relationship. When variables are co-integrated in a model with a given order they have VECM. The Vector Error Correction Model (VCEM) representation of the Johansen approach is presented as the following:

$$\Delta X_t = \alpha(\beta X_{t-1} + \mu + \rho t) + \sum_{i=1}^{k-1} \Gamma_i \Delta X_{t-i} + \gamma + \varepsilon_t \qquad (2)$$

X represents the vector of I(1) endogenous variables. As discussed earlier, endogenous variables in the model are the following: LRGDP, LRCONS, LRGOV, and LROPEN. The parameter γ is the deterministic trend term in the model. The individual VAR equations in the VECM estimate provides the short-run dynamic and 'α' measures the speed of adjustment in the error correction process. The 'β' coefficients indicate a long-run relationship among endogenous variables in the model.

In the present study, the Augmented Dicky-Fuller (ADF) test is applied to test the order of integration of endogenous variables. To test the presence of co-integration the Johansen (1988) approach has been applied. In this approach the number of co-integrating relations is tested on the basis of trace statistics, maximum Eigen statistics, and minimum information criteria. Similarly, the number of lags in the model is determined by the number of information criteria. Once the presence of

co-integration is established we estimate an ECM that includes both long-run and short-run information.

In the present study various multilateral sources are used to collect data and focus on various dimensions of the study. We have sourced various components of national income time series data from UN Statistical Division *National Accounts Main Aggregates Database*. For India we have taken GDP and its components in national currencies at constant prices. Though we have taken data for the period 1970-2010, we used data for the period 1974-2010 in the empirical analysis. India passed through a critical phase between 1971 and 1973 because of India's war with a neighboring country in 1971 and the global oil crisis in 1973. The situation became relatively calm during the subsequent period. We have also taken trade data from the UN *Comtrade* and *Direction of Trade Statistics*.

Representing alternative policy strategies, different studies have modeled these development strategies (i.e., ELG or DDLG) by linking the income variable with one or more factors. For example, while examining Domestic Demand-Led Growth strategy in a modeling framework, various forms of model specification are found in the literature (i.e., models starting from two-variable to multi-variable ones). In most of these cases efforts are made to link GDP with consumption, investment, or government expenditure in a model. From these exogenous variables one or more variables are chosen to complete the system of equations to examine their long-run relationships with the income variable. Empirically it is insignificant to demonstrate whether one or more independent variables are considered to complete the system of equations. It is important how meaningfully these variables are integrated in a system of equations. The choice of variables between consumption, investment, and government expenditure, for their inclusion in the model, is in the exclusive domain of the researcher to build a model appropriately to justify position of a country. In such empirical analysis, the statistical significance of variables and other considerations are important for presenting a complete system of equations in a model[18].

[18] Recent studies examine the efficacy of these hypotheses using VECM and other methodologies, which are based on systems of equations.

While modeling Export-Led Growth, the income variable is linked with exports, imports, or openness. Countries have different experiences concerning their current account situations. Some studies also use other variables, which are not figured in the income identity. For example, Love and Chandra (2005) used a terms of trade variable in the model. It is very difficult to reflect which variables are to be included in the system of equations for a model like ELG.

In the present analysis we have attempted to examine the relevance of both strategies with reference to India using time series data. We have experimented with several variables to develop an appropriate model. We have tried to examine the linkages between GDP and investment along with other variables[19]. Taking into account the present literature and empirical analysis, we have chosen consumption and government expenditure to represent Domestic Demand-Led Growth and openness to characterize export led growth in the following empirical analysis.

6. Results

It may be mentioned that India's sustained growth performance has been the outcome of its continued reliance on the twin development strategies of DDLG and ELG to adjust its domestic regime to the global economic environments during the last decade. In the empirical analysis long-run relationships between income growth and domestic demand factors (i.e., consumption and public consumption) as well as the external sector, represented by openness are examined.

From the outset it is necessary to examine whether the variables in the estimated equation (2) are stationary and also to determine their orders of integration. We have used the Augmented Dickey Fuller (ADF) test to find the existence of unit root in each of the time series variables. The results show that the variables used in the model are not stationary at levels as presented in Table 2. This is examined by comparing the observed value of the ADF test statistics with the critical values of the test statistics at the 5% level of significance. The ADF test suggests strong evidences of non-stationarity for all variables included in the model. Therefore, the null

[19] The results of the Johansen co-integration test reveal that there is a weak long run relationship between income growth and investment.

hypothesis is accepted by confirming the presence of unit root in the variables at levels.

Table 2: ADF Tests for Unit Roots

Variables	Test Statistics	
	Level	First Difference
Real GDP (LRGDP)	1.170	-9.667*
Real Govt. Expenditure (LRGOV)	0.257	-8.015*
Real HH Consumption (LRCONS)	1.436	-9.398*
Openness (LROPEN)	1.846	-5.994*

Note: * indicates significance at 5% level.

LRGDP: the log of real Gross Domestic Product; LRCONS: the log real household consumption; LRGOV: the log of real government expenditure an LROPEN: the log of openness

As model variables are found to be non-stationary at levels, the ADF test was conducted on the first difference of each of these variables. The ADF tests on first difference suggest that the null hypothesis of non-stationarity is rejected and therefore variables are stationary at first difference. Since variables in the model are integrated of order one i.e., I(1), they could be considered in a co-integration model to examine the possible long-run co-integrating relationships among them and also their short-run dynamics.

Before considering the co-integration test it is worth examining the autoregressive structure in the model variables. It is important to set the appropriate lag length, k, of the VAR model in order to ensure that the error terms in the vector error-correction model (VECM) are Gaussian and the estimated residuals satisfy the properties of no residual autocorrelation and normality. Different criteria to determine the lag length of the variables are used in this case. Results of four test criteria including FPE, Akaike Information Criteria (AIC), HQIC, and Schwarz Bayesian Information Criterion (SBIC) suggest at least one lag in the VECM model is to be estimated.

Johansen (1988) and Johansen and Juselius (1990) derived the likelihood ratio test for the hypothesis of 'r' co-integrating vectors in the model. In the literature the co-integrating rank, r, can be tested with three statistics e.g. trace statistic, maximal Eigen value, and minimum information criteria and any two tests can be used to

examine the co-integrating ranks[20] among the variables included in the model. In the present case trace statistics and the Schwarz Bayesian Information Criterion (SBIC) are used to examine co-integration ranks among the model variables. Furthermore, the procedure for the choice of the appropriate number of co-integrating vectors (r) stops when the null hypothesis is accepted for the first time. In the present empirical exercise both trace statistics and the SBIC-based minimum information criteria suggest the presence of two co-integrating vectors among these four variables (Table 3). This implies that there exist two unique long-run equilibrium relationships between GDP, consumption, government expenditure, and openness for India.

Table 3: Johansen ML Test for Co-integration

Rank	Trace Statistics	Minimum information Criteria (SBIC)
0	61.30	-11.10
1	35.33	-11.12
2	12.64*	-11.24#
3	4.49	-11.17
4	--	-11.20

Note: SBIC: Schwarz Bayesian Information Criterion. * indicates significance at 5% level. # indicates the rank identified by the criteria.

The estimates of the long-run co-integrating equation are presented in Table 4. In the equation (2), 'β' vector represents long-run estimates of the co-integrating equation. Signs of the normalized coefficients are to be treated opposite while interpreting the computed results. As expected the results affirm the existence of long-run co-integrating relationships among GDP, consumption, government expenditure, and openness for India.

Table 4: Long-run Estimates of Cointegration Equation

Variable	Estimated coefficient	Standard error	Z-statistics
Real GDP (LRGDP)	1.0000	--	--
Real Govt. Expenditure (LRGOV)	-0.4522*	.0559	-8.08
Openness (LROPEN)	-0.2938*	.0330	-8.90
Real HH Consumption (LRCONS)	-0.0005	--	--
Constant	-3.901	--	--
χ^2	5122.79		
Likelihood Ratio	236.91		

[20] We have examined all the three tests mentioned above, but the maximum eight tests did not turn out to be significant. We took results of other two tests for analyzing the results.

Note: * indicates significance at 5% level. The restricted co-integrating vector is obtained after normalization, i.e. after putting the coefficient of LRGDP=1. Note that the trend is not included in the co-integrating vector as it is insignificant.

The long-run relationship can be expressed in the following form:

LRGDP= 3.901 + 0.0005 LRCONS+ 0.4522 LRGOV+ 0.2938 LROPEN

The signs of all the coefficients in the normalized co-integration equation are positive, as expected. The significant relationship between government expenditure and GDP with a coefficient of 0.4522 indicates that a 10 percent increase in government expenditure leads to more than a 4.5 percent increase in real income (GDP). Similarly, openness is expected to affect GDP significantly in India. GDP is likely to rise by 2.9 percent with a 10 percent rise in India's openness in the long-run. Unlike government expenditure and openness, a robust response is not expected from consumption on real income. This may be due to the declining share of consumption in overall GDP on account of a sharp rise in the contribution of the external sector. However, the sector accounts for a significantly larger proportion of the total real income of the country. Besides leaving a substantial impact on the composition of domestic output and local employment a large degree of consumption and growing influence of openness could have important policy implications for India.

Table 5: Error Correction Coefficients

Variable	Estimated coefficient	Standard error	Z-statistics
D(LRGDP)	-0.7118**	0.1671	-4.26
D(LRGOV)	0.3192	0.2184	1.46
D(LROPEN)	0.4977*	0.2987	1.67
D(LRCONS)	0.0538	0.1544	0.35

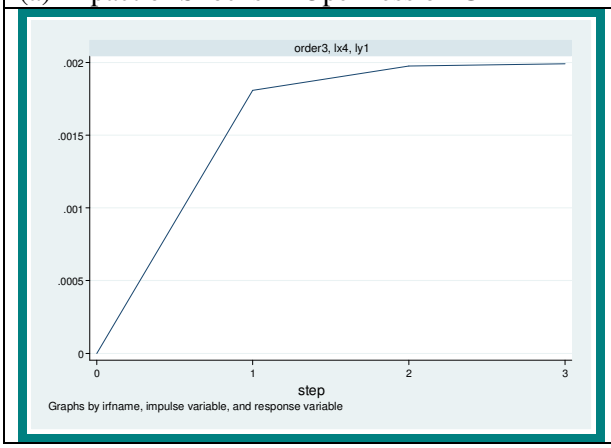
Note: ** and * indicate significance at 1% and 5% levels respectively.

The result of the ECM is given in Table 5. The model seems to be appropriate and confirms the diagnostic test. The negative coefficient of the error term is indicative of the fact that the long-run relationship is stable in the model. Any disequilibrium in the short-term could be temporary in nature and is likely to be corrected over a period of time. It is imperative from the adjustment parameter that GDP will adjust about 71 percent of its total deviation from the long run equilibrium level in each time period. The result further shows that consumption, government

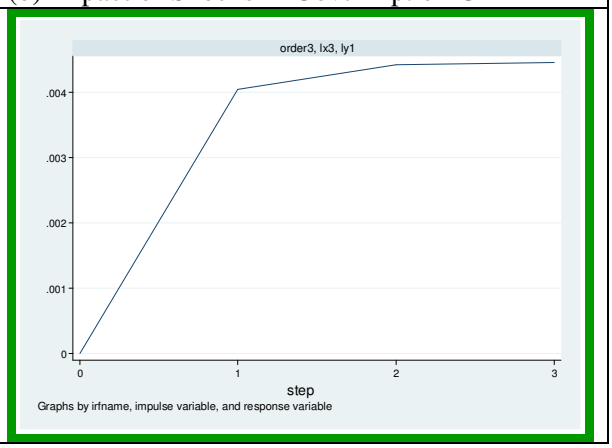
expenditure, and openness have positive and significant relationships with economic growth in the short-run. Export has a positive influence on GDP but its contribution is not statistically significant.

Figure 1: Orthogonalized Impulse Response Function (3-Year Horizon) GDP Function

(a) Impact of Shocks in Openness on GDP



(b) Impact of Shocks in Govt Exp. on GDP



In addition to the numerical coefficient estimates the patterns on the impact of shock to any of the model variables on any variable in the model could be visually discerned from the Impulse Response Functions (IRFs). IRFs present indications concerning the shock persistence and short-run adjustment mechanisms, if there is any. We have experimented with the implication of shock responses on real GDP over a forecast horizon of three years. The IRFs shown in Figure 1 indicate that the shocks to openness and government expenditure have significant impact on GDP in the first year and the effects are expected to persist in subsequent years with a gradual decay of the shock effects.

7. Conclusions

The debate on the choice of the appropriate development strategy for countries in Asia, particularly in the East Asian Summit, has been circulating since the last 'Asian Financial Crisis' in the late 1990s. The experiences of East and South-Asian countries are clearly pointing towards Export-Led Growth as the most credible

development strategy, which placed most of the regional countries on a high growth trajectory. As the global economy is in deep turmoil with the recent recession, followed by the Eurozone crisis, the return of buoyancy in the world economy is difficult to predict in the medium term. The existing literature stresses that the DDLG strategy could generate more synergies which could trigger a growth momentum within the region. The developmental experiences of India and China indicate that both countries have used key policies of both DDLG and ELG strategies alternatively to maintain steady growth over a long period. India has benefited from the DDLG in minimizing the adverse effects of the recessionary situation of the global economy and key policies of the ELG have supported the country to maintain a steady growth over a long period.

In this study the long term relationship between real GDP growth performance and the impetus of ELG and DDLG strategies are examined with Johansen's co-integration VECM framework. While the DDLG is represented by household consumption and government expenditure the ELG was represented by openness. The period considered for the analysis was between 1974 and 2010. The endogenous variables were found to be stationary at first difference. Using trace statistics and other information criteria the model is found to have two co-integrating vectors with one period of lag to estimate the error correction model. The results confirm that long-run co-integrating relationships exist among GDP, household consumption, government expenditure, and openness in India. Short-run analysis indicates that GDP adjusts rapidly from the long-run equilibrium level in one time period. These results indicate that DDLG and ELG strategies have a long run relationship with the GDP growth in India.

India, however, has export competitiveness in a large number of sectors in the world economy. It will continue to use the ELG strategy as long as it has not fully exhausted its global competitiveness. India will continue to focus on the simultaneous use of key policies of DDLG and ELG to shape its developmental strategy in the long run. This policy-mix would contribute to the integration of the Indian economy with the EAS.

The following policies may be recommended for strengthening India's integration with the ASEAN/EAS.

1. India is using Export-Led Growth and Domestic Demand Led Growth strategies in different periods to minimize the adverse effects of the global business cycle on its growth prospects. While ELG policies are more prominent during global buoyancy, DDLG policies are effective during recession. Such policy switching during various phases of a global business cycle have enabled India to maintain its high economic growth, even above its potential. A similar experience was noticed by China along with many other emerging countries.
2. India's recent manufacturing policy would generate a large demand for imports to modernize its industrial sector. As India's trade pattern is "Asia Centric', growing demand for manufacturing imports would provide a wider market access to ASEAN and other EAS countries in India.
3. In a situation where India continues to maintain a high growth rate in the future, ASEAN countries would gain more market access in India. Empirical evidence suggests that when India's GDP increases market access of ASEAN in India rises more, proportionately, than in recent years. This is irrespective of whether India adopts ELG or DDLG or both.
4. Private domestic consumption is a driving factor in India's rapid growth performance. This has been an important factor where small and large ASEAN countries can have market access in India for their products.
5. India's integration with ASEAN is strengthening at the cost of its own deteriorating bilateral trade imbalances with them. The deepening of India's trade integration with ASEAN can be sustainable when coupled with effectively addressing the bilateral trade imbalance issue with them. Earlier studies indicate that India has competitiveness in many sectors including in the regional value chain. Large market access to India in this sector could reduce its bilateral trade imbalances to some extent.

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CHAPTER 7

Indonesia: Building an Inclusive Development Model

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More than ten years ago, Indonesia was hit by an extremely severe economic crisis ever happened since the country's independence in 1945, known as the Asian financial crisis, which led Indonesian economy to an economic recession with -13 % of economic growth in 1998. Since then, Indonesia has become a different country. It has embarked upon a far-reaching institutional transformation and has become one of the region's most vibrant democracies. Wide reforms in all economic areas including trade, finance and industry have been carried out, and development strategy has been shifted from 'exclusive' to 'inclusive'. The main aim of this study is to examine the process of change in Indonesian development strategy from 'exclusive' oriented before the Asian financial crisis 1997/98 (during the 'New Order' era) towards "inclusive' oriented. Specifically, it discusses main important 'inclusive' policies that have been introduced or implemented so far by the Indonesian government. In addition to this, based on a number of indicators of inclusive development in the literature, the study also proposes an inclusive development index to measure its achievement.

Keywords: Indonesia, inclusive growth, development model
JEL Classification: I32, I38, O11,O20,O43.

1. Introduction

During its so-called 'New Order' era (1966-1998) Indonesia went through a rapid economic development process, with growth rates at 6 to 8 % annually. The regime also managed to push down poverty through rural economic development based on modernization in agriculture, and industrialization. With this achievement, Indonesia was often spoken of as a coming "Asian Tigers", together with Malaysia and Thailand. However, this economic performance at the macro-level concealed some problems. These were a result of the chosen development strategy which created inefficiency and market distortions. Indonesia suffered from high economic costs and a growing income gap. During the New Order era, the development process was beneficial only for certain groups of society, *i.e.* those who were considered important by policymakers, and certain regions, *i.e*. Java.

More than ten years ago, Indonesia was hit by a severe economic crisis, the worst since the country's independence in 1945, known as the Asian financial crisis, which led the Indonesian economy to an economic recession with 13 % of economic decline in 1998. Since then, Indonesia has become a different country. It has embarked upon a far-reaching institutional transformation and has become one of the region's most vibrant democracies. In social and economic terms, Indonesia has also seen much progress. Its real GDP has been growing at 5 to 6 % annually since 2002. Prudent fiscal management and a strategy of fiscal consolidation have continued the significant reduction in government debt levels. Inflation has largely been kept under control and Indonesia has a strong balance of payments, with record exports of many commodities. Public investment has steadily increased over the past five years. Poverty has declined and public services are receiving additional resources, including through community-driven development programs. Wide reforms in all economic areas including trade, finance and industry have been carried out, and development strategy has been shifted from 'exclusive' to 'inclusive'.

The main aim of this study is to examine the process of change in Indonesian development strategy from 'exclusive' oriented before the Asian financial crisis 1997/98 (during the 'New Order' era) towards "inclusive' oriented. Specifically, it discusses the main important 'inclusive' policies that have been introduced or

implemented so far by the Indonesian government. In addition to this, based on a number of indicators of inclusive development proposed in the literature, the study also proposes an inclusive development index to measure its achievement.

2. Indonesian Achievements in Brief

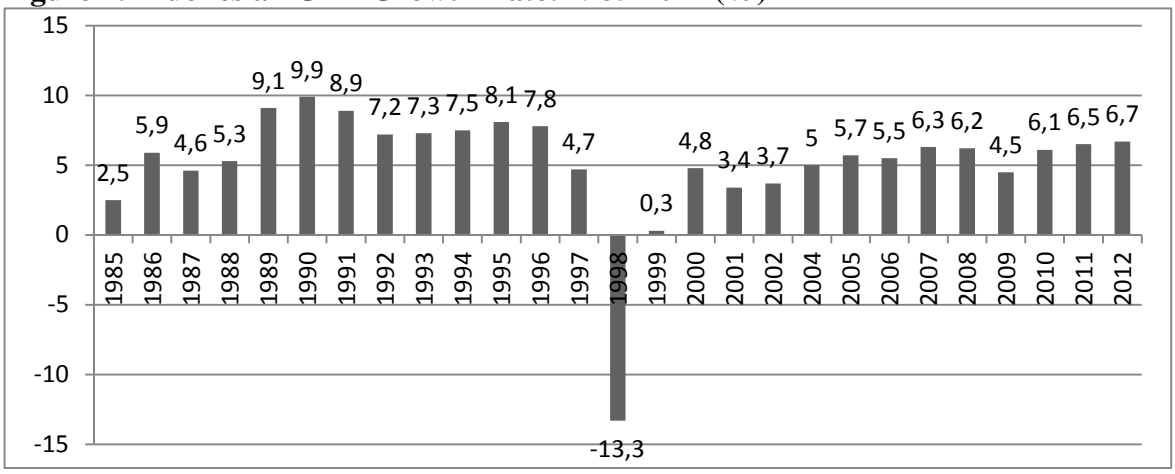
Indonesia was among only few countries in Southeast Asia which experienced high rates of annual economic growth during the "New Order" era (1966-1998) led by the former President Soeharto, and, probably among very few countries with the best performance in terms of industrialization, agricultural development (especially with respect to the implementation of the "green revolution"), GDP growth, income per capita growth and poverty reduction within the group of developing countries in Asia, Africa and Latin America. Because of its spectacular performance at that time, in its regional report the World Bank even named Indonesia, along with Malaysia and Thailand as the "new Asian tigers" following the existing ones (besides Japan), i.e. Hong Kong (before it returned to China), South Korea, Singapore, and Taiwan, province of China.

Guided by a five year economic plan (Repelita), the process of economic development in Indonesia during that period placed emphasis on two sectors, namely industry and agriculture. Starting first with an import-substitution strategy in the early 1970s and shifting gradually to an export promotion strategy in the mid 1980s, financed by money from donor countries and the World Bank, and stimulated by huge inflows of foreign direct investment (FDI), especially in manufacturing industry, Indonesia has experienced a rapid process of structural change from an agriculture-based toward an industry-based economy. Although the degree of industrial development in Indonesia, in terms of diversification, structural deepening, and technology base, was still very low as compared to South Korea and Chinese Taipei. By the end of the 1990s Indonesia's GDP share of industry had already reached around 43 %, and it was in the second rank of countries, after Malaysia, within the ASEAN.

Although the share of agriculture in GDP declined steadily during the period, as normally happens everywhere in the course of a long-term economic development process, the sector also developed well with the implementation of the so-called "green revolution", focusing on modernization and intensification. The government at that time adopted this strategy with the aim of improving productivity and hence the incomes of farmers. It sought in this way to reduce poverty especially in rural areas and to reduce the country's dependency on imports of agricultural commodities, in particular basic foods such as rice. The chosen strategy worked, and agricultural productivity and farmers' incomes increased. Indonesia was even able, in certain years of the 1980s, to become self-sufficient in rice, the nation's main staple food.

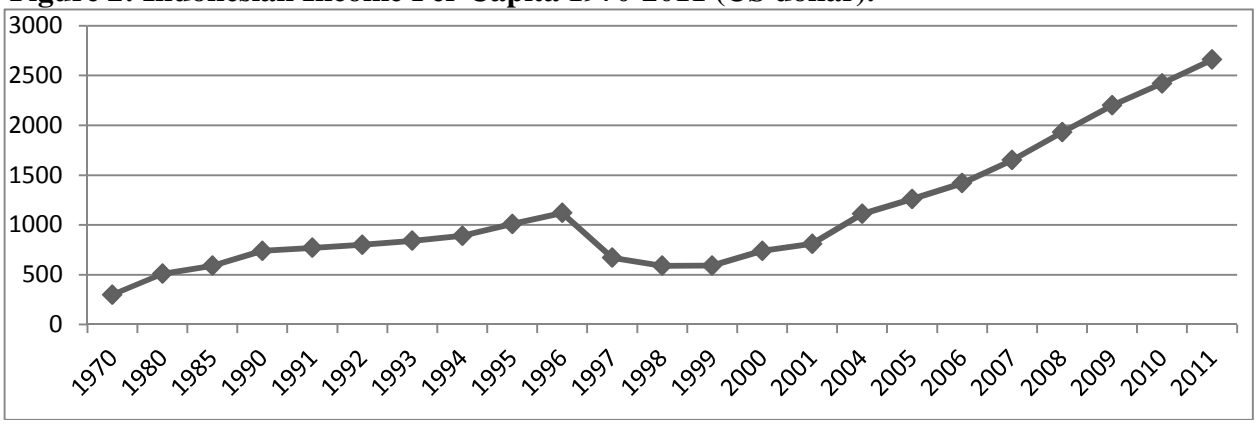
As outputs of agriculture and manufacturing industry experienced a remarkable growth, followed also by output growth in some other non mining sectors, such as trade, construction and finance, Indonesia's overall GDP grew significantly quickly with 8 % on average per year during the 1980s and up to 1997 peaking at 9.9 % achieved in 1990 (Figure 1). Income per capita also increased steadily from less than US$500 in 1970 (which made Indonesia amongst the poorest countries in the world at that time together alongside countries such as Bangladesh, Nepal and Sri Lanka) up to slightly above US$1,000 in 1996. After a decline during the major economic crisis in the region, (generally known as the Asian financial crisis) in 1997-98, it started to rise again in 1999 and kept increasing, and it is expected to have reached more than US$2,500 in 2011 (Figure 2).

Figure 1: Indonesian GDP Growth Rate: 1985-2012 (%)



Note: Government's prediction (RAPBN, 2012)
Source: Statistical Yearbook of Indonesia (various years), BPS (www.bps.go.id).

Figure 2: Indonesian Income Per Capita 1970-2011 (US dollar).

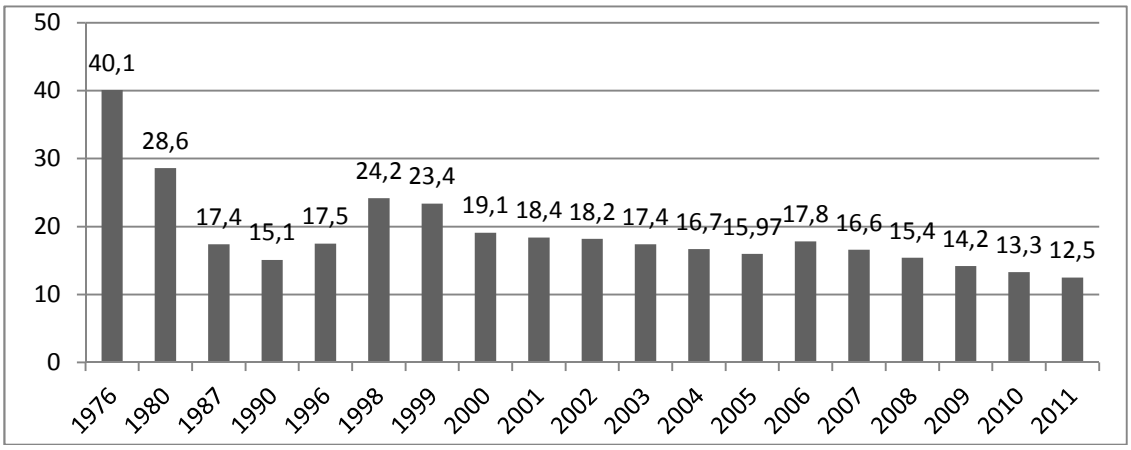


Source: Statistical Yearbook of Indonesia (various years), Indonesian National Agency of Statistics (BPS) (www.bps.go.id).

Another indicator which also clearly shows the positive results of economic development during the Soeharto era is the continued decline in the poverty rate, measured by the percentage of the country's total population living under the current national poverty lines. In 1976 the poverty rate was around 40 % and it fell to about 15 % in 1990. Because of the 1997-98 crisis, which led many companies to close down, and, as a direct result, unemployment to increase significantly, the poverty rate jumped up again to 24 % in 1998, the worst year of the crisis. Since 1999 the poverty rate has dropped and had fallen to 13.3 % in 2010. It is expected by the

World Bank that in 2011 the poverty rate in Indonesia would be around 12.5 % (Figure 3).

Figure 3: Poverty rate in Indonesia: 1976-2011 (%)



Source: Statistical Yearbook of Indonesia (various years), Indonesian National Agency of Statistics (BPS) (www.bps.go.id).

The process of economic development in Indonesia has not, however, been free of disturbances. Since the New Order era the Indonesian economy has been hit by two more major economic crises. The first was the Asian financial crisis, which started in the second half of 1997 and reached its climax in mid 1998. The crisis was triggered by a sudden capital flight from Thailand which led to a significant depreciation of its currency, the Baht, against the U.S dollar. Soon afterwards capital in huge amounts also fled from Indonesia, South Korea and the Philippines, leading to a big fall in their currencies. Indonesia was the country most impacted by the crisis, which resulted in a negative economic growth rate of - 13 %, leading the poverty rate to increase significantly. The second crisis occurred during the period 2008-2009, and is regarded as a global economic crisis since its impact was much wider than that of the 1997/98 crisis. The crisis started first in the United States in 2007 as a serious financial crisis. This crisis has been described by many economists as the most serious economic or financial crisis that the U.S. experienced since the great depression in the 1930s. Its global effects include the failure of key businesses, declines in consumer wealth estimated in the trillions of U.S. dollars, substantial financial commitments incurred by governments, and a significant decline in economic activities in many countries. The crisis then rapidly developed and spread

into a global economic shock, resulting in a number of bank failures, declines in various stock indexes, and huge reductions in the market value of equities and commodities. In Asia, most, if not all, countries, including China, India and Indonesia were also affected by the crisis. While many Asian countries only saw moderate deceleration in their economic growth in 2008, as the crisis intensified and export demand began to slow sharply in 2009 from the U.S, the European Union (EU) and Japan, a substantial decline in domestic economic activities took place in many of these countries in 2009.

In addition to these two crises, currently there are fears another big global economic crisis, caused by the euro-zone sovereign debt debacle. Effects are generally expected to spread to the rest of the world, including Indonesia. The main channels through which this crisis may affect Indonesia are mainly trade (although euro countries traditionally are not the most important market destinations for Indonesian exports, as compared to the US and Japan), inflows of tourists from European countries, and changes in the exchange rate of the Indonesian national currency, the rupiah, against the euro. However, it is generally expected that, as during the 2008-09 crisis, this time too Indonesia is ready to face the possible impacts of the crisis. The country's economy is generally believed to be more resilient than during the 1997-98 crisis and this is supported by recent conducive developments of key macroeconomic indicators, such as the foreign debt-GDP ratio, government financial deficits in total, as well as in percentage of GDP, and banking indicators such as the rate of non-performing loans (NPL) and capital-asset ratios.

3. Inclusive Development

3.1. Conceptual Definitions

What is inclusive development? According to Ali and Zhuang (2007), Ali and Son (2007), and Rauniyar and Kanbur (2009), among others, there is no agreed-upon and common definition of inclusive development. The concept, however, is based on 2 other concepts: inclusion and development, and inclusion is a process and also a goal. Inclusion is about society changing to accommodate differences by removing

all barriers which discriminate or exclude certain individuals/groups within society. It sees society as the problem, not the person. In Rauniyar and Kanbur (2009), it is stated that inclusive development is understood to refer to economic growth coupled with equal economic opportunities. It focuses on creating economic opportunities and making them accessible to everyone in society at all levels, not just to the poor. An economic development process is said to be inclusive when all members of a society participate in and contribute to that process equally, regardless of their individual circumstances or backgrounds. In the same way, inclusive development emphasizes that economic opportunities created by economic growth are available to all, particularly the poor, to the maximum extent possible. Inclusive development therefore is the process of ensuring that all marginalized/excluded groups of a society are included in the development process. Because inclusion involves all members of a community, then collaboration, partnership, and networking among individual members in the community are core strategies to achieve inclusion.

But in order to give all members of a community the same opportunities, according to Sachs (2004), an inclusive development strategy requires three most important components. First, ensuring the exercise of civil, civic and political rights. Thus, as emphasized by Sen (1999), democracy is a truly foundational value, as it also guarantees the transparency and accountability necessary for the working of the development processes. These three rights, says Sachs are pre-conditions for inclusive development. Second, all citizens, especially disabled people, mothers and children and the elderly, must have access on an equal basis to welfare programs designed to compensate for natural or physical inequalities. Compensatory social policies financed out of the redistribution of income should also include benefits for the unemployed. Third, the whole population should also have equitable opportunities for access to public services, such as education, health protection and housing.

The idea of inclusive development came after the introduction of the Millennium Development Goals (MDGs), a United Nations program motivated by the observation that, although many countries in the world have achieved remarkable results in their long-term development, in terms of high economic growth, high income per capita, and rapid structural change from agriculture-based towards

industry-based economies, in many of these countries, poverty is still high and the gap between the rich and the poor has become wider. It is widely acknowledged that sustained poverty reduction depends on a rapid pace of economic growth. But the connection is not automatic. Some fast-growing economies have failed to tackle poverty, while some slower-growing ones have been more successful. Even the United Nations Conference on Trade and Development (UNCTAD (2010)) argues that a fundamental problem in achieving the MDGs by the target date of 2015 has been the lack of a more inclusive strategy of economic development that could integrate and support its "human development" ambitions.

It is not difficult to understand why many countries in the world, especially in South Asia and some parts of Africa, still struggle with poverty (or have even witnessed increasing poverty), and have a large proportion of their citizens living in extreme states of deprivation (notably in sub-Saharan Africa). It is because many groups, so called “disadvantaged” people such as women, children, people with HIV/AIDs, ethnic minorities, nomads, and people in conflict/refugee situations have been excluded from, or marginalized in relation to, participation in economic development. Poverty is a consequence and also a cause of disability, and, thus, poverty will not be alleviated without including disabled people in the process of development.

From the above discussion, key issues of inclusive development are poverty, participation, collaboration, and networking. This means that poverty alleviation is or should be the centre of inclusive development policies, and to eliminate or reduce poverty, not only direct policies to alleviate poverty are needed but also economic development policies, programs and projects should be favorable to poverty reduction, of course not at the cost efficiency, productivity, and competitiveness.

3.2. Indonesia's Inclusive Development Strategy

3.2.1. Fundamental Development Strategies

In 1997-98 Indonesia was heavily hit by the Asian financial crisis, which was soon followed by social and political disturbances and physical conflicts. This multidimensional crisis led to the fall of the ‘New Order’ (Soeharto) regime in May 1998. Since then the Indonesian people have decided to pursue a new path in

history, the path of democracy. The political system was fundamentally transformed by the implementation of democracy, decentralization, and amendment of the 1945 constitution. Social life was drastically changed. Some of public institutions are no longer functional.

Although during the 'New Order' era there were many pro-poor programs which led poverty rates to decline significantly, showing that the government in that period also tried seriously to address the poverty problem in the country, the gap between the rich and the poor did not decline significantly. In fact, during this era, it is clear that the adopted development strategy was more 'exclusive' rather than 'inclusive', as many regulations, policies and facilities were set in favor of a small group of mainly big companies (known as conglomerates) at the cost of micro, small and medium enterprises (MSMEs).

In this post-Soeharto era, known as the era of reform (*reformasi*), government attention has been shifting toward 'inclusive' development. In his address on national development from a regional perspective, before the special plenary session of the House of Regional Representatives of the Republic of Indonesia in Jakarta, August 2009, Susilo Bambang Yudhoyono (often referred to as SBY), the President of the Republic of Indonesia stated that the paradigm of development for all, in Indonesia's context, can only be carried out by adopting six fundamental development principles (SNRI, 2011).

The first fundament principle is any development strategy must be inclusive, ensuring equity and justice and respecting and maintaining the Indonesian people's diversity. The central and regional governments ought to constantly renew the common understanding and consensus in developing Indonesia. This consensus is guided by Indonesia's medium and long-term visions and missions. Indonesia's long-term direction for 2005-2025 is stated in Law Number 17 of 2007 on the National Long-Term Development Plan, and Indonesia's medium-term direction is given in each five year stage, the Medium□Term Development Plans (RPJMs). Each of the stages has a scale of priorities and development strategies that constitute a continuity of scale of priorities and development strategies of preceding periods. The basic scale of priorities and strategies of the respective RPJMNs are summarized in the following (MNDP, 2010, page I-23):

1. The first RPJM (2005-2009) is directed at reforming and developing Indonesia in all fields and is aimed at creating an Indonesia that is safe and peaceful, just and democratic, and that has an increasingly prosperous population.

2. The second RPJM (2010-2014) aims at the greater consolidation of the reform of Indonesia in all fields by emphasizing endeavors for increasing the quality of human resources, including the promotion of capacity building in science and technology and the strengthening of economic competitiveness.
3. The third RPJM (20152019) is aiming for the greater consolidation of development in a comprehensive manner in all fields by emphasizing attainment of economic competitiveness on the basis of competitiveness of natural resources and the quality of human resources and by an increasing capability to master science and technology.
4. The fourth RPJM (20202025) aims to realize an Indonesian society that is self-reliant, advanced, just, and prosperous through the acceleration of development in various fields by emphasizing a realized economic structure that is more solid on the basis of competitive advantage in various regions, and is supported by high quality and competitive human resources.

Each RPJM elaborates the vision, mission, and program of the President, the formulation of which is based on the National Long-Term Development Plan (RPJPN). It contains the national development strategy, general policies, programs of ministries/agencies, regional programs, as well as the macroeconomic framework which covers the overall economic situation, including the direction of fiscal policy, in a work plan comprising regulatory and indicative funding frameworks.

Each RPJM forms the basis for ministries and government agencies in formulating their respective Strategic Plans (Renstra-KL). Regional governments must also take into account the current RPJMN when formulating or adjusting their respective regional development plans to reach national development targets. For the implementation of the 2005-2025 National Long-Term Development Plan, the RPJMN is to be further elaborated into the Annual Government Work Plan (RKP) that will then become the basis for formulating the Draft Government Budget (RAPBN).

Currently RPJMN 2010-2014 is in operation. As with RPJM 2004-2009, RPJMN 2010-2014 is also divided into three economic development strategies, namely the ‘pro growth, pro job, and post poor’ strategies. Through the ‘pro growth’ strategy

economic growth has accelerated, accompanied by an improvement of the distribution of income (growth with equity). RPJMN 2010-2014 has 14 national priorities, regional priorities which are Sumatera, Java-Bali, Kalimantan, Sulawesi, Nusa Tenggara, Maluku and Papua, and field priorities which consist of social-cultural, economic, science and technology, infrastructure, political, defense and security, law and state apparatus, region and spatial, and natural resources and the environment.

The second fundamental development principle is that in the framework of development for all, Indonesia's development must have a territorial dimension. Each province, each regency/municipality, is a center of growth that must capitalize on all the potentials of the respective regions, whether their natural resources, human resources or geographic locations. This is the reason why the Indonesian government is seriously encouraging the regions in border areas to seize on the opportunities of regional development cooperation such as the Indonesia Malaysian Thailand growth triangle (IMT-GT) and the Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA), as well as border cooperation with Australia and Timor Leste. This policy of development with a territorial dimension also signifies that the government hopes to stimulate each region in enhancing their respective comparative and competitive advantages. However, the inter-regional balance must also be preserved, in order to avoid any possible inter-regional imbalance.

The third fundamental development principle is to create an integrated national economy in this era of globalization. As Indonesia is an open economy, national economic development cannot be implemented in a vacuum. Moreover, Indonesia is a member of the Association of South East Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation forum (APEC) as well as the World Trade Organization (WTO), which means that Indonesia's economy has been comprehensively linked to the global economy, and has fully committed to eliminate all trade barriers with the rest of the world. At the same time, however, Indonesia has to utilize its links with the global economy for the maximum possible benefit of the Indonesian people. In other words, Indonesia has to seize on the emerging opportunities in the globalization era, while, at the same time, protecting itself from its negative impacts.

The fourth fundamental development principle, which is also one of the keys to the success of 'development for all', is local economic development in every region, with the purpose of developing a strong domestic economy nation-wide. A strong domestic economy is the main asset for a nation wishing to succeed in the midst of the globalization onslaught. The lessons Indonesia drew from the 2008-09 global economic crisis is the fact that countries which are able to withstand the negative impacts of global recession are the countries with strong domestic economies. Furthermore, a strong domestic economy also ensures the nation's self-reliance. This is the reason why the reinforcement of inter-regional linkages becomes a prerequisite. To this end, the central and regional governments continue to enhance the quality and quantity of infrastructure, primarily in physical terms. During the 2004-2009 period, Indonesia has succeeded, among other things, in completing the construction of the bridge linking Java and Madura. This connection will significantly boost progress in Madura and the well-being of its inhabitants. Likewise, Indonesia is also planning to build a bridge between Java and Sumatra. When this is completed the distribution of development benefits that have so far been concentrated in Java will spread better to Sumatra. Indonesia will likewise continue with the completion of the construction of the Trans Kalimantan, Trans Sulawesi and Trans Papua highways. Apart from improving the physical linkages, in functional terms, Indonesia also needs to establish better inter-regional linkages. The government continues to encourage the products of one region to be used as basic materials in other regions, or to be used as finished products. For this purpose, central as well as regional governments have been working to minimize the number of trade barriers between regions, such as official levies or collections, and especially 'unofficial' levies or corruption that obstruct the emergence of investment and business communities in the respective regions.

The fifth fundamental development principle is establishing harmony and balance between growth and equity, or "growth with equity". This is a correction from previous development policy, which relied on the 'trickle-down' effect. The trickle-down effect assumes the need for prioritizing economic growth over equity. In reality, in many countries including Indonesia, this theory has failed to create welfare for all. In order to simultaneously realize growth and equity, therefore,

Indonesia has adopted a triple-track objective, namely a pro-growth, pro-job, and pro-poor target for national economic development planning. High economic growth has to be achieved through the promotion of investment as well as domestic and foreign trade. The development is also aimed at creating employment opportunities by growing the real sectors of the economy and, at the same time, alleviating poverty through agricultural and rural revitalization policies as well as pro-people programs.

The sixth fundamental development principle is the essence of just and equitable development, namely development that emphasizes the promotion of human quality. In this area, the Indonesian people are to be considered not merely as objects of but, as the subject of development. In other words the human beings become actors in, as well as the focus of the development goals, so that the quality of living of Indonesians can be improved. For this purpose, therefore, the paradigm of 'development for all' gives a high priority to education, health, income and a better living environment. Environment here refers not only to a healthy and sustainable natural environment, but also to a social, political and security environment which is orderly, safe, pleasant, and democratic.

The life expectancy of Indonesians has continued to rise from 68.6 years old in 2004 to 70.7 years in 2009. The infant mortality rate has also declined from 33.9 per 1000 live births in 2004 to 26.2 per 1000 live births in 2009, while the maternal mortality rate has declined from 307 per 100,000 live births in 2003 to 228 per 100,000 live births in 2007. Meanwhile, the illiteracy rate (for inhabitants above 15 years old) in 2008 has dropped to 7.9 %, compared to 9.6 % in 2004. In general, Indonesia's human development index has gone up from 68.7 in 2004 to 71.1 in 2008.

3.2.2. Poverty Alleviation Policies

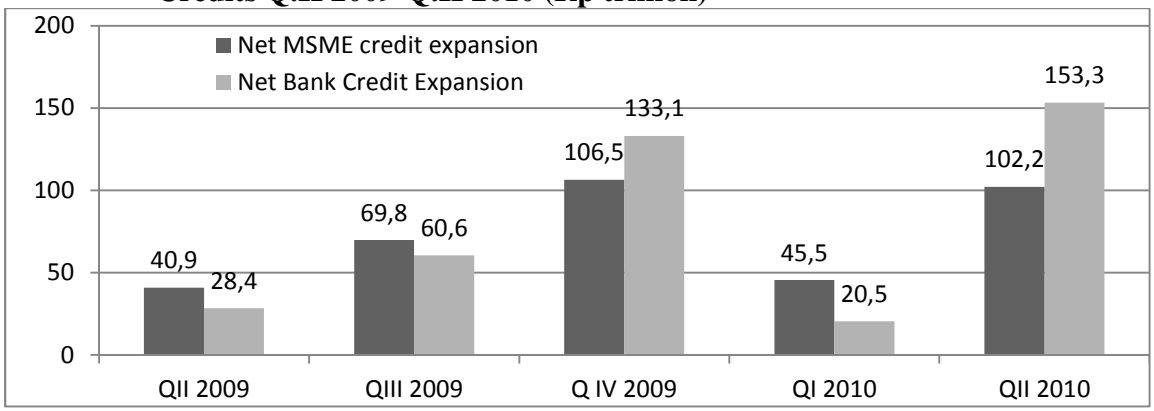
As described above, in aiming for inclusive development, the Indonesian government has adopted a triple-tracked "pro-growth", "pro-job" and "pro-poor" strategic objective. With respect to the pro-poor element, the Indonesian government currently has various programs aimed at alleviating poverty directly or indirectly. The implementation of these programs is not to substitute but to complement economic growth as the main engine of poverty elimination. The most popular among these programs is the National Self Reliant Community

Empowerment Program (PNPM Mandiri) which aims to empower the people directly at the sub-district and village levels. With the PNPM, the people in the villages can decide on the development priorities of their respective regions.

Other pro-poor programs include Unconditional Direct Cash Assistance (BLT), Public Health Insurance (*Jamkesmas*), School Operational Support (BOS), the provision of subsidies (such as subsidies for food such as rice, fertilizers, and program credits), and the Family Hope Program (PKH), which are all earmarked for poor and near-poor families all over the archipelago. The PKH is implemented in order to meet the basic needs of households when they are not able to support themselves. Some of the programs are capacity-enabling program ('not fish but the fishing rod'), such as the PNPM, which empowers people/communities through the provision of funds up to Rp 3 billion per sub-district per year, the use of which is determined by the people themselves at the village level.

In addition, the government also allocates budgets for micro, small and medium enterprises (MSMEs) in the form of subsidized credits, and the banking sector has been requested to channel certain portions of their funds as credit for MSMEs. This category of enterprises is considered very important for the following three main reasons. First, they are very labor intensive and as the majority of existing enterprises in Indonesia are in this category of enterprises (with micro and small enterprises (MSEs) as the majority), they are thus the largest source of employment creation/income generation in Indonesia. Second, most of MSMEs, in particular MSEs, are run by poor households/individuals. So, for Indonesia, one effective instrument of poverty alleviation is supporting the development of MSMEs, especially MSEs. Third, as in many other developing countries, female Indonesian entrepreneurs are mostly concentrated in MSMEs. It is generally recognized that empowerment of women is crucial for poverty alleviation, and giving women unlimited opportunities to become entrepreneurs is one effective way to empower women. The development of MSMEs is thus important for the development of female entrepreneurship. Figure 4 and Table 1 to 4 may give some idea about the importance of MSME credit in Indonesia, as part of the pro-people or pro-poor or inclusive development programs.

Figure 4: Development of MSME Net Credit Expansion versus Total Bank Credits Q.II 2009-Q.II 2010 (Rp trillion)



Source: BI (www.bi.go.id)

Table 1: MSME Credit by Sector (Rp trillion)

Sector	2002	2003	2004	2005	2006	2007	2008*	2010**
Agriculture	8.6.	8.6	12.1	12.6	13.3	16.1	19.4	18
Mining	0.5	0.6	0.9	0.97	1.3	1.5	1.8	6.1
Industry	22	24.4	26.6	32.5	36.7	37.8	46.1	53.99
Electricity, gas & clean water	0.1	0.1	0.1	0.3	1.5	0.3	0.6	0.95
Construction	3.6	4.6	5.9	7.7	10.1	13.2	17.1	21.4
Trade	38.6	52.8	67.2	87.5	107.3	134.6	157.1	194.2
Transport	3.7	5.1	6	6.5	6.6	7.2	8.6	11.96
Business services	7.96	13.3	15.6	20.7	23.5	30.5	40.9	46.99
Social services	2.2	3	4.3	5.3	6	6.7	7.6	35.3
Others	73.6	94.7	132.4	180.9	203.5	254.9	334.8	481
Total	160.98	207.1	271.1	354.9	410.4	502.8	633.95	869.9

Notes: *December; *** August.
Source: BI (www.bi.go.id).

Table 2: Development of MSME Credits by Groups of Banks (Rp trillion)

Group of Bank	2005	2006	2007	2008*	2010**	Share (%)		
						2007	2008*	2010**
State owned banks (BUMN)	122.2	144.9	176.7	226.4	318.5	35.0	35.9	36.6
Regional development bank (BPD)	42.5	52.9	67.8	89.3	123.6	13.0	14.2	14.2
National private banks (NPB)	176.4	195.3	238.2	288.8	376.0	47.0	45.8	43.2
Foreign & Join ventured banks (FJB)	13.8	17.3	20.1	26.4	51.8	4.0	4.2	5.9
Total Credits for MSMEs	354.9	410.4	502.8	631.0	869.9	100.0	100.0	100.0

Notes: * November; ** August
Source: BI (www.bi.go.id)

Table 3: Total MSME Credits by Group of Bank and Type of Credit, 2008-2010 (Rp trillion)

Category Bank	December 2008	December 2009	August 2010
BUMN	230.2	285.1	318.5
-micro	99.5	114.4	107.6
-small	71.2	98.3	129.9
-medium	59.5	72.5	80.9
BPD	87.7	107.7	123.6
-micro	39.0	38.9	38.9
-small	43.4	61.6	76.1
-medium	5.3	6.8	8.6
NPB	290.7	315.4	376.0
-micro	65.4	70.4	77.3
-small	96.4	110.2	139.8
-medium	128.9	134.8	159.0
FJB	25.4	29.2	51.8
-micro	12.2	12.0	34.2
-small	3.2	4.9	6.0
-medium	9.97	12.4	11.6
Total	633.95	737.4	869.9

Source: BI (www.bi.go.id)

Table 4: MSME Credits by Province, 2009 & 2010 (Rp trillion)

Province	2009 (December)	2010 (August)
Naggroe Aceh Darussalam	12.1	13.8
North Sumatera	39.4	43.97
West Sumatera	13.6	15.9
Riau	19.8	22.6
Jambi	9.0	9.5
South Sumatera	18.0	21.2
Bengkulu	5.3	5.8
Lampung	13.1	14.6
DKI Jakarta	155.5	211.4
West Java	112.6	128.9
Central Java	64.5	70.3
DI Yogyakarta	8.96	9.8
East Java	85.5	95.4
Banten	30.9	38.2
Bali	17.1	18.97
West Nusa Tenggara	7.7	8.9
East Nusa Tenggara	6.8	7.5
West Kalimantan	9.4	10.95
Central Kalimantan	4.7	5.5
South Kalimantan	10.4	11.9
East Kalimantan	16.3	19.6
North Sulawesi	9.7	12.7
Central Sulawesi	6.8	7.4
South Sulawesi	26.8	30.2
Southeast Sulawesi	4.7	5.1
Gorontalo	3.0	1.2
West Sulawesi	1.8	1.6
Maluku	2.6	3.3
North Maluku	1.7	1.7
West Papua	2.0	2.1
Papua	5.6	6.5

Source: BI (www.bi.go.id)

Most recently, the present cabinet under SBY has introduced four special credit schemes intended for MSMEs. First, *Kredit Ketahanan Pangan & Energi* (KKPE), aims to secure food and energy. The purpose of this credit scheme is provision of loans for working/investment capital only for farmers, through farmers' associations/ cooperatives. The interest rate is 5%-7% per annum for a maximum of 5 years. Second, *Kredit Pengembangan Energi Nabati & Revitalisasi Perkebunan* (KPEN-RP), aims to support energy development programs based on plantation commodities. It takes the form of loans for working/investment capital for farmers through farmers' associations/cooperatives. The interest rate is 5%-7% per annum for 13-15 years. Third, *Kredit Usaha Pembibitan Sapi* (KUPS), aims to support

financing artificial breeding of cattle. It is also takes the form of loans for working/investment capital for farmers through farmers' associations/cooperatives at an interest rate of 5%-6% per annum for a maximum of 6 years. Fourth, and the most important one, the Smallholder Credit Program or *Kredit Usaha Rakyat* (KUR), aims to help financing feasible but not bankable MSMEs, which is known as credit without collateral. It takes the form of loans for working/investment capital provided to individual producers/owners of MSMEs, and cooperatives at an interest rate of 14% (KUR retail) -22% (KUR micro) per annum for maximum of 10 years.

In addition, the current government has also issued various new regulations including Presidential Instruction (Inpres) No. 6/2007 dealing with Real Sector and MSMEs Development Policy, on June 2007, which mentions the need to strengthen the credit guarantee system for MSMEs; Presidential Regulation (Perpres) No. 2/2008 relating to Guarantee Corporations; and the Ministry of Finance (MOF) Regulation No. 222/PMK.010/2008 on the Credit Guarantee Company (CGC) and the Credit Re-guarantee Company. The main aim of the CGC is to help MSMEs which have no or not enough collateral, or which have collateral but no formal license (for instance: a land certificate).

4. Inclusive Development Index

4.1. Framework of Inclusive Development Indicators

In Asian Development Bank (ADB) (2011), a set of 35 key indicators was introduced to be used in examining inclusive development. The publication identifies key policy ingredients for inclusive development, namely economic growth and employment opportunities, social inclusion, social protection, and good governance and institutions, as proposed by Zhuang (2010). The proposed indicators cover eight dimensions: (1) poverty and inequality (income and non-income); (2) economic growth and employment opportunity; (3) key infrastructure endowments; (4) access and inputs to education and health; (5) access and inputs to basic infrastructure utilities and services; (6) gender equality and opportunity; (7) social safety net; and (8) governance and institutions (Table 5). According to Zhuang (2010), inclusive

economic development or growth has three policy pillars (Figure 5). Policy pillar 1 is to create productive employment and economic opportunities. Policy pillar 2 is to ensure equal access to economic opportunity. Policy pillar 3 is to protect the chronically poor and to mitigate the effects of transitory livelihood shocks caused by, among others, economic crises, natural disasters, or social unrests. In their turn, the three policy pillars must be based on good governance and institutions.

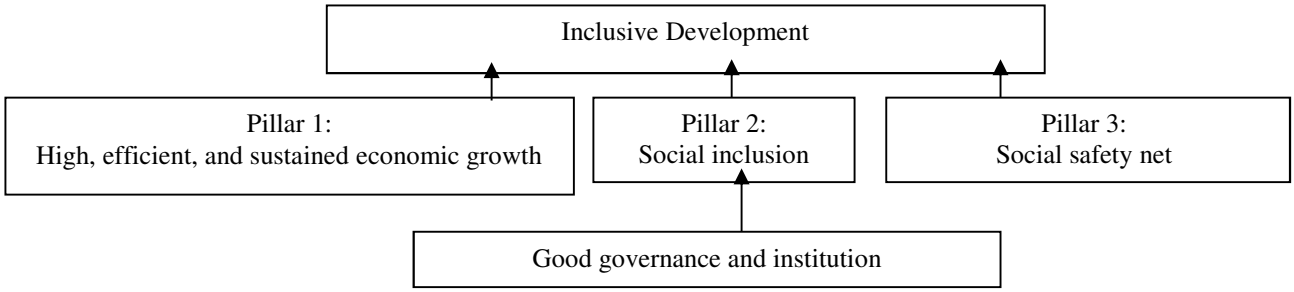
Table 5: Framework of Inclusive Development Indicators

Dimension	Policy pillar (PP)	Indicator
(1)		Income: -percentage of population living below the national poverty line -percentage of population living below $2 a day at Purchasing Power Parity (PPP)$ of the selected year -ratio of income/consumption of the top 20% to bottom 20% Non income -average years of total schooling (youth and adult) -prevalence of underweight children under five years of age -under-five mortality rate
(2)	PP 1	-growth rate of real GDP per capita at PPP $ of selected year - average growth rate per capita of income/consumption at PPP$ of selected year (lowest and highest quintile and total) -employment rate -income (GDP) elasticity of employment -ratio of own-account and family workers to wage and salaried workers
(3)		-per capita consumption of electricity -percentage of paved roads -number of cellular phone subscriptions per 100 people -depositors with other depository corporation per 1000 adult (comprises depositors with commercial banks and other deposit takers (except the central banks)
(4)	PP 2	-school life expectancy for all levels -pupil-teacher ratio (primary) -immunization coverage among 1-year-olds -physicians, nurses, and midwives per 10,000 population -government expenditure on education and health, respectively, as percentage of total government expenditure
(5)		-percentage of population with access to electricity -percentage of population using solid fuels for cooking -percentage of population using good drinking water sources -percentage of population using good sanitation facilities
(6)		-ratio of female to male in education at all levels -ratio of female to male in labor force participation -antenatal care coverage (at least one visit)

Dimension	Policy pillar (PP)	Indicator
		-percentage of seats held by women in national parliament
(7)	PP 3	-social protection and labor rating -share of social security expenditure on health in total government expenditure on health -share of social security expenditure and welfare in total government expenditure
(8)		-voice and accountability -government effectiveness -corruption perceptions index

Source: Zhuang (2010), ADB (2011).

Figure 5: Four Pillars of Inclusive Development



Source: Zhuang (2010).

4.2. Constructing an Inclusive Development Index (IDI)

As previously discussed, the concept of inclusive development is based on two other concepts, namely inclusion and economic development. Inclusion means development without barriers which discriminate or exclude certain individuals/groups of society, in other words, 'high quality' economic development, i.e. economic growth with equal economic opportunities for all members of a community. The opportunities can be employment opportunities or opportunities to conduct own businesses. But for equal opportunities to happen, there is one pre-condition, namely that all members of a community must have access on an equal basis to all public services for improving their personal capability to perform (e.g. successful entrepreneurs, highly productive workers), namely education, health care/protection, housing, food, and welfare programs for the disabled, mothers and children and the elderly to compensate for natural or physical inequalities.

Thus the 34 indicators shown above, can be reduced to only seven key indicators, which represent all dimensions and all policy pillars proposed by Zhuang.

From here, an index of inclusive development (IDI) can be calculated, which is simply the sum of the seven key indicators, which are the followings:

X_1: economic growth, measured by growth rate (%) of real GDP per capita (positive sign);

X_2: employment, measured by total employed labor force as percentage of total population or working population (positive sign). This reflects the access of members of a community to economic opportunities. As an alternative measure, the unemployment rate can be used instead (negative sign).

X_3: human development, measured by the human development index (HDI) developed by UNDP (positive sign). The index has three dimensions: long and healthy life (measured by life expectancy at birth) , knowledge (measured by mean years and expected years of schooling), and a decent standard of living (measured by gross national income (GNI) per capita. Each of the dimensions has an index, the life expectancy index, the education index, and the GNI index, respectively. This dimension thus reflects the access of members of a community to education, health and the other necessary facilities that determine the quality of human development;

X_4: poverty, measured by the percentage of total population living under the current national or international (e.g. US$1.25 per person per day) poverty line (negative sign). This reflects the access of all members of a community to all facilities, including welfare programs aimed at protecting them from poverty.

X_5: Income equality, measured by the well-known Gini coefficient (negative sign), which measures the inequality among values of a frequency distribution (for example levels of income), with a value between 0 and 1. A Gini coefficient of zero expresses perfect equality, where all values are the same (for example, where everyone has an exactly equal income); whereas, one (100 on the percentile scale) expresses maximal inequality among values (ie where only one person has all the income).

X_6: gender equality, measured by e.g. the Global Gender Index (GGI) from the World Economic Forum (WEF). The Index (positive sign) is designed to measure gender-based gaps in access to resources and opportunities in individual countries rather than the actual levels of the available resources and opportunities in those countries. The index is therefore independent of a country's level of development. The GGI examines the gap between men and women in four fundamental categories: economic participation and opportunity, educational attainment, health and survival and political empowerment. Higher scores (closer to one) mean that women's conditions in those countries are better than in those with lower scores. Alternatively, gender equity can be measured by the Gender Inequality Index (GII) from UNDP. This index has three dimensions, namely health, empowerment, and labor market with the following subsidiary indexes: a female reproductive health

index, a female empowerment index, a male empowerment index, a female labor market index, and a male labor market index.

X_7: government and institutions, measured by the Corruption Perception Index (CPI), which ranks countries/territories based on how corrupt their public sector is perceived to be (positive sign). A country/territory's score indicates the perceived level of public sector corruption on a scale of 0 - 10, where 0 means that a country is perceived as highly corrupt and 10 means that a country is perceived as very clean.

Values for these indicators, based on the most recent data (years) for selected countries in Asia are presented in Table 6. As can be seen, for some indicators, some countries are doing better than the others. For instance, with respect to economic growth in 2010, Singapore (SGP) is the top, followed by China (CHN) in the second rank. With respect to poverty, based on an international poverty line, i.e. US$1.25 per person per day, again Singapore comes top, revealing itself as a non-poor country with almost zero percent, and India is shown to be the poorest nation in the group with almost 42 % of its total population being poor. For the other indicators, Singapore also performed very well. As a result, Singapore has the highest IDI (Figure 6), which means that Singapore is the most successful country in the group in implementing inclusive development.

Table 6: Seven Key Indicators for IDI by Selected Asian Countries, Most Recent Data

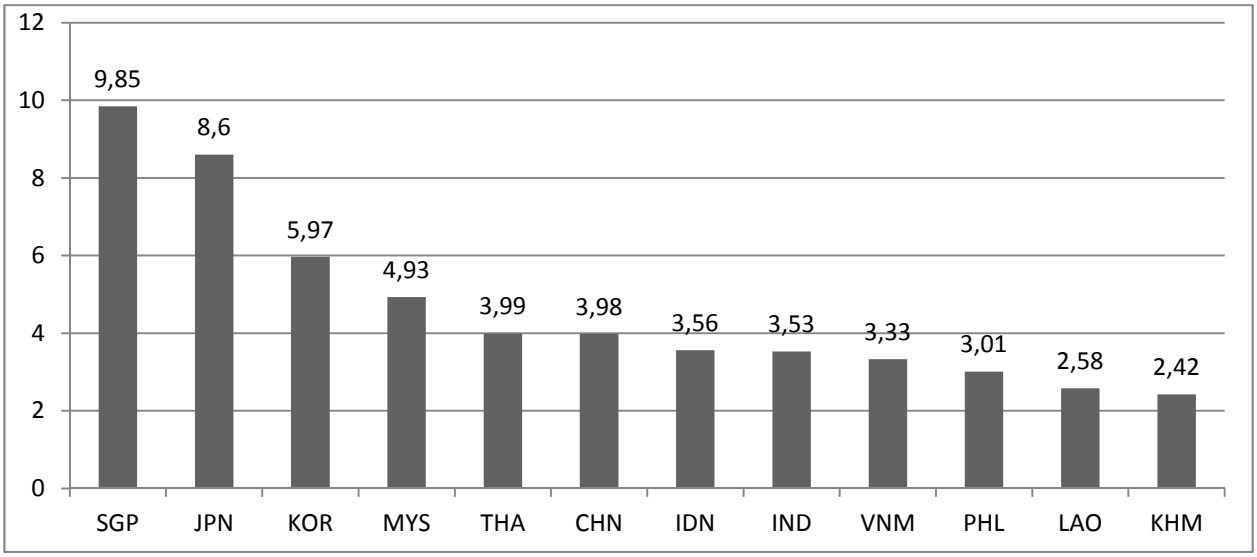
Country	Indicator						
	X_1 (2010; %))	X_2 (%)	X_3 (2011)	X_4 (US$1.25/ person/day)(%)	X_5	X_6 (2011)	X_7 (2011)
Cambodia	5.9	-3.5 (2007)	0.52	-28.3 (2007)	-0.44 (2007)	0.500	2.1
Indonesia	6.1	-7.1 (2010)	0.62	-18.7 (2009)	-0.37 (2009)	0.505	3.0
Lao PDR	7.9	-2.5 (2009)	0.52	-33.9 (2008)	-0.37 (2008)	0.513	2.2
Malaysia	7.2	-3.0 (2012)*	0.76	0.0 (2009)	-0.46 (2009)	0.286	4.3
The Philippines	7.6	-7.3 (2010)	0.64	-22.6 (2006)	-0.44 (2006)	0.427	2.6
Singapore	14.5	-2.1 (2012)*	0.87	0.0***	-0.43 (1998)	0.086	9.2
Thailand	7.8	-1.0 (2012)*	0.68	-10.8 (2004)	-0.43 (2004)	0.382	3.4
Viet Nam	6.8	-2.3 (2011)	0.59	-13.1 (2008)	-0.38 (2008)	0.305	2.9
PRC	10.3	-4.1 (2012)*	0.69	-15.9 (2005)	-0.42 (2005)	0,209	3.6
Rep. of Korea	6.2	-3.2 (2012)*	0.90	-15.0 (2006)	-0.32 (1998)	0.111	5.4
India	8.5	-3.8	0.55	-41.6 (2005)	-0.37 (2005)	0.617	3.1
Japan	4.0	(2011/12)** -4.4 (2012)*	0.90	-16.0 (2007)	-0.25 (1993)	0.123	8.0

Notes: * first quarter/March/April/June; ** fiscal year; *** close to zero.

Sources: ADB (Key Indicators, 2011; http://www.adb.org/data/publications/1090), The Ministry of Internal Affairs and Communications of Japan (Trading Economics; http://www.tradingeconomics.com/japan/unemployment-rate); Index Mundi

(http://www.indexmundi.com/ unemployment _rate.html), Transparency International (Corruption Perception Index 2011; http://cpi.transparency.org/cpi2011/results/), World Bank (Poverty headcount ratio at $1.25 a Day (PPP); http://data.worldbank.org/indicator/SI.POV.DDAY/countries), UNDP (Human Development Index 2011; http://hdr.undp.org/en/reports/global/hdr2011/); CIA (The World Factbook; https://www.cia.gov/library/publications/the-world-factbook/fields/2046.html);Wikipedia (http://en.wikipedia.org/wiki/List_of_ countries_ by_percentage_of_population_living_in_poverty)

Figure 6: Index of Inclusive Development of Selected Asian Countries, most recent years



Source: Table 6.

5. The Role of ASEAN

Since the formalization of ASEAN economic cooperation during the Bali Summit in 1976, where the Treaty of Amity and Cooperation in Southeast Asia and the Declaration of ASEAN Concord calling for cooperation on economic development was signed, and the launch of the ASEAN Preferential Trading Agreement (PTA) in 1977 to liberalize trade in the region, then followed by many other cooperation agreements after the 1997/98 Asian financial crisis, including the Framework Agreement on the ASEAN Investment Area (AIA) signed in 1998 with the aim of providing an environment conducive for the free flow of direct investment, technology and skilled professionals, the regional economy has made

much progress, as reflected in the emergence of a wide range of extra- and intra-regional agreements.

The question however remains: how important is ASEAN in promoting inclusive development in member countries? Or more concrete questions: have the declines in poverty rates recorded in many member countries in the past decades been the result of ASEAN related activities, or have extra-and intra trade agreements within ASEAN generated significant increases in employment in member countries? These are important questions that need to be answered, since the end goal of commencing regional economic cooperation is to increase welfare of all members of all communities in member countries, not just to expand trade and investment activities and to achieve higher rates of national economic growth.

Indeed since the idea of inclusive development came after the introduction of the Millennium Development Goals (MDGs) 13 years ago, ASEAN is now facing a new challenge, or has a new role to play, namely to promote high and sustainable economic growth with a high quality outcome. That is, the growth created should be environmentally friendly and generate equal opportunities to all individuals in member countries. This new objective was officially adopted during the 19th ASEAN Summit in Bali (Indonesia) in 2011, with the introduction of the ASEAN Framework for Equitable Economic Development (EED), emphasizing that equitable economic development is characterized by narrowing development gaps within and between member countries, by better access to opportunities for human development, social welfare and justice, and by more inclusive participation in the process of ASEAN integration and community building. The establishment of the ASEAN Economic Community (AEC) in 2015 can perhaps be considered as a concrete effort by ASEAN towards inclusive development.

The EED Framework provides the guiding principles for inclusive and sustainable growth for all sectoral and ministerial bodies under the following five AEC Pillars: (i) inclusive and sustainable growth; (ii) connectivity; (iii) cohesive action; (iv) fostering inclusive growth; and (v) financing. Now the question is, what should ASEAN as an organization do to make sure that each of these pillars can be fully realized? There are some actions that ASEAN should take seriously. First, as economic growth will be equitable only if it is inclusive both within and between

member countries, so the growth must be broadly based across sectors, regions, districts, villages and communities. Consequently, all trade, investment and other cooperation agreements within ASEAN should take into serious consideration their possible positive as well as negative effects (not only directly but also indirectly) on certain sectors, regions and groups of communities. One concrete question: have all existing trade agreements within ASEAN had positive impacts on local communities in the northern least developed regions in Indonesia or in villages alongside the Mekong river, or communities living in villages along the border between Thailand and Malaysia?

Second, to achieve sustainable and inclusive growth, the growth should be based on ensuring robust connectivity within and between member countries, which encompasses physical, institutional, and people-to-people connectivity and therefore requires adequate physical infrastructure, human capital mobility, technology transfer, and access to markets. Therefore, besides creating free trade and investment between member countries, ASEAN should also give high priority for cooperation in spheres such as building infrastructure especially in least developed/rather isolated parts of member countries, transfer of technologies and knowledge between firms, universities, R&D institutes, government bodies and non-government organizations (NGOs) within and between member countries, especially from more developed to less developed member countries. More student exchange between members and the organization of social events that connect more people between members should also be part of this effort.

Third, as ASEAN aims not only to generate a single market but also to fully integrate with the global economy, concrete measures should be taken to ensure that not only the well developed and wealthy but also the poor or least developed member countries can take advantage of the opportunities that will emerge naturally from the ASEAN single market as well as from the integration with the global economy. Therefore, there should be concrete policy actions especially to remove all obstacles to trade and investment in narrowing development gaps within as well as between member countries, so that all individuals (e.g. producers, traders, investors, workers, customers) can have equal opportunities created by the ASEAN single market and its integration with the global economy. Institutional, regulatory and policy bottlenecks

that have hitherto hampered trade and investment activities in the region should be eliminated. The value chain and connectivity issues must also be well-identified to enable access to markets by those in less and especially the least developed regions within member countries. This effort must also include capacity building in local micro, small and medium enterprises (MSMEs), particularly in technology/innovation and human capital, to make them able to fully participate in and to gain from regional production, trade and investment activities within ASEAN as well as between ASEAN and the global economy.

Finally, differently from in the past, and with the current focus on inclusive development, ASEAN should also give high priority to cooperation in projects or programs that directly address poverty in the region, although the projects do not directly benefit trade and investment activities. In this respect, ASEAN can be a good regional partner for the Asian Development Bank (ADB) in initiating, formulating and implementing poverty alleviation programs or projects. On the other hand, any trade and investments agreements within ASEAN should have a special chapter dealing with the poverty consequences of the agreements or their potential benefits for local people.

6. Future Agenda for Indonesia

The success of economic development in Indonesia has already shown itself in a large number of achievements in past years, but needs to be maintained and further developed. Past achievements include the creation of basic assets that need to be enhanced and improved in years to come.

As stated by the President himself, for the near future, Indonesia must attain enhancements in the welfare of the people, in the justice sector, in the application of good governance, in the quality of democracy, and in maintaining national unity and security. For this purpose, the President launched in 2010 the Development Mission of Indonesia which is the initial part of the process towards attaining the country's longer term goals. It is a formulation of the endeavors needed and the targets to be achieved according to the vision of Indonesia by the end of the second RPJM,

towards the realization of an Indonesia that is prosperous, democratic, and just. The government mission in this period is then directed at realizing an Indonesia that is more prosperous, secure, and democratic.

Efforts for realizing the vision of Indonesia are elaborated into the following missions of the government:

Mission 1: continuing development towards a prosperous Indonesia. Prosperity is measured not only in material terms, but also in spiritual terms, that will make it possible for the Indonesian people to become one in its pursuit of the ideals, and its participation in the development process in a creative, innovative, and constructive way. In this mission, important policies are related to developing and maintaining food and energy security in a sustainable way. Specifically these are climate change measures (the rehabilitation of forests and lands, enhancing the management of watersheds, developing environmentally friendly energy and transportation, controlling the emission of greenhouse gas, controlling the pollution and degradation of the environment), good governance and clean government, basic human rights, sustainable economic growth; and employment creation.

Mission 2: strengthening the pillars of democracy. Since the start of political reform in 1998 Indonesia has grown into one of the largest democracies in the world. The process of democratization has proceeded since then and shows mature development. Nevertheless, more improvements are needed to improve the political structure and to emphasize the process of democracy in institutions. Key policies in Mission 2 are related to reforming the relationship between political institutions and the security and defense institutions of the nation; reform of the political structure, placing emphasis on enhancing the performance of government institutions in the implementation of the tasks and functions that have been entrusted to them by the constitution and by laws and regulations; and the implementation of decentralization, regional autonomy, and the process of democracy in the regions.

Mission 3: strengthening the dimension of justice in all fields. The main objective of this mission is to stimulate the development and growth of strategic and fast growing regions in order to build up a sense of justice by developing marginalized regions in their vicinity, with synergistic systems of economic developed areas that cross administrative boundaries, and place greater emphasis on

linkages in the chains of industrial production and distribution processes. In meeting this objective, special emphasis will be placed on a sense of justice, equity and security, in addition to community empowerment. Important policies are related to the development of selected products of the regions; allocations of special funds to develop public services; development of outer small islands and border areas; equal spread of economic growth and employment creation among metropolitan, large, medium and small cities; inducing coordination, synchronization, integration and cooperation among sectors, government institutions, the business community and society; development of the rural economy with focus on the development of infrastructure, human capital, and labor intensive agro-industries (especially for agriculture- and marine-based regions); management and utilization of natural resources; support the enhancement of business and investment opportunities in the regions; social welfare of the less fortunate groups in society, including the poor and those living in isolated, left-behind and natural disaster stricken areas; and women's empowerment.

To achieve the missions, five national development agendas have been determined, namely: economic development and increased welfare of the people (Agenda I), enhancement of good governance (Agenda II), strengthening of the pillars of democracy (Agenda III), enforcement of the law and eradication of corruption (Agenda IV), and development that is inclusive and just (Agenda V).

The agenda for increasing the welfare of the people remains the priority of the government. The final form of enhanced welfare will be reflected in increased income levels, the decrease of unemployment, and in the enhancement of the quality of life of the people. Some key policies include: (i) compilation of basic data (with names and addresses) of households that are very poor, poor, and near to poor, which is essential for directing social protection and assistance programs; (ii) the classification of programs for reducing poverty so as to facilitate and clarify coordination; (iii) harmonization and integration of programs for community empowerment in PNPM Mandiri; (iv) regulations for coordinating steps for reducing poverty between the central and regional levels, including joint responsibility for its implementation. The most important programs aimed at this goal are the Jamkesmas (Social Health Security): scholarships for poor children, provision of rice for poor

households, PNPM Mandiri (Community Empowerment Program) and the KUR (Credit for Smallholders).

With respect to the second Agenda, reform of the bureaucracy has to be implemented at all ministries and government agencies as well as in regional governments. The implementation of the budgeting process and monitoring performance based on a budgeting system are also to be applied in a comprehensive way. These two measures would be accelerated by consolidating and expanding the program for speeding up bureaucracy reform in combination with a number of programs on legal reform. As the endeavors to enhance the practice of good governance are not only confined to the public sector but will also encompass the private sector, including management of state-owned companies, the government are encouraging many more enterprises to change their status into public companies in order to bring further public openness and accountability of corporations to Indonesia. This step is also considered very important in eradicating collusion, nepotism, and conflicts of interest, that could disturb the efficiency of economic activities.

To uphold the pillars of democracy, strong emphases need to be given to basic human rights; freedom of expression (including press freedom); fair checks and balances; respecting diversity; rule of law/law enforcement; equality and justice; fair general elections at a national as well as a local level; and protection for all citizens without regard to their beliefs, origins, class, or gender.

For law enforcement, which is an essential element in the process of corruption eradication, the agenda covers the processes of law making, elaboration, oversight, and the law enforcement of the enacted laws, including in corruption cases. The agenda also places attention on ensuring a free and fair judicial process. This will facilitate efforts to consolidate democracy. Problems related to the structure of the law will be resolved by increasing the independence and accountability of the law institutions, by enhancing human resources in law, and by encouraging the transparent and open practice of the judicial system. Thereby, all government parties, the business community, as well the whole law enforcement apparatus, starting from the police, the state prosecutors, to judges and legal attorneys must consistently enforce the rules of the law and the legal system.

With respect to Agenda V, in the economic field, justice is manifested in the reforms or affirmation processes for left-behind groups, the disabled people, and marginalized groups. In the social-political field, justice in participation (inclusiveness) is manifested by the increased access to political activities, to gender equality in political activities and in the removal of all forms of discrimination. In the economic field, especially with respect to efforts to reduce income gaps, one key policy is the reallocation of subsidies received by higher income groups to poor communities through directly targeted programs. The reallocation of oil fuel subsidies to education and health programs is another key policy.

Regarding efforts to alleviate poverty, various approaches have been adopted including the bottom-up development approach, which has been practiced in various programs, including PNPM MANDIRI (the National Community Empowerment Program). In this program, communities are involved in the planning phase, project selection, and the evaluation phase. The involvement of the community in the development process thereby should become an essential component of the process. Through this approach, the community will have a sense of ownership, and will voluntarily cooperate with the program while at the same time benefitting from it.

In the years to come, strengthening of justice and inclusiveness will be carried out for each development activity in each program. For example, through the Family Hope Program (PKH), conditional cash transfers for the financing of education and health will be provided for very poor communities. This policy is expected to be able to provide extra income for poor families (i.e. improve the distribution of income) in the short-term, and will create a new generation with better education and health in the long-term. In addition, the government will enhance the quality of social protection to create a family-based social assistance program.

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CHAPTER 8

Thailand: Achieving Social-Economic Development Balance

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After decades of high economic growth, Thailand is now facing many challenges; ensuring sufficient level of economic growth to avoid middle-income trap, and balancing its social and political successes with the economic one. Overall, the country has done well in reducing poverty, provision of basic and advanced health care and basic education. The least progress is economic and social inequality and environmental sustainability. The quality of human capital is also lagging behind other countries, as indicated by the low performance of the education system and the low levels of labor skills. To achieve a better socio-economic development balance, Thailand needs strong institutions that would steer the development process to a more balanced, productive and sustainable path of future economic and social development. More specifically, the country needs political leadership that is visionary, transparent and efficient.

Keywords: social development, economic development; economic growth; poverty, inequality, social welfare.

JEL classification: A13, I24, H55, I38, O15, O33

1. Introduction

It goes without saying that a country can only truly develop when its people not only have a high economic standard of living, but also live happily. The balance of economic and social development is thus a critical criterion against which any 'development models' should be judged. However, judgment is not a straightforward business because, while economic standards of living can be somewhat objectively evaluated, the 'happiness' cannot. Fortunately, progress is constantly being made on the question of what constitutes happiness.

This chapter will use Thailand as a case study in exploring the issues surrounding balancing economic and social development. It will make the case that, when there is a serious problem with such balancing, a country can easily risk falling into disarray and it will require tremendous collective effort to restore socio-economic peace and prosperity. The chapter will then discuss how, and with what measures, to bring about the desired balance.

The chapter consists of five sections. A brief historical account of economic and social development in Thailand over the past half century will be first presented in Section 1, followed by an identification of some fundamental social development issues in Section 2. Section 3 and 4 discuss what needs to be done to improve the balance. The conclusion is in Section 5.

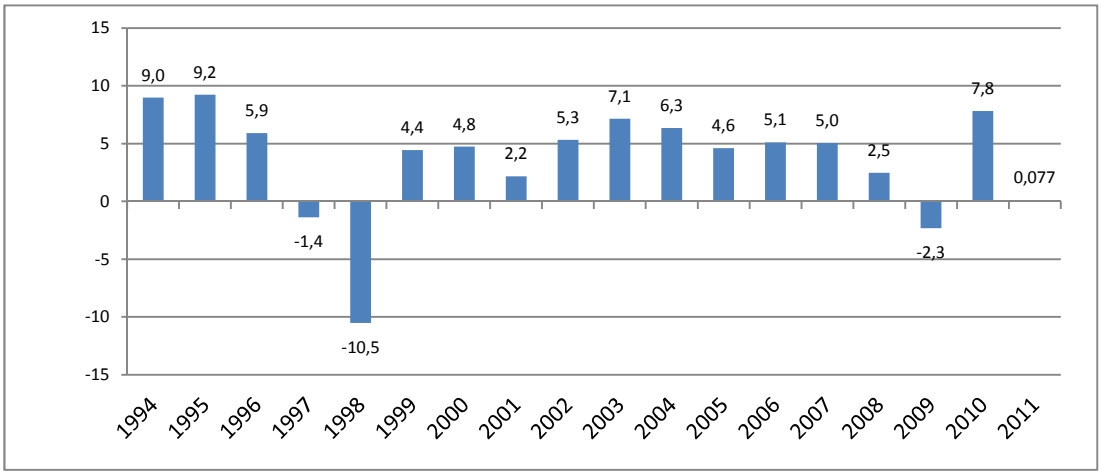
2. Historical Account of Thailand's Economic Development

Before the Asian financial crisis in 1997/98, Thailand had long been considered one of best performers in terms of achieving long-term economic growth. The World Bank (2011) lists Thailand as among '13 economic miracles' with the highest economic growth after the Second World War. The average real annual economic growth between 1952 and 2011 was 6.2%, and on the first of July 2011, the World Bank announced that Thailand had moved up from its lower-middle income category

to an upper-income one. To some, the upgrading was a reassurance that this country is moving toward becoming a developed, high-income economy.

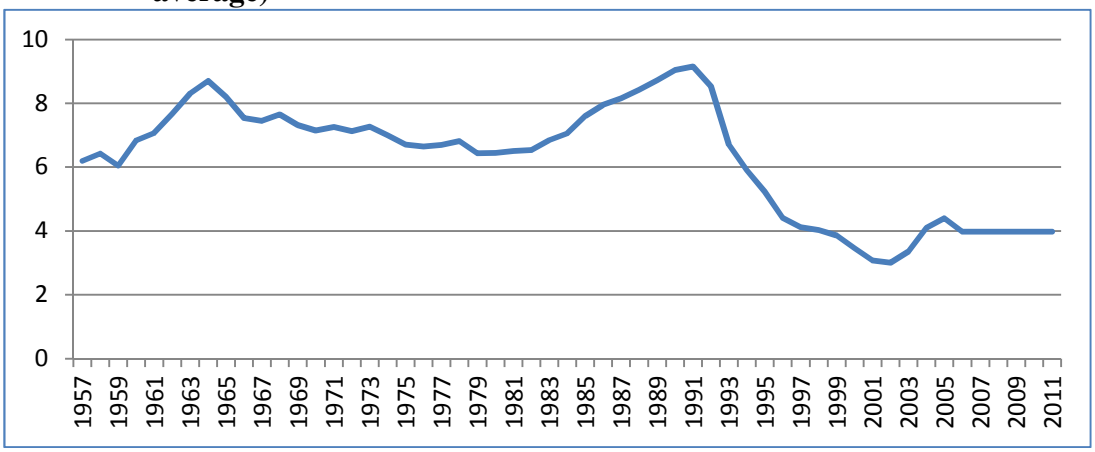
Thailand's recent performance has, however, been quite the opposite of its long-term past. Economic growth rates have been on a roller-coaster, as shown in Figure 1, where growth tumbled from close to 10% in the early and mid-1990s to much lower rates afterwards, due partly to three economic crises (1997/98,2001,2008/9). Since 1996, Thailand has never seen a growth rate above 8%, and those years where growth rates exceeded 6% were years of recovery from deep crises. Figure 2 shows that since 1997 Thailand's medium-term growth (measured by the 11-year moving average) has only been around 4%. This is a sharp decrease from around 7% or above during 1963-1993.

Figure 1: Annual real GDP growth rates, 1994-2011 (%)



Source: Office of National Economic and Social Development Board, Thailand

Figure 2: Medium-term growth rates, 1950s-present (%, 11-year moving average)



Source: calculated by the author using national income data from the Office of the National Economic and Social Development Board, Thailand.

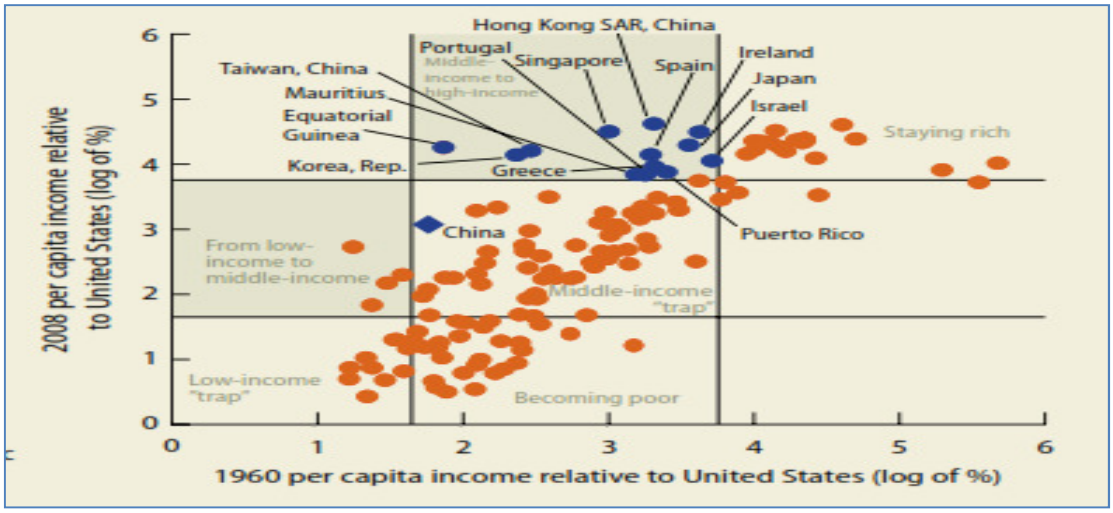
Note: The moving averages for years 2006-2011 are calculated using 2001-2011 data.

The increased growth uncertainly and, more importantly, the lower medium-term growth prospects indicate fundamental problems with the state of development the country is currently in. Specifically, it raises the possibility that Thailand might be now falling into the 'middle-income trap'. A middle-income trap--hereafter the MIT--is commonly defined as a situation where a country that is successful in rising from its status as a least-developed or low income country into a middle income one, eventually remains there without much prospect of becoming an advanced and rich country. Although the general meaning of the term is clear, its operational definition is not. One problem arises from the fact that 'middle-income country' can be either a relative or an absolute concept. If we use it as a relative concept, the phenomenon is perhaps best depicted by Figure 3. When measuring economic performance against the US economy, only 13 countries managed to close the gap with the US during 1960 and 2008 in such as way that they escalated from being 'middle-income' against the US in 1960 to being more or less equally as rich as the US in 2008. Many more countries remained in a relatively middle-income position throughout the period (those in the middle box), including Thailand.

Figure 4 illustrates the absolute concept of the MIT. Japan and South Korea were successful in raising their per capita income steadily from1950 to 2008, leaving

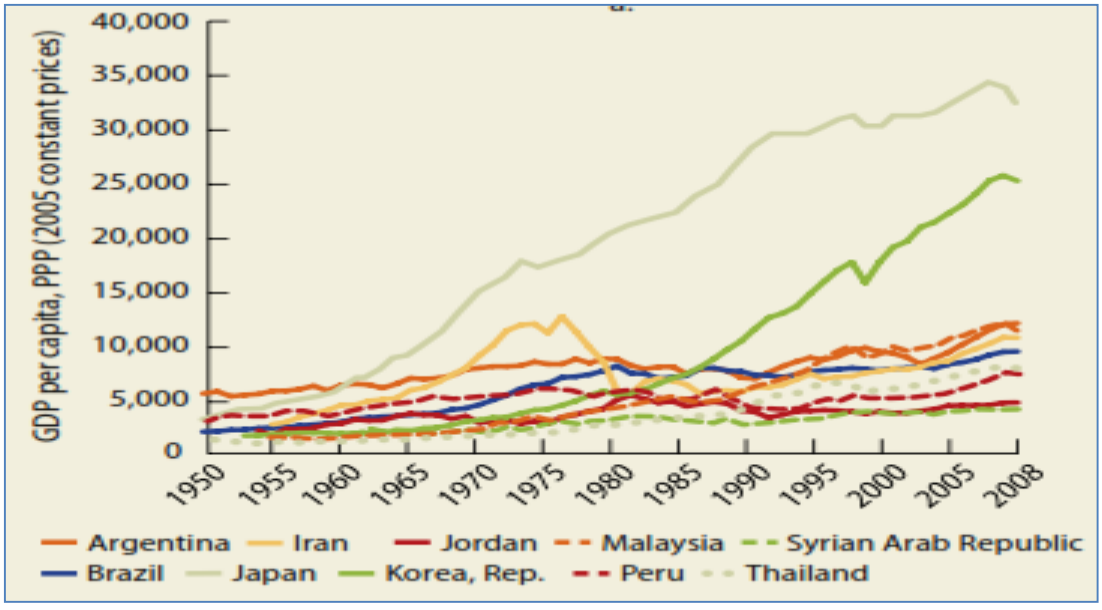
behind many other countries that had similar incomes in 1950. Again, this indicates that Thailand is indeed in the MIT.

Figure 3: Countries' Positions in Relation to the US Economy, 1960 and 2008



Source: World Bank (2012), Box 1.

Figure 4: Per capita GDP of Selected Countries (2005 Constant Purchasing Power Parity (PPP))



Source: World Bank (2012), Box 1.

Many factors can account for why Thailand is stuck in the MIT trap. Among them are weak institutions (both public and private sector) that are unable to steer the

economy toward more prosperous long-term growth, old business models relying too much on low wages, low technology and manufactured exports. Delayed human capital development and delayed technological improvement are thus the keys to helping Thailand escape the MIT trap. The ratio of R&D spending to GDP has stagnated at around 0.2%. The Thai business sector might have been successful in the past in making organizational and marketing innovations (evidenced by the country's high average long-term growth as mentioned in the beginning), but going upward to the next level of competition will need more product and process innovations.

3. Social Achievements and Remaining Challenges

Despite its recent weakness, long-term economic growth has translated into many social achievements in Thailand. The question is how balanced the two areas of achievement are. Since there is no consensus on how to define such 'balance', I rely on the comparison of Thailand's scores in various social dimensions with other countries in the world. The dataset is from the latest human development report from the United Nations Development Programme (HDR, 2012). The scores are defined by converting Thailand's scores into 'percentile scores' by normalizing the countries' scores into a range from 0 to 100, with higher values indicating better positions. The score for economic achievement is represented by per capita Gross National Income (GNI) (in constant 2005 purchasing power parity (PPP$). Thailand's economic achievement score is 52.4 (meaning that 52.4% of countries have lower scores). The results are shown in Table 1.

3.1. Comparisons of Economic and Social Achievements

Let us first compare the overall human development index (HDI) with the economic score. The HDI score is 44.9, which is lower than the economic score described above. This indicates that overall human development is lagging slightly behind economic development. Drilling into the HDI components we find that the main reason for Thailand's low overall result is the low performance of education

(years of schooling and expected years of schooling), while the health dimension, represented by life expectancy scores higher. Interestingly, the well-being index score is very high in spite of the lower HDI. One of the reasons for this might be the low rate of poverty, which scores high in all aspects, with the exception of poverty vulnerability, which is only slightly better than the overall economic score. Looking at the rest of the detailed figures, other social dimensions have mixed scores, some higher and some lower.

Among those social dimensions with lower scores, there are some with very low scores which thus need particular attention. Their scores are highlighted with bold numbers in Table 1. They indicate that Thailand does much worse in three areas:

1. Educating its people.
2. Keeping emissions under control, protecting endangered species, protecting its people from being affected by natural disasters.
3. Economic inequality.

Table 1: Comparison with economic development score of various social indicators, using international index scores

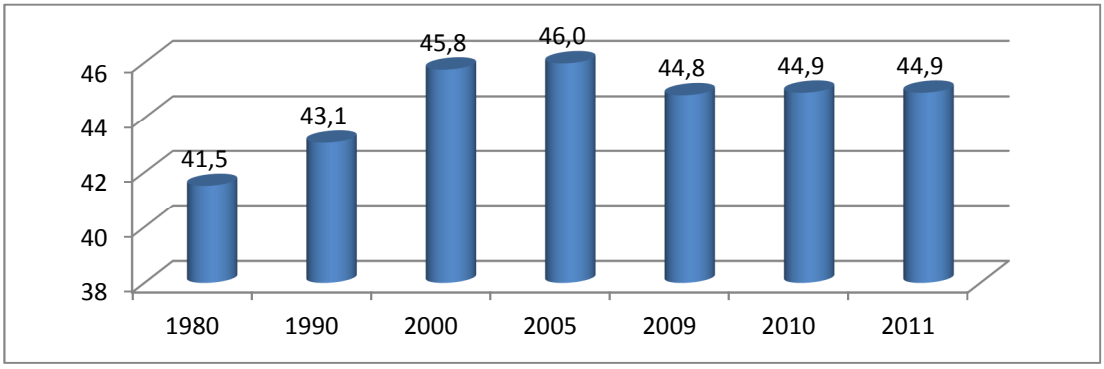
Indicator Group	Comparison with economic percentile score			
	Better Score		Worse Score	
	Indicators	Score	Indicators	Score
HDI	Life Expectancy	61.0	HDI	44.9
			Mean Years Schooling	34.8
			Expected Years Schooling	46.0
Well-Being	Well-being Satisfaction	71.6		
	Satisfaction with Actions to preserve environment	92.8		
Poverty	$1.25 PPP Poverty	55.0		
	National Poverty	92.5		
	Multidimensional Poverty Index	86.1		
	Vulnerable to Poverty	53.7		
	Severe Poverty	77.8		
Inequality	Gender Inequality Index	53.4	Quintile Income Ratio	10.6
			Income Gini Coefficient	7.8
Education	Tertiary Enrollment	66.3	Primary Enrollment	12.1
	Adult Literacy	62.9	Secondary Enrollment	39.1
	Pupil/Teacher Ratio	69.5		
Health	Maternal Mortality	56.8	Male Mortality	34.8

Indicator Group	Comparison with economic percentile score			
	Better Score Indicators	Score	Worse Score Indicators	Score
	Stunting	77.1	Female Mortality	41.8
	Wasting	59.3		
	Under 5 Mortality	64.0		
Environment	Adjusted Net Saving	89.6	CO2 Emission	41.6
	Forest Area	61.8	Growth of CO2 Emission	3.4
	Active in Environment Groups	96.2	Endangered Species	17.3
			Natural Resource Depletion	40.8
Health-Environment	Deaths from Water Pollution	69.3	Populations Affected by Natural Disaster	5.8
			Deaths from Natural Disaster	40.4
			Population live in degraded lands	27.1

Note: Economic score is represented by per capita GNI, which results in a score of 52.4.
Source: Author's Calculation based on Word Development Indicators 2012.

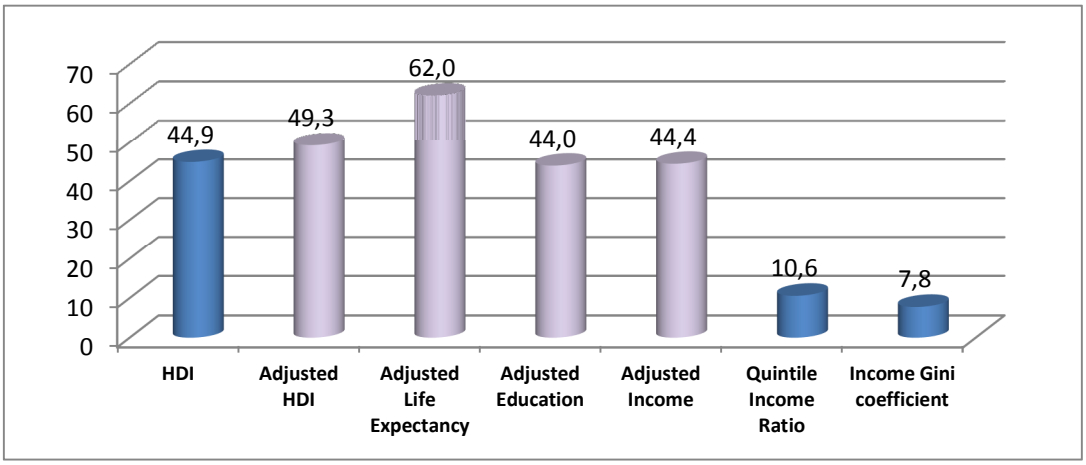
On the brighter side, Thailand's HDI has shown some improvement over the years, moving up from 41.5 in 1995 to 44.9 in 2011 (Figure 5). When adjusted by inequality, the HDI score is actually higher than the unadjusted one, in spite of the very high income inequality. This is mainly due to the high score for life expectancy, indicating that overall health achievement among the Thai people is somewhat more equal (Figure 6). The scores of the inequality-adjusted education and income levels are not as high, however. This can be explained by the very low scores for both the quintile income ratio and the Gini income index, which reflects very high inequality of income (or consumption) of Thailand when compared to other countries. In fact, Thailand's quintile income ratio (the ratio of the average income of the richest 20% of the population to the average income of the poorest 20% of the population) was ranked 15th among 142 countries in the HDI database. It is therefore safe to say that Thailand's inequality is among the world's highest.

Figure 5: Thailand's Overall HDI Scores up to 2011 (Percentile of Countries Ranked below, %)



Source: Author's calculation using HDI 2011 data

Figure 6: Thailand's Inequality-adjusted HDI Scores up to 2011 (Percentile of Countries Ranked Below, %)

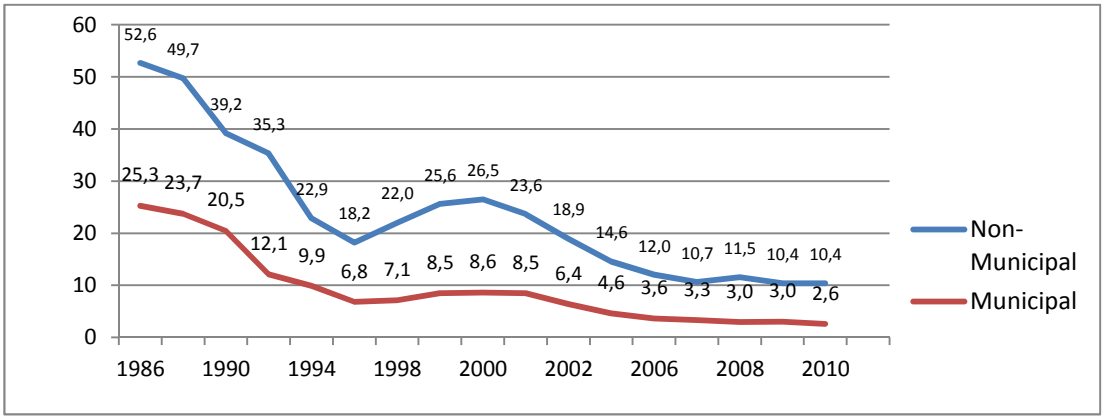


Note: Gini coefficients were derived from either income or consumption, so they are not perfectly comparable.
Source: Author's calculation using HDI 2011 data

3.2. Poverty and Social Inequality

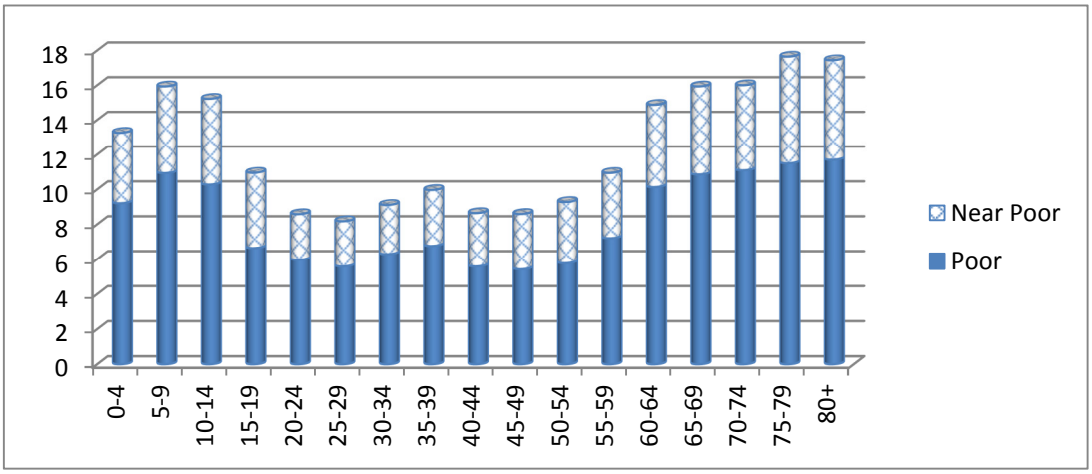
Reducing poverty is perhaps Thailand's most important social achievement. More than 40% of the Thai population escaped from poverty in the past 25 years (see Figure 7). It might be interesting to see how poverty distributes among age groups. As expected, the poverty rate tends to be higher among the young and the elderly people (Figure 8); the young are usually those living in large families, which tend to be poorer than those in smaller families, while the elderly are more likely to earn less than the working-age population.

Figure 7: Poverty Headcount Ratio, 1986-2010 (%)



Note: A household is defined as poor if its monthly consumption falls below its household-specific poverty line.
Source: National Statistical Office, Thailand

Figure 8: Poverty and Vulnerability (Poor plus Near-poor) Rates by Age Group, 2010 (%)



Source: Socio-Economic Surveys, National Statistical Office, Thailand

Let us now turn to the implications of the high inequality level. The literature predicts that such high inequality would lead to many economic, social and political problems;. It certainly would make people 'less happy' than a more equal society with the same level of per capita income. Economic problems would include the recently found relationship between high inequality and lower long-term economic growth, and the narrow tax base (because of the limited size of the tax-paying middle-class) which would prevent government from spending on investment and social protection. Politically, the high inequality is a major obstacle to the development of democracy, as it nurtures the patronage system that is commonly

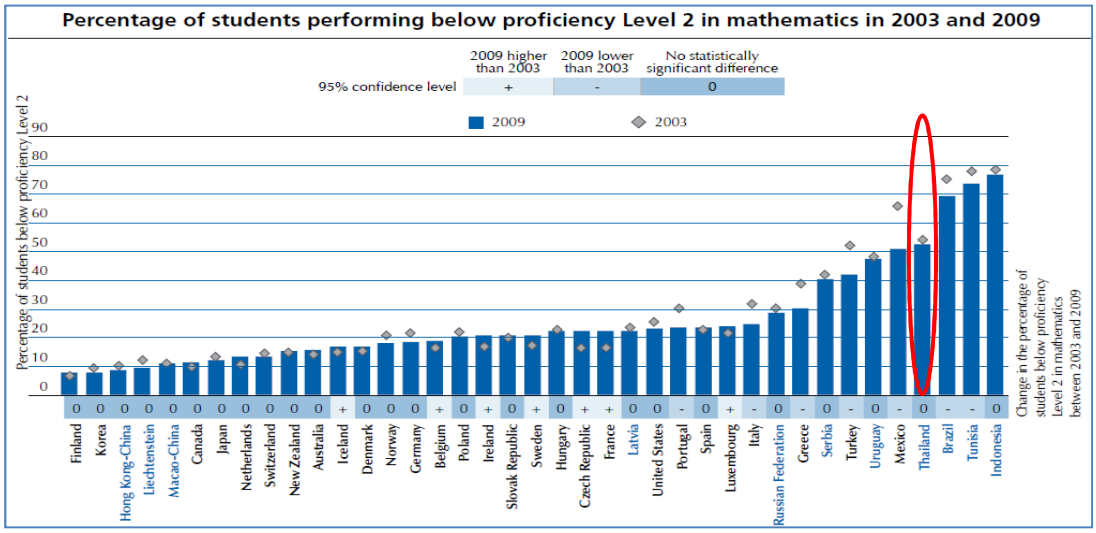
associated with vote-buying. Some socio-political researchers also argue that high inequality is the major factor that deepened the recent political crises and instability in Thailand.

Many social problems can also be linked with the high inequality. While poverty might have been the major cause in the past, the later boom in the sex industry in Thailand is more likely attributed to high inequality. Those who sell their services do not do it out of poverty anymore, but are motivated by the need to 'feel equal' with their peers (fellow college friends, for example). And because the differences of income between the potential service buyers and potential service sellers are quite large (and there are quite a few buyers and sellers) the 'deals' can be made in large numbers, resulting in a thriving market for sex service. In countries that are more equally rich (like the Scandinavian ones) or more equally poor (like some African countries), the sex industry tends to be a thin market.

3.3. Education

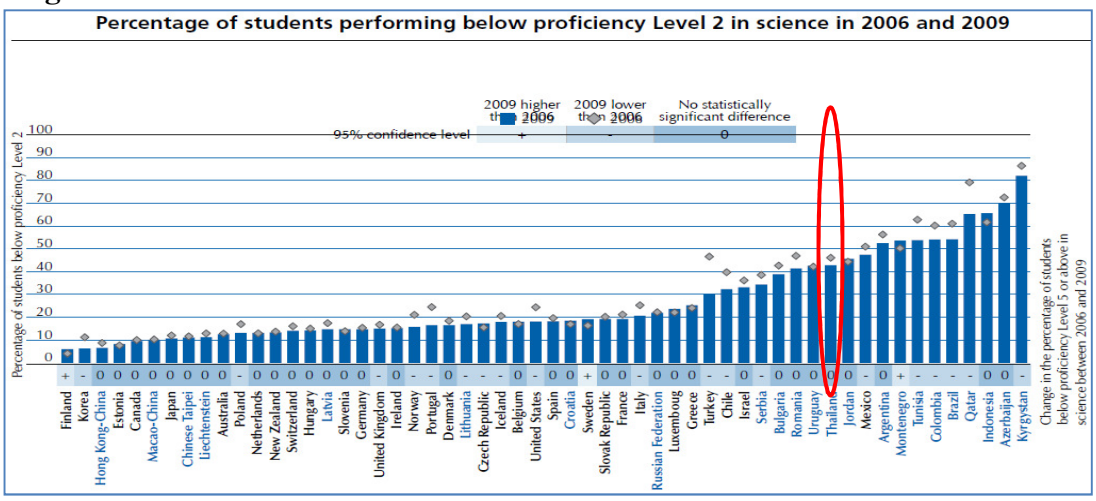
The mediocre level of the education element of the country's HDI reveals one of Thailand's most problematic areas, and a key obstacle to its long-term prosperity: human capital development. Starting from a low position in terms of basic educational provision, Thailand has made some impressive progress in the past two decades in widening education opportunities for its population. Now, most students finish at least higher secondary schools, and almost half of them go on to tertiary education. It has been estimated that around 52% of young Thai people in the age-range 10-25 has a good chance of obtaining at least a bachelor's degree. This is a very impressive figure indeed. The key problems lie in the quality of the education or, more specifically, the lack of equality of access to good education among Thai students. Almost all education achievement indices of Thai students declined in the past several years. Figures 9 and 10 show how Thai students performed badly in mathematics and science using the Programme for International Student Assessment (PISA) scores. More than half of Thai students performed below proficiency level 2 in both subjects and, more worryingly, their performance deteriorated over the years from 2003 to 2009.

Figure 9: Thai Students' Mathematics Performance



Source: Programme for International Student Assessment (PISA), 2009

Figure 10: Thai Students' Science Performance

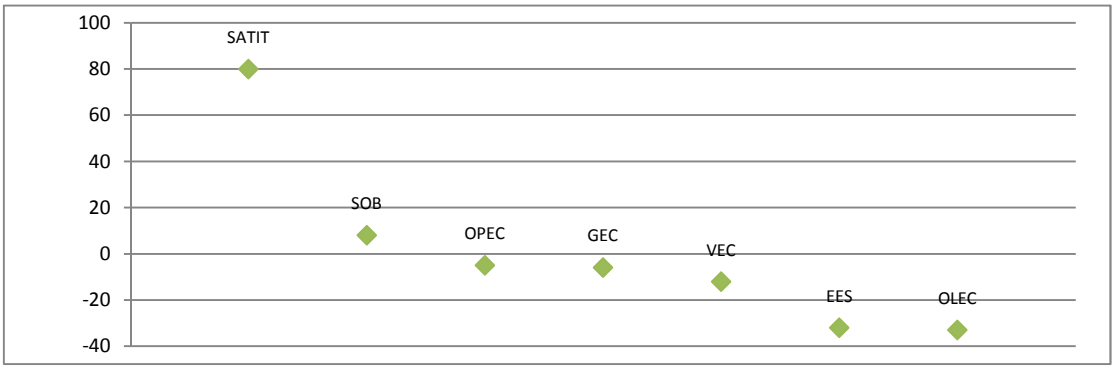


Source: Programme for International Student Assessment (PISA), 2009

The equality issue can be illustrated in Figures 11 to 13. Some selected types of school are offering an educational quality comparable to the international best. Figures 11 to 13 reveal that 'demonstration schools' outperformed other schools by a wide margin. On the other hand, small schools, such as the 'education expansion schools', which are schools in more remote areas which used to offer only primary education but had to move up to secondary education following the changing age

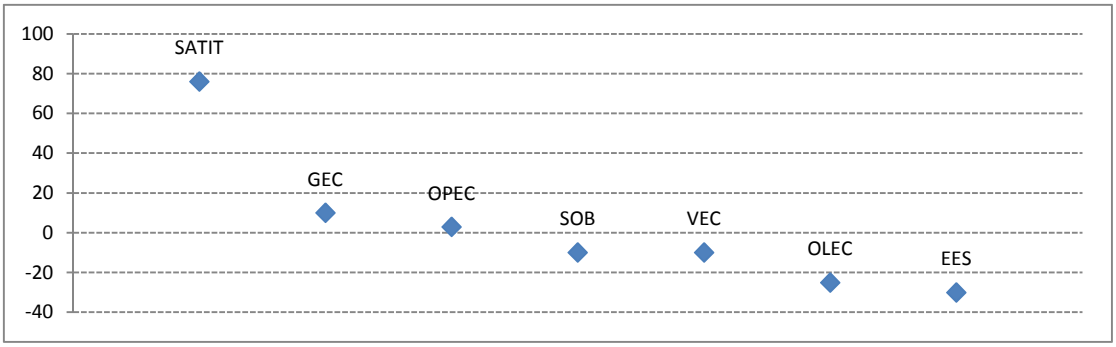
structure of their potential local students, and schools under the supervision of local governments, performed much worse than average.

Figure 11: Performances in Mathematics of Thai Students by School Groups



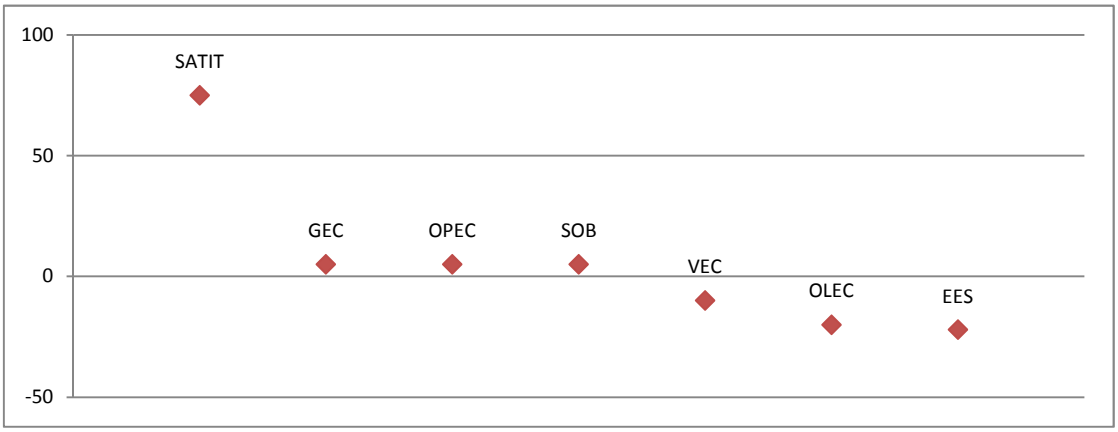
Note: SATIT= Demonstration Schools, GEC=Department of General Education, OPEC=Office of Private Education, SOB=Schools of Bangkok, VEC=Department of Vocational Schools, OLEC=Office of Local Education, EES=Educational Expansion Schools
Source: Programme for International Student Assessment (PISA), 2009.

Figure 12: Performances in Science of Thai Students by School Groups



Note: see Figure 11 notes for the meaning of the abbreviations.
Source: Programme for International Student Assessment (PISA), 2009

Figure 13: Performances in Reading of Thai Students by School Groups



Note: see Figure 11 notes for the meaning of the abbreviations.
Source: Programme for International Student Assessment (PISA), 2009

3.4. Socio-Political Development

Another troubling aspect of Thai society that has become well known lately is its severe and prolonged political conflicts. The conflicts, which started around the years 2004/5, have been characterized not only by power struggling among elites, as most past conflicts were, but also by real economic and political conflicts between wider bases of different economic classes. The highly unequal society already mentioned earlier broadened and deepened the conflict to the point that the usual quid-pro-quo deals between the conflicting political elites cannot be easily achieved. How this deep-rooted societal conflict will unwind in the medium-term future will be crucial to Thailand's economic and social development. If the conflict leads to a more equal society, as many hope, the balance between economic and social achievement may be improved. On the other hand, the economy also risks falling into a populist policy trap, which would eventually dampen the country's economic efficiency and deteriorate the general well-being of all Thai people.

4. Moving Toward Balanced Development

The preceding sections describe, in the case of Thailand, how some social developments have progressed more or less in unison with economic achievements,

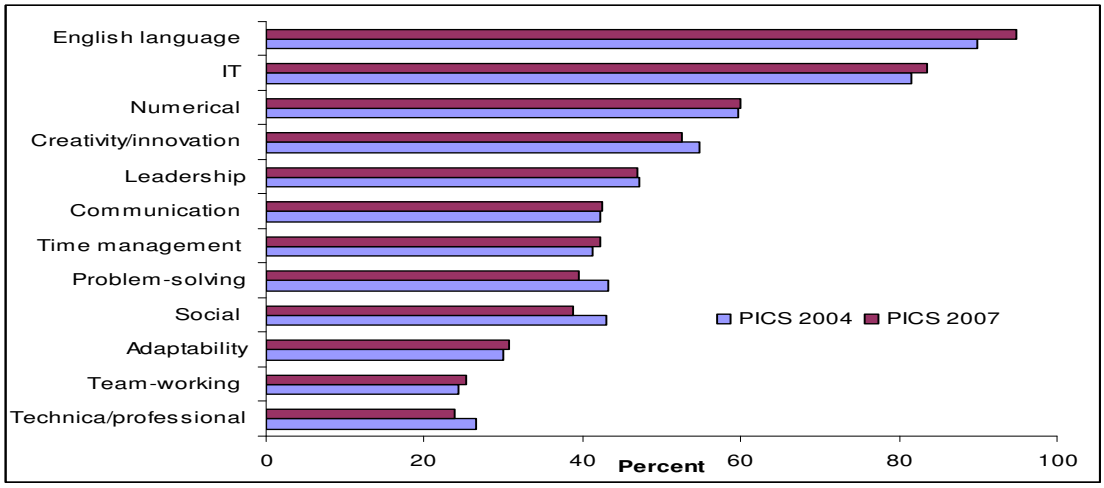
while some have lagged behind. Those falling behind are in two broad categories; human development and environmental quality. In this section, I will discuss how Thailand should improve in these two areas to make its economic development more balanced.

4.1. Human Development as a Key to Social-Economic Balance

Although Thailand has made significant progress in human development, much remains to be done. There are typically two principle channels through which a country's human quality is improved; education and health-care. Thailand has been doing quite well on health, as evidenced in the previous section, so the remaining important policy issue is education. And as pointed out earlier, the key problem with education is with its quality. The question is how to improve education quality. Numerous studies have found that the education system in Thailand does not need more money spent on it but rather a reform of its management. The Thai Development Research Institute (TDRI) (2012)) argues that accountability in the education system would help increase the quality of education. It proposes that a reward/punishment scheme should be introduced and linked to students' performance.

The next question is what kind of 'education quality' is most relevant in ensuring well-being. Acemoglu & Zillibotti (1999) argue that education must provide skills that are compatible with changes in technology in the modern world, to avoid the 'technology-skill-mismatch' problem. Surveys of foreign firms operating in Thailand reveal that the types of skill they desire from their employees are foreign language competence, information technology skills, communication skills, problem-solving abilities and leadership (Figure 14). The World Economic Forum (2009) suggests that 'entrepreneurship education' is required, where education engenders an entrepreneurial spirit in students, plus the creative ability to 'think outside the box'.

Figure 14: Types of Skill Thai Workers Lacked, Reported by Foreign Investors in Thailand



Source: World Bank (2008b).

4.2. Towards a Comprehensive Welfare Society

For a highly unequal society like Thailand, the natural policy recommendation is to strengthen redistribution policies. And among those redistribution policies, building up a comprehensive welfare society would perhaps be the most effective. A comprehensive welfare society is a society that looks after its citizens and residents in all the basic aspects of social protection and social assistance that a person deserves in his or her life journey from birth to death. Thailand needs to establish such a welfare society because the country does not have yet a decent social protection and welfares for its population. According to Jitsuchon, *et al*. (2009 and 2011), Thailand still has large 'welfare gaps', meaning that there are many basic social services that Thai people of all ages are still lacking. The key welfare gaps are:

- Children before school age are still not taken care of properly, especially in the area of intellectual and emotional development;
- Poor students are still denied access to quality education because their parents cannot afford additional costs (other than tuition fees which have been free for many years) such as transportation cost;
- More than three quarters of workers are not covered under social security, making them unable to get basic help when they most need it, such as unemployment/invalidity/maternity benefits, child allowance, etc.;

- Disabled and elderly people are paid monthly allowances that are not sufficient for most.

Jitsuchon, *et al.* (2009 and 2011) proposes a basic universal social protection and welfare system that would fill all these gaps, and estimates that it would need the government to bear an additional budget burden of around 2% of GDP. They argue that the proposed welfare system would not lead to a problem of people avoiding employment, as in the case in many countries, since the level of basic welfare would not provide a very comfortable life. Rather it would provide minimal, but adequate, social protection and welfare during times of need. How to mobilize resources to meet this proposal in the case of Thailand will be discussed in the next section.

The notion that providing basic social protection and welfare to all citizens is in fact affordable, as proposed in Jitsuchon, *et al.* (2009 and 2011) is not new. Many organizations under the United Nations system, especially the International Labor Organization (ILO), have been promoting this notion for some time. The idea is called the 'social protection floor' or SPF[1]. According to a 2010 ILO study, SPF is affordable at virtually all stages of development, with total additional cost ranging from 2.0% to 5.7% of GDP depending on how good the existing system is for each country. The key to affordability is the management of 'fiscal space', which can be broken down into four different measures: tax reform, gradual increase of social spending as a percentage of GDP, reallocation of resource between different kinds of social spending, and refocusing to increase the effectiveness of social spending in fighting poverty and vulnerability[2].

4.3. Inclusive Growth

Apart from provision of a comprehensive welfare system, Thailand should seriously rethink how it should move towards a growth strategy that allows more participation from all walks of life regardless of economic and social status. Specifically, the country needs to conceptualize and implement its own version of 'inclusive growth' that addresses the key problems that have prevented more equal

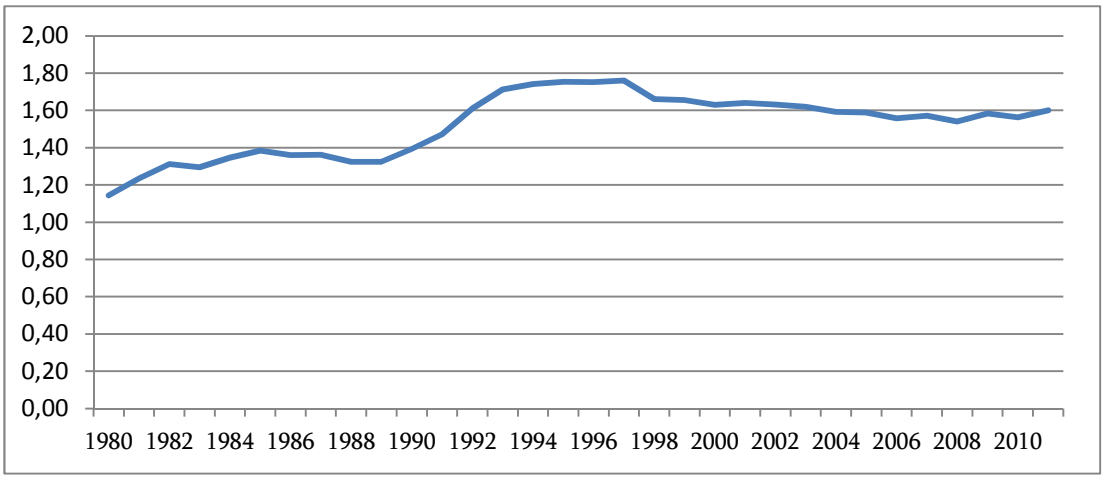
[1] See the ILO website on the social protection floor at http://www.social-protection.org/gimi/gess/ShowTheme.do?tid=1321&ctx=0

[2] http://www.social-protection.org/gimi/gess/ShowTheme.do?tid=2526

development in the past. Among one of these key problems is the fact that functional distribution of income in Thailand has adversely affected the income distribution. Since the outbreak of the Asian Financial Crisis in 1997/98, the earning prospects of low skill and unskilled laborers have been weak.

Figure 15 shows that the real minimum wage declined significantly from 1998 to 2000 and has stayed roughly unchanged since then. This is despite of the overall positive economic growth (albeit a low average growth as pointed out earlier), which means that other 'factors of production', namely, capital, land and entrepreneurship, have gained in relation to labor. This finding suggests that policies toward more equal functional distribution are badly needed.

Figure 15: Real Minimum Wage in Thailand (2007 prices)



Note: Real minimum wage = nominal minimum wage adjusted by consumer price indices.
Source: Author's calculation using nominal minimum wage from the Ministry of Labor and consumer price indices from the Ministry of Commerce

There are many ways to promote inclusive growth, but the overarching concept is to make sure that future economic growth should benefit the poor and the lower income citizens more than proportionately and, equally importantly, to achieve this goal with as little intervention in the market mechanism as possible. Measures include, for example, systematic training to low skill workers, more innovations that increase labor productivity, rural infrastructure that benefits the local people more, and fiscal decentralization. Microfinance for the grass-roots population can also help reduce the economic gap at the same time as it promotes economic growth. Encouraging small enterprises to adopt more modern innovations, such as

information and communication technology, could be very effective in raising their profitability.

Macroeconomic policies can also play significant roles in an inclusive growth model. For example, fiscal policy needs to be more progressive, both on the revenue (tax) side and the expenditure side. The World Bank (2008a) finds that Thailand is collecting less tax than it should be at its development level. The lack of serious taxes on property is one explanation; a smaller personal income tax base due to a large informal sector is another. With tax revenue too low, Thai governments are unable to spend on necessary infrastructure investments that would generate higher economic growth.

4.4. Green Growth

For some time now, the term 'green growth' has become fashionable in development circles. It is fashionable because it represents a balanced view between economic growth and environmental sustainability. Lately, countries are beginning to see the concept as a new way to generate economic growth. The challenge is to achieve sufficiently high economic growth (to avoid falling deeper into the middle-income trap) while making it greener. One solution is to invest more in 'green technology' which would not only promote economic growth domestically but is potentially a good source of export revenue when the technology is mature and saleable. Thailand is not at that stage yet, but it should be aiming in that direction. There are many areas of green technology in which Thailand has a natural comparative advantage, such as solar energy, bio-energy, and organic agriculture. A proactive policy to develop these technologies would in the long-term put the country in the forefront of new green developments. And if progress is made in such a way that the cost of producing green products becomes sufficiently low, the technology would spread globally and help improve the quality of life of everyone on the planet.

Another possible measure is an environmental tax. There have been frequent attempts to implement more and higher 'carbon taxes' in Thailand, but with limited success. On monetary policy, there are debates over the role of the interest rate, set by monetary authorities, which affects the discount rates in most investment

programs, including investments in green technology. When discount rates are set too high, green technology investments will have lower social benefits when measured in net present value, and are thus discouraged.

5. Political Economy of Gap Narrowing

The call for effective redistribution policies in this chapter is certainly nothing novel. Academia made this demand decades ago. And the government recognized their necessity and put the issues into the 5-year national plan as early as the fifth plan in the early 1980s. What is astounding is how little has been achieved in the past three decades, if there are any achievements at all. Jitsuchon (2012a) points out that inequality had been rising since the 1960s and had only shown some small signs of improvement after the early 1990s, a decade after the fifth national plan. And despite such improvement, the level of economic inequality remains today one of the world's highest (Table 1 shows, less than 8% of countries have a higher income inequality than Thailand). Reducing inequality is thus a daunting task. I believe that the failure to satisfactorily improve income distribution lies with politics, and thus one must find the solution there first before considering economic measures.

One positive thing about the current Thai politics is the rising political activism among the country's low income population. Unlike in the past, poor people have started to demand their political rights, and policies that are more favorable to them, and have become very active in making sure that government meets their demands. Such developments explain why Thailand has been full of 'populist policy/measures' in the past decade. Unfortunately, populism would not be good for Thailand, and even for the 'grassroots' themselves in the long-run. There have been numerous studies and writings warning against the use of populism for too long a time (such as Dornbusch and Edwards, 1991; Jitsuchon, 2012a; Warr, 2011; Jitsuchon, 2012b).

Jitsuchon (2012b) urges the government, and Thai society at large, to 'transform' populist policies into a comprehensive welfare system, as discussed in the previous section. He argues that the fiscal consequence of such transformation is minimal, as the fiscal cost of the current package of populist policies is close to what would be

needed to finance the proposed welfare system. But the consequence for inequality would be much better under the welfare system, since all Thais at all ages would be protected in all circumstances. The challenge is how to convince politicians that such a transformation would also be a winning political strategy, similar to the populist election campaign.

Before the proposed transformation towards a welfare system can pick up sufficient political support, the issue of financing and resource mobilization must be dealt with prudently. One might argue that the current expensive populist platform is not permanent, as the government will not have to spend so much every year, but only at the time when they want to secure popularity. Such political behavior is reported in literature on fiscal budget deficit cycles in democratic systems (Alesina and Tabellini (1987)). A 'rights-based' welfare system will, in contrast, cost the public sector and the taxpayer year in year out. In response to this concern, Jitsuchon, *et al*. (2011) argues that a simple solution lies with a minimal tax reform. The reform would raise tax revenues from the current level of 17-18% of GDP to around 20-21%, a level that is more commonly found in countries at similar levels of per capita income and development as Thailand (World Bank (2008a)). The 'minimal' tax reforms could consist of only two measures: increasing value-added tax from 7% to 10%, and introducing a new property tax law that would collect tax on the current value of land and houses. These two measures are certainly within the political reality, if only the politicians are too.

Another way to ensure sustainability of resource mobilization for a comprehensive welfare system would be to create an appropriate burden-sharing system between various parties in society. Theoretically, having the state as the sole provider of social welfare has at least 2 important limitations. First, it is a budgetary burden. Government will need to collect more revenue from taxes. This will not only entail a collection cost, but will also interfere with the market mechanism. Secondly, social benefits provided by the state may be inefficient compared to provision by other parties in society, including the private sector, community organizations, or Non-Governmental Organizations (NGOs). The creation of a participatory social welfare system should, therefore, be beneficial.

There are other policy measures to help reduce the development gap within Thai people. Promoting and ensuring transparency is crucial in preventing the widening of gaps between those becoming rich through non-transparent activities such as nepotism and corruption, and the rest of society. Secondly, it is important to make sure that the benefits of globalization spread more evenly among the Thai people. Normally it is the large entrepreneurs who benefit the most from expanding into global markets. Smaller firms must be encouraged and helped to join the globalization process more actively. Such measures as the introduction of innovation in all aspects of business life (product, process, organizational, and marketing) are needed.

6. Summary and Policy Recommendations

- Although Thailand has been one of the best performers in term of long-term economic growth since World War II, the country is now facing many challenges.
- The first challenge is to ensure that future growth will be not too low compared to its past performance. Specifically, the country needs to escape from the middle-income trap, in which it seems to have been stuck for more than a decade. One of the causes of this recent slow economic growth is the country's low resilience to economic crisis, both home-grown and imported.
- On the social front the country is doing quite well in many areas and can claim to be achieving a satisfactory level of economic-social development balance. These areas include reducing poverty, provision of basic and advanced health care and basic education.
- There are some social areas, however, that show significant development delays. Economic and social inequality stands as the country's top priority problem. Environmental sustainability is also problematic. The quality of human capital is also lagging behind, as indicated by the low performance of the education system and the low levels of labor skills.
- The three fundamental problems hindering the development of a more balanced society in Thailand (human development, unequal society, and environmental challenges) can only be overcome with strong institutions, as they are problems that cannot be entirely dealt with by market mechanisms.

- More specifically, the country needs political leadership that is visionary, transparent and efficient.
- Ironically, the current political setting is, despite its deep-rooted conflicts and uncertainties, most supportive to a more equal society. This is because of the increased political activism of the party grass-roots, and the low income population, both in rural and urban areas. While the short term consequences include wasteful policies such as the current expensive and ill-designed populist measures, there is an emerging long-term potential for beneficial change.
- However, to realize such potential the country needs strong economic and social institutions that would steer the politicians to a more balanced, productive and sustainable path of future economic and social development.

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CHAPTER 9

ASEAN Small Less Developed Economies: Need for a New Approach

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Cambodia, Laos and Myanmar, the three ASEAN 'low incomes countries' (LICs), all aspire to progress to middle income countries over the next decade. This chapter presents a political economy perspective on possible new approaches to development and regional cooperation for these ASEAN small low income and least developed economies, with some reference also to Vietnam which, although having recently graduated to lower middle income country status, still shares many of the domestic development policy challenges facing the other three. It argues that, despite their differences, these countries share some common development challenges that must be met if the 'development gap' in ASEAN and East Asia is to be bridged or narrowed. These include - hard and soft infrastructure for connectivity; economic diversification and private sector development; agricultural development diversification and productivity; trade, transport and trade facilitation; regional integration and the cross-border movement of goods and people; human resource development particularly education and labor market responsive skills development; institutional capacity development and systems of governance; improved aid effectiveness and graduation from aid dependency. This will require a new approach directly linking domestic policy, development cooperation and regional economic integration in the Greater Mekong Sub-region, the Association of Southeast Asian nations (ASEAN) and broader East Asia. Various policy recommendations are made to achieve this including the use of ASEAN's Regional Comprehensive Economic Partnership (RCEP) initiative as its primary vehicle.

Keywords: Cambodia; Laos; Myanmar; Vietnam; CLMVs; ASEAN; Greater Mekong Sub-region (GMS), East Asia: regionalism; sub-regionalism; regional integration; regional economic cooperation; development gap; low income countries; middle income countries; overseas development assistance (ODA); development cooperation; aid effectiveness; ASEAN Regional Comprehensive Economic Partnership (RCEP)

JEL classification: F02, F15, F35, O19, O53

1. Introduction

Cambodia, Laos and Myanmar, the three ASEAN 'low income countries' (LICs), all aspire to progress to the status of middle income countries over the next decade. This chapter presents a political economy perspective on possible new approaches to development and regional cooperation for these ASEAN small, less developed economies, with some reference also to Vietnam which, although having recently moved from less developed country (LDC) to lower middle income country status, still shares many of the domestic development policy challenges facing the other three. These 'ASEAN 4' countries, the CLMVs as they are known from their initials, with their diverse peoples, societies, economies and political systems, share a significant geo-political and economic place in ASEAN and the broader East Asian region. They are located in the Greater Mekong Sub-region (GMS), and have a unique sub-regional integration and development model driven by both national political leadership and the GMS program of the Asian Development Bank (ADB). They lie in close proximity to China, the region's economic powerhouse, and in Myanmar's case, also to India. Significantly, they also clearly reflect the quite extreme 'development divide or gap' between the nations and economies of ASEAN and East Asia, and the challenge this poses for future regional integration and economic convergence.

Along with analysis of the development challenges of these countries, the chapter addresses the three broad policy research questions posed in the project's original concept note:

(i) What kind of policies would be necessary and effective for East Asian economies to re-orient the export led growth model and to create dynamic internal demand?
(ii) Are East Asian countries ready to rethink and readjust development strategies to move to a new and sustainable development model, and what are the kinds of policies and actions these East Asian countries could and should take?
(iii) What role could and should regional cooperation play in these policy initiatives?

This chapter also explores two further questions specific to these three CLM nations and economics -What can these 'latecomers' learn from the development experiences of other East Asian development success stories, the Newly Industrialized Economies (NIEs) of East Asia, particularly Singapore, South Korea and Taiwan; and what can they also learn from the experience of their GMS neighbor, Vietnam, given its recent graduation to lower middle income status, and its strengths and weaknesses. What were the main factors that led to the success of these economies that could inform CLM growth and development strategies?

The analysis that follows assumes the desirability of high levels of inclusive, more equitable growth, driven by pro-active and responsible government policy-making and planning, and the dynamic role of the private sector, as necessary conditions for further poverty reduction and sustainable socio-economic development. It also assumes the positive role of an economically integrated GMS and ASEAN, already in train, and eventually an integrated East Asia[1] in achieving this. It begins with a brief overview of the CLMVs and their major development challenges, as they move from low to middle income status, and in Vietnam's case, from lower to upper middle income status. It identifies their development aspirations and needs, commonalities and differences. Cambodia is dealt with in more detail reflecting the author's location.

The second section considers the changing regional context - recent developments and trends in the GMS, ASEAN and broader East Asia, and the roles and linkages of these countries in current regional and sub-regional integration and cooperation processes and institutions. It discusses their strengths and weaknesses in contributing to inclusive growth, sustainable socio-economic development, and strategies for narrowing or bridging the 'development gap' in the region. This is followed by a discussion of the role of official development assistance (ODA) in these countries in the context of a changing global and regional 'development paradigm'. This now involves traditional and more recent non-traditional ODA donors. The chapter outlines the challenges and opportunities this raises for the CLMVs, as both

[1] 'East Asia' for the purposes of this discussion refers to the ASEAN 10 countries plus China, Japan and South Korea, or 'ASEAN+3', without any assumption as to what an integrated East Asia or eventual East Asian Community might comprise.

recipients and managers of ODA in their development strategies, and describes how a new approach to ODA in East Asia might be more effective in meeting their needs.

The final section explores what the CLMVs, particularly the three low income economies - Cambodia, Laos and Myanmar -can learn from the development experiences and successes of other East Asian economies, and what they would need from any new development and regional cooperation model for East Asia. It concludes with some observations on the nature and feasibility of a new development model, its prospects and priorities, and the domestic and regional policy issues it raises for these smaller transition economies in ASEAN and East Asia, with some associated policy recommendations.

2. The ASEAN CLMVs - Cambodia, Laos, Myanmar, and Vietnam: Their Development Status, Challenges, Priorities and Needs[2]

The Asian Development Bank (ADB) and ADB Institute (ADBI)'s initiative *ASEAN 2030: Toward a Borderless Economic Community* (ADBI, 2012a) provides an analytical overview of the prospects and challenges for the CLMVs in ASEAN integration and future prosperity. It discusses their implications for regional cooperation and national policy making, in achieving a 'RICH ASEAN' by 2030 – an ASEAN that is resilient, inclusive, competitive and harmonious. (ADBI, 2012a). In its draft highlights, the ADBI states bluntly '*the income gap between ASEAN countries is severe*', demonstrating that, even excluding Singapore, and Brunei, Malaysia, the next richest ASEAN country in 2010, had per-capita GDP (USD 8,260) of nearly 12 times that of Myanmar (USD 714). While CLMV growth rates have been higher that of the ASEAN 6 over the past decade, this has been from a very low base. The CLMVs also remain poorer in relation to other socio-economic indicators. On the United Nations Development Programme (UNDP)'s 2010 Human Development Index, Singapore is ranked 27, and Malaysia 57, while Vietnam is at

[2]The overviews of the CLMVs presented here summarise key aspects of the final draft country background papers produced by local CLMV country authors for the ADBI Cambodia 2030 project which is currently nearing completion, focusing on their major development challenges and policy needs. However these papers, referenced at the end of this paper, have not yet been published and may be further amended prior to publication in late 2012.

108, Laos at 122, Cambodia at 124 and Myanmar at 132. This section provides a brief overview of the strengths, weaknesses, opportunities and threats faced by the CLMVs in achieving more sustainable and inclusive growth and socio-economic development, and, in the case of the CLMs, moving from low to middle income country status., Despite their differences, it identifies some shared development needs and priorities that would need to be addressed in any new regional economic development and regional cooperation approach.

2.1. Cambodia (CDRI 2011)

Cambodia, with an open economy and more than a decade of high levels of GDP growth, averaging 7.8% between 1994 and 2010, has some unique challenges in human resource development to support national development goals. As background one must remember the nation's loss of a generation of educated professionals and skilled labor as a result of the Khmer Rouge genocide in the 1970s, and the decade-long embargo that followed through the 1980s. Its priorities are now focused on quality universal primary and secondary education, building its institutional capacity, the quality and labor market responsiveness of vocational education and training, tertiary education quality and governance, and the building of a professional, adequately remunerated, civil service.

Despite significant poverty reduction, from 39% in 1994 to around 25% in 2010, [3] more inclusive and equitable growth that further reduces poverty and inequality is a priority. This is to be achieved through implementation of national development strategies fostering growth of the rural economy and small and medium-scale enterprises (SMEs). There will also be increased public investment in rural infrastructure, public works and transport, agricultural development, health, education and local service delivery, and vocational education and training linked to labor market needs, so as to create employment opportunities for a young population. Significant improvement is also needed in the governance and management of natural resources. The aim is to ensure sustainable productive rural development, the

[3] The poverty line in Cambodia is based on a World Bank benchmark of a per capita calorie requirement of 2,100 calories per day, with the composition of an underlying food bundle chosen to be representative of typical consumption patterns in Cambodia, and taking into account geographic price variations in the cost of the same food basket

attainment of livelihoods and poverty reduction goals, especially in land management policy and the administration of social and economic land concessions and exploitation of forests, fisheries and minerals. Government investment and development assistance are needed to invest in the long term capacity development and strengthening of government institutions in sectors crucial to the achievement of inclusive growth, economic diversification and poverty ruction goals. These sectors include agriculture, forests and fisheries, rural development, water resource and land management and agencies responsible for cross-border transactions in the movement of goods and people. There is also a general need for adequate remuneration of, and increased professional skills in the civil service.

In facing these development challenges Cambodia has particular strengths and weaknesses, opportunities and threats (CDRI, 2011). Its strengths include a sustained period of peace, political stability and security; high growth rates over the past fifteen years due to structural policy transformation from a planned to an open market economy; effective macroeconomic management in response to crises; strong government-private sector consultation and responsiveness; its geo-political location in GMS-ASEAN-East Asia; a relative abundance of natural resources; a steady inflow of foreign direct investment; an adaptable and open export-oriented economy; and a young, growing population and middle class. Its weaknesses include significant human resource capacity constraints and low education/skills level of the workforce; pronounced dependency on foreign aid, and uneven aid effectiveness; a complex 'hybrid democracy' with weak democratic institutions; a high degree of dollarization; a low degree of economic diversification and high vulnerability to shocks; increasing inequality among income groups and an urban-rural divide; underdeveloped economic infrastructure; diffused corruption across sectors; highly concentrated land ownership and community conflict over land management and the administration of economic land concessions; and the lack of a mature and effective civil society.

Cambodia's opportunities include its privileged ASEAN status as a CLMV country; sustained development prospects as part of GMS and the benefits of sub-regional and regional economic integration in ASEAN and East Asia; the strong presence of Chinese investment and earmarked infrastructure development projects;

increasing investment from Japan, South Korea and Vietnam, particularly in agri-business and light industry; the prospects of serving huge neighboring Asian markets, especially China, and enlargement of export markets due to realization of an ASEAN Economic Community. There are also opportunities for further expansion of the tourism industry based on increasing income levels in neighboring countries. In the longer term there are potential revenues from oil and gas exploitation. However Cambodia also faces some potential threats. These include the prospect of political instability in neighboring countries with potential cross-border consequences; slow growth in Cambodia's major export markets due to double dip recession after the global financial crisis; the potential indirect impact of any significant slowing of China's growth and development; the impact of climate change, environmental degradation and the increased frequency and intensity of natural disasters, especially floods, all of which damage rural livelihoods and agricultural development; and the rising inequality and constraints on the absorption of young people into the labor market.

Broadly agreed policy priorities for the Cambodian government, the private sector and international development partners include; diversification of the economy through expansion of current sources of growth; further development of the agricultural sector; expansion of industrial manufacturing; diversification of export products and markets; and delivering more inclusive growth through national socio-economic development strategies that achieve growth and poverty reduction goals but reverse increasing inequality. The maintenance of a stable macroeconomic environment will continue to be critical through; reigning in inflation, ensuring cautious and disciplined use of any future revenue from oil and gas sectors; keeping close track on the evolution of the real estate and banking sectors; and ensuring the capacity of the economy to absorb the large pool of new entrants to the workforce every year. Increasing revenue collection is vital, and will require; strengthening the capacity of tax administration; expanding the current domestic tax base and encouraging private informal businesses to formalize and register. Strengthening government finances so as to reduce reliance on ODA is also a priority. In the future, there may need to be consideration of the feasibility of establishing a well-managed sovereign wealth fund, if significant national income potential from the

exploitation of off-shore oil and gas resources is realized. The country must also resource its national development priorities and stimulate private sector investment in support of economic diversification, learning from the experience of other ASEAN economies. Cambodia's development prospects also call for; expansion of public investment in access to quality healthcare, education, agriculture and rural development, and transport infrastructure; development of human capital through addressing both the quality of education at all levels and the urgent need for technical and vocational education and training; and the inclusion of research as one of the missions of higher education institutions, turning them into focal points for research and development (R&D) so as to assist policy making and general technological upgrading. Investment in hard and soft infrastructure through an increase in budget allocation is necessary for building and upgrading underdeveloped rural infrastructure, including rural roads and irrigation systems. Improving production capacity and the efficiency of power generation, in order to reduce costs and expand rural electrification, are also required. As a major agricultural producer, and a still predominantly rural society, the promotion of the agricultural sector is important. Cambodia must make the most of its factor endowments such as land and labor, lift agricultural productivity and diversify its agricultural base. The government needs to deliver on its commitment to the sustainable utilization of natural resources, improving the governance of natural resources to ensure sustainable use and increase value-added. In its sub-regional and regional context, a major priority is ensuring the complementarity, mutually supportive objectives and adequate resourcing of the GMS Program and the Initiatives for ASEAN Integration. The focus should be on regional cooperation to achieve long term human resource development and institutional strengthening to 'bridge the development gap' in ASEAN and East Asia. Promotion of deeper regional integration, and increased private sector engagement in regional and sub-regional integration are important, together with awareness of opportunities under regional Free Trade Agreements (FTAs) and 'connectivity' initiatives.

In all of this, Cambodia's economic and strategic location in the GMS, its membership of ASEAN and its proximity to China are major assets, offering prospects for integrated GMS production networks and markets in southern China.

Linkages through GMS to other ASEAN economies provide potential for growth. Private sector development, employment and poverty reduction are possible, and there are potential exports to China – rice, rubber, cassava, maize, soya beans, minerals, with agri-business and food processing investment. Cambodia's trade and investment relationships with China, Vietnam, South Korea and Japan are deepening rapidly. It is a beneficiary of GMS and ASEAN infrastructure and 'connectivity' including major roads, railways, bridges, waterways and ports. Soft infrastructure is lagging behind hard infrastructure, however, with impacts on cross-border movement of people and goods, and problems in transport and trade facilitation.

There is strong commitment in the Cambodian system to formation of the Asian Economic Community (AEC) in 2015 but there are concerns that it will not be fully achieved. Cambodia is ranked 3rd in ASEAN on AEC 'preparedness' on key deliverables, but there are still unresolved issues on cross-border transactions and LDC-specific provisions. Preparedness for AEC is more associated with the general openness of the Cambodian economy and World Trade Organization (WTO) compliance than specific AEC compliance. However there is very uneven to poor private sector engagement in ASEAN processes, and a lack of awareness of the benefits and opportunities of ASEAN FTAs and of regional integration. Also, the complex set of initiatives to promote 'connectivity' and socio-economic development, and to reduce poverty in ASEAN and the GMS, are a challenge for the capacity of Cambodian institutions and its private sector.

Cambodia's strong and deepening relationship with China is fundamental to its future socio-economic development. There has been significant recent expansion of trade, tourism, investment and development cooperation. China is now Cambodia's leading source of both investment and development assistance, and there is a strong and deepening political, economic and strategic relationship, but Cambodia balances this key relationship with good relations with other major regional players such as Japan, South Korea, Vietnam, United States and Australia. The Cambodian government and private sector's focus is now on building an economy more integrated into its region, while remaining open to international markets and trade and investment relationships. Cambodia's deeper integration in the GMS, ASEAN and ASEAN+3 (China, South Korea and Japan, or East Asia), through regional free

trade agreements and development cooperation is providing opportunities for intra-regional trade and investment, production and market networks and value chains, and access for Cambodian exports to an increasingly prosperous regional consumer market.

2.2. The Other CLMVs – Laos, Myanmar, Vietnam

2.2.1. Laos (Leeber and Phoupet 2011)

Laos has also experienced recent rapid growth, at an average of 7.9% over 2006-10, with GDP per capita increasing from approximately USD 325 in 2000 to USD 1086 in 2010. GDP composition has changed, with a decline in agriculture, and increases in the industrial and service sectors. Laos aspires to further sustained high GDP growth, with graduation to middle income status over the next decade. It is aiming for significant reform of its economic structure; further progress in poverty alleviation; and improved quality of life for its people through better access to education, health care, social safety nets and public services; infrastructure development; political and socio-economic stability; and environmental sustainability.

Its strengths include a long term development strategy with a clear vision up to 2020; a clear action plan, the 7th National Social Development Plan (NSEDP-VII) until 2015; political stability; abundant natural resources such as minerals, water, forests, and arable land; its strategic location as the hub of the GMS and as a land-locked country between two big markets, China and ASEAN, and other large Asian neighbors. Its weaknesses include limited human resources and low institutional capacity; poor infrastructure development and high transportation costs; low domestic financial resources; and dependency on foreign direct investment (FDI) and ODA as major capital sources.

Laos's opportunities in meeting its development challenges include the strong support of multilateral and bilateral development partners for the government's long term development strategy framework; initiatives for regional cooperation (ASEAN and the GMS), which promote regional economic integration and diversification; expanding markets in neighboring countries, particularly Thailand, Vietnam, China and other ASEAN countries; and the globalization of relatively free flows of trade,

investment capital, labor, and technology transfer. Its threats include the over-reliance of government budgets on ODA, and the likely reduction of ODA following its graduation from LDC to middle income status; the narrow base of the economy and its vulnerability to external shocks; the challenge of competition pressures with members of the ASEAN Free Trade Area (AFTA), ASEAN+1+2 +3…+6 and the WTO after 2015; and the potential impact of climate change and the need for adaptation.

In achieving its development aspirations Laos's major policy challenges include how to sustain rapid economic growth; how to foster human capital; how to ensure environmental sustainability; how to modernize economic infrastructure and reduce transportation costs; how to increase firm competitiveness and labor productivity; and how to ensure more equitable socio-economic development and strengthen social safety nets.

2.2.2. Myanmar (Verbiest and Tin 2011)

Myanmar, despite its enormous economic potential, remains the poorest country in ASEAN with a per capita GDP estimated at around USD 821, a national poverty incidence estimated at around 32%, complex ethnic diversity and tensions, and a ranking of 132 out of 169 on the UN's Human Development Index. While the rapid pace of political change and reform in recent times, and the associated easing or lifting of economic and other sanctions, provides optimism for Myanmar's future development, major challenges remain. They include; the maintenance of peace and stability; fundamental strengthening of institutions and governance systems; diversification and development of the agriculture sector; fostering human capital, particularly in terms of education and health; economic diversification, beyond agriculture and natural resource exploitation, to the industrial sector; and maximizing growth prospects through ASEAN and broader regional integration.

Myanmar's strengths include abundant natural resources – agriculture, gas, oil, minerals, and precious stones; significant foreign exchange reserves; limited population pressure on land with a relatively high land-population ratio, and half of arable land currently fallow; an abundant and trainable labor force with basic education; its excellent connections to major Asian markers – ASEAN, China and India; its strategic location and geo-political importance for regional connectivity as

a ‘tri-junction’ of East, Southeast and South Asia; and the benefits of being a latecomer in development with the potential to ‘leapfrog’ development stages. Its weaknesses include macroeconomic instability associated with weak institutions and policy inconsistency; low savings and investment rates; lack of implementation of institutional capacity building and governance; an underdeveloped banking and financial system; high dependency on natural resource extraction and agriculture; poor infrastructure, and institutional and business environment; high poverty rate, low HDI and high out-migration rate; lack of comprehensive approach and appropriate funding to human capital formation; and the absence of accurate and reliable economic data to provide diagnostics of the economy.

Myanmar does, however, have significant opportunities, including its potential role as a regional hub for multi-nodal transportation and a potential supply route by-passing the Straits of Malacca; its position as the sole land-bridge between the two giant economies of China and India; high potential to be a ‘food basket’ and energy source for Asia; and huge industrial potential for FDI from ASEAN and global supply chains. Threats include the lack of balance between economic growth and environmental sustainability; the danger of ‘Dutch Disease’ in managing the benefits of natural resource exploitation without currency appreciation leading to lack of competitiveness in other sectors of the economy; social and spatial inequality; increased corruption; political instability and ethnic insurgency; international pressures and renewal of economic sanctions; and managing the strong influence of China.

Along with the other CLMVs, but to a more significant extent, Myanmar’s development policy priorities focus on; institutional and legal reform and associated capacity development; sound macroeconomic management based on the establishment of reliable national socio-economic data; specific industry sector policies; infrastructure and ‘connectivity’; social policy on education, health and social protection; and ethnic reconciliation.

2.2.3. Vietnam (Vo and Nguyen 2011)

Since the 1980s, Vietnam has undergone major economic reform, enjoyed high levels of growth averaging around 7% per annum and very significant poverty reduction from 37.4 % in 1998 to just over 12% in 2010. Its HDI ranking, however,

is still only above Cambodia, Laos and Myanmar in ASEAN. Its major development challenges include; the inadequacy of institutions; inadequate infrastructure; inadequate human resources; the consequences of rapid urbanization; environmental degradation; the development of sustainable social safety nets; and its successful ASEAN and broader East Asian integration.

Vietnam's strengths include; its stable socio-political environment; favorable investment and business climate; a large pool of human resources; its geographical location in Southeast and East Asia – dynamic regions favorable for growth and development; deepened regional development cooperation; high savings rates; GMS, ASEAN and East Asian integration; and its integration in regional production networks. Its weaknesses include; a shortage of institutional capacity; underdeveloped infrastructure; insufficient human resource quality and development; state owned enterprise (SOE) inefficiency; inefficient public investment; and an under-developed financial system.

Vietnam's opportunities include; global and regional trade expansion; regional economic integration; its relatively small adjustment costs in response to climate change and adverse environmental impacts; and the rise of China and India as impetuses for domestic reforms to enhance competitiveness. Its threats include; the risk of macro-economic instability; rising inflation; bad debts in relation to finance and property speculation; the possible impact of the current wave of FTAs in the region on its comparative advantage, There is also the risk posed by the current structure of Vietnam's exports to China which rely heavily on natural resource and labor intensive products. A deeper engagement in a production network with China may mean that Vietnamese enterprises fall into lower production nodes with limited value-adding and the prospect of Vietnam falling into a middle income trap with negative economic and social consequences.

Vietnam's development policy priorities focus on; domestic reforms in response to regional economic integration; improving the quality of institutions and human resource development; private sector development; the formulation and implementation of industrial policy to create domestic value and build comparative advantage; harmonization of economic development across the regions of Vietnam; and the enhancement of social progress and environmental protection.

2.3. The CLMVs: Some Shared Development Aspirations and Priority Needs

This brief overview of the major socio-economic development issues, challenges, strengths, weaknesses, opportunities and threats, and resulting policy reform priorities for each of the CLMVs, despite their significant country-specific differences, helps identify some shared development aspirations and priority needs. These priorities include:

- Hard and Soft Infrastructure for Connectivity;
- Economic Diversification and Private Sector Development;
- Agricultural Development, Diversification, and Productivity
- Trade, Transport and Investment Facilitation;
- Regional Integration and the Capacity to Effectively Implement Related Domestic Policy in relation to the Cross-Border Movement of Goods and People
- Human Resource Development, particularly education and labor market responsive skills development
- Institutional Capacity Development and Systems of Governance
- Improved Aid Effectiveness and Graduation from Aid Dependency.

2.4. Learning from East Asia's Newly Industrialized Economies and Vietnam – Key Factors That Could Inform CLM Growth and Development Policies and Strategies to Narrow the Development Gap

As regional development 'latecomers', the CLMs can learn valuable lessons from other more developed East Asian economies and national systems, including Vietnam, in achieving their aspirations high levels of inclusive sustainable growth, to progress from low to middle income economy status, and to greatly improve HDI outcomes over the next decade. Several key factors can be identified that would be useful to the CLMs in creating effective development strategies and priorities:

(i) The openness of their economies, and a focus on creating an enabling private sector environment. This will encourage entrepreneurialism, SME development, competitiveness, and trade and investment facilitation in sectors where there is the greatest potential for comparative advantage;

(ii) Priority investment in human resource development from national budgets and ODA - education (at all levels but with a particular emphasis on labor market responsive vocational education and training) and health;

(iii) Investment in agricultural development, diversification and agribusiness that creates and takes advantage of sub-regional and regional value chains;
(iv) Governance of natural resources - land, forests and minerals - to support national development goals, promote economic value adding and attract productive investment;
(v) Investment in hard and soft infrastructure to support national and cross-border economic activity and access to affordable energy;
(vi) Institutional strengthening in key areas for socio-economic development, including macro-economic management, trade and investment, education and health;
(vii) Assertive national ownership and coordination of development assistance clearly linked to priority national development goals and priorities, with transparency and accountability but limited conditionality; and
(viii) A commitment to sub-regional and regional economic cooperation, and integration priorities, while remaining open to global trade and investment opportunities.

The ADB's lead economist, Jay Menon, in his forthcoming paper on narrowing the development divide in ASEAN, will emphasize that national development policy-making and reform, rather than an over-reliance on development assistance, will be critical to both the prospects for sustainable and equitable growth in the CLMVs, and also to any real prospect of narrowing the divide.

Members have committed to realizing an ASEAN Economic Community (AEC) by 2015. The third pillar of the AEC Blueprint is on Equitable Economic Development, which aims to 'address the development divide and accelerate integration of Cambodia, Laos, Myanmar and Vietnam (the CLMVs) through the Initiative for ASEAN Integration (IAI) and other regional initiatives'. (para 7). The reality is that neither the IAI nor other regional initiatives will have the resources, or the ability, to address the development divide. While aid can play a part, the solution must come from within the countries themselves. This will necessarily involve the adoption of policies that promote rapid economic development and economic convergence (Menon, 2012)

He cites three critical factors, based on the experience of Asia's 'Newly Industrialized Economies' (NIEs), that hold important lessons for the CLMVs and their reform policy priorities and institutional strengthening, and which need to be in

place before the economic 'convergence with cohesion' that must underpin effective regional integration is possible:

(i) Human capital formation – investing in access to quality primary and secondary education, combined with effective vocational and on-the-job training facilities, to enhance workforce productivity and labor market responsiveness;
(ii) A conducive investment climate and sound macroeconomic fundamentals – exploiting comparative advantage and benefiting from opportunities arising from labor-intensive light manufacturing;
(iii) The distribution of land ownership and asset inequality – ensuring a land reform policy and administration to achieve a fairer distribution of land for increasing agricultural productivity, the prevention of deforestation and elite 'land grabbing', and enhancing labor market flexibility during structural transitions.

Along with these three fundamentals, Menon also stresses the role of 'behind the borders measures' if regional economic convergence is to be achieved. These would reduce trade costs through transport and trade facilitation, ensure effective labor migration, and stimulate healthy capital flows through improvements in the investment climate. All these factors rely on human resource development, governance and institutional strengthening for effective policy making and implementation.

3. The CLMVs in a Changing Regional Context: GMS, ASEAN, East Asia Roles and Linkages with Regional and Sub-regional Integration and Cooperation Processes and Institutions: Their Current Strengths and Weaknesses

3.1. The Greater Mekong Sub-region and ASEAN: Integration, Infrastructure and Connectivity

The complex but potentially very beneficial set of multilateral and bilateral initiatives and processes to promote 'connectivity', achieve socio-economic development, reduce poverty, and bridge the development gap in the GMS and

ASEAN continues to provide challenges for the CLMVs. Many elements of the 'soft' infrastructure, the legal and regulatory framework and associated institutional capacity to support cross-border movement of goods and people and promote regional economic integration, is lagging well behind the 'hard' infrastructure. The latter is progressing well, with the construction of roads, bridges, dams for hydro-power generation, and the development of sub-regional economic corridors to promote connectivity, trade and investment.

An imperative for the CLMVs are; the strategic coordination of ASEAN-GMS integration initiatives; more realistic time frames for implementation of complex reforms; and associated investment in long term institutional capacity building. The capacity building measures needed include the range of AEC 2015 plans and agreements, particularly those on transport, connectivity, trade facilitation, and customs reform. Customs reform includes elements of the ASEAN Trade in Goods Agreement (ATIGA), and the GMS Cross Border Transport Agreement. There must also be synchronicity of the Master Plan on ASEAN Connectivity with GMS connectivity initiatives and processes, and a greater awareness of and engagement in ASEAN Economic Community mechanisms and opportunities by the private sector.

The range and complexity of ASEAN-GMS institutional arrangements has serious implications for the pace and effectiveness of regional integration, and on the 'absorptive capacity' in CLMV GMS countries where institutional capacity is still building. The strategic coordination of ASEAN-GMS integration initiatives is important for these GMS countries. There do, however need to be more realistic time frames for implementation of complex reforms, and associated investment in long term institutional capacity building. Examples are the GMS Cross Border Transport Agreement and the synchronicity of the Master Plan on ASEAN Connectivity with GMS connectivity initiatives and processes. A greater awareness of, and engagement in, ASEAN Economic Community mechanisms and opportunities is also required.

3.2. ASEAN: An ASEAN Economic Community 2015 and Beyond

The ASEAN 2030 study, found that there exists a severe development divide. An analysis of its nature, and suggested strategies for its narrowing, have led to the

conception of a new ADB-ADBI-ASEAN initiative on *Supporting Equitable Economic Development in ASEAN,* which could form the basis for a broader long-term regional initiative (ADBI, 2012b). As the concept note for this initiative points out, while the CLMVs have the potential to grow faster than other ASEAN members over the next two decades, they also suffer from low or uneven institutional capacity. This affects their ability to design and implement the necessary policy reforms to transform growth potential into reality. They also need assistance with associated human resource development. Even if potentially rapid GDP growth is achieved, and their per-capita income is brought closer to the ASEAN average, a substantial development 'gap' or 'divide' will remain. This has negative implications for progress towards an ASEAN Economic Community, for intra-ASEAN competitiveness, trade and investment, and for progress towards the associated socio-cultural and political-security communities.

The ADB-ADBI-ASEAN initiative reflects the findings of the ASEAN 2030 study on CLMV priority needs, focusing on programs geared to the structuring of macroeconomic policy frameworks, increasing productivity and competitiveness of their primary, secondary and tertiary sectors, and improved effectiveness of institutions and governance frameworks. Underpinning all this is the imperative of substantial skills upgrading. Human resource formation is a critical factor in achieving the necessary policy reforms and socio-economic development outcomes.

4. ODA and the 'Development Paradigm': The Case for Change

Official Development Assistance (ODA) has made a significant contribution to the socio-economic development of many of the countries of East Asia, from the 'success stories' of the NIEs to the CLMVs. While the CLMVs all aspire to graduation from aid dependency, putting greater emphasis on private sector development, trade and investment as drivers of growth and development, realistically they will remain to varying degrees significantly dependent on ODA to achieve their development goals for the foreseeable future. The issue of aid effectiveness is critical to their development success.

Despite the commitment of ODA recipient countries and their development partners to The Paris Declaration on Aid Effectiveness (OECD, 2005) there is still very uneven progress in donor harmonization and coordination, and the elimination of competition, duplication, and waste. Although there has been some progress in the achievement of 'sector-wide approaches' to ODA delivery, there has been less discernible change in ODA delivery practice and very limited progress on achievement of the 2005 Paris Declaration on Aid Effectiveness. A recently published study on the impact of the Paris Declaration (Nunnenkamp, *et al*. 2011), analyzing the programs of 19 major international donors (17 major OECD members, the EU and the World Bank) found that, contrary to donor commitments to better harmonize and specialize their country and sector priorities, the degree of specialization for the majority of donors had hardly changed at all and the degree of overlap actually rose for all 19 donors. Three factors were held responsible for this lack of progress. These were; the politics of development aid and the need to demonstrate involvement in projects that are highly visible and whose value can be 'sold' to domestic political constituencies; self-interest and foreign policy concerns, with reluctance to accept an international agenda that limits national room to maneuver on ideological or policy issues; and the growing number of actors or 'non-traditional donors' involved in development cooperation. Significant new development partners like China are not involved in existing coordination regimes, which raises questions as to the likely future viability and influence of existing development coordination mechanisms such as the OECD's Development Advisory Committee (DAC), and even the possibility of an alternative multilateral institution to the World Bank mooted by Brazil, Russia, India and China (the BRICs).

Cambodia was chosen as a case study for the global evaluation of the implementation and impact of the Paris Declaration, to be reported to the Busan High Level Forum in South Korea in November 2011. The evaluation study, undertaken in 2010, provided useful and sobering evidence of the development results achieved, and any improvements in development practice as a result of the Declaration and its implementation. (CDC-CRDB, 2011).

On the positive side, the study found; that the Declaration had contributed to setting a useful context for development priorities and strategies at the policy level

and in securing development partnerships; that the Cambodian government had increased its leadership capacity and ownership of development cooperation efforts; that the Declaration had generally contributed positively to improving aid effectiveness in Cambodia; that the style of development cooperation embodied in the Declaration which already existed in Cambodia had been strengthened by the Declaration; and that there were positive aspects to Cambodia's engagement with non-traditional and emerging donors, particularly China.

However the study also found many continuing negative or challenging features that constrained improved aid effectiveness. these included; incomplete and uneven progress on donor alignment of programs and resources, especially on country systems, with few development partners prepared to raise their fiduciary risk tolerance levels; aid coordination mechanisms, although established, remained fragmented with donor headquarter requirements dominant over local harmonization incentives; increasing managing for results at sector program level but few donor programs showing evidence of linking work to outcome-level results; progress in mutual accountability at the national level but limited at the sector and project investment level; achievement of country ownership, which remained very uneven, depended on the country's capacity and the willingness of development partners to support capacity building in any systematic way; limited progress in reduction of the burden of aid management for all concerned, with the burden remaining high; the need for government to continue to assert its leadership and for civil society organizations (CSOs) to increase their involvement and participation in national networks; and a continuing imperative for donor countries and agencies to work more effectively together in sector-wide approaches with shared accountability for the achievement of development results.

In recent years there has been much talk, process and paper generated in response to the Paris Declaration and the aid effectiveness agenda. However, from the vantage point of an aid-dependent country like Cambodia, it is difficult to discern real fundamental changes in practice by the major traditional multilateral and bilateral development partners, Competition, duplication and variance in policy and practice remain features of the complex aid landscape. However there are some emerging signs of change. The mixed outcomes of the Busan High Level Forum

demonstrated the changing international development paradigm since the global financial crisis and during continuing economic uncertainty in Europe and the United States, and the increasing role of powerful emerging economies and 'non-traditional donors', particularly China, India and Brazil. While the 'BRICs' endorsed the forum's final statement - the 'Busan Partnership for Effective Development Cooperation'- they negotiated an exemption for emerging markets from some of the previously defined obligations of earlier agreements. The statement included a provision that 'the nature, modalities and responsibilities that apply to South-South cooperation differ from those that apply to North-South cooperation' while inviting emerging market governments to apply the earlier principles voluntarily. The statement defines four laudable principles for development cooperation, namely; ownership of development priorities by developing countries; a focus on results; transparency and accountability between donors, recipients and other stakeholders such as civil society and the private sector; and inclusive development partnerships.

In general, over the past decade, in the CLMVs and elsewhere, much of the ODA delivered to less developed nations has been too 'supply driven' rather than 'demand driven', and not reflective enough of local initiative and ownership. 'Short-termism' in ODA commitments and delivery, with associated country program design, remains a constraining factor in aid effectiveness. Too often we see a failure or incapacity to invest in the long term strengthening of local institutions, and examples of ideological and institutional 'favoritism' in the choice of institutions where major investment is to be made. There remains an over-reliance on expensive international consultants and technical advisers, and often short-term, rather than long term, investment in building capacity and ownership of local institutions. This practice constitutes capacity substitution rather than capacity development, and entrenches dependency.

Many of the development cooperation management challenges, faced by aid-dependent least developed countries, flow from the fact that international development cooperation is a very large and powerful multi-billion dollar 'industry', until relatively recently dominated by the developed nations and the multilateral development agencies they control. Their own bilateral development agencies are also players, together with consulting companies and individual consultants, many of

whom are former employees of those development agencies, and the academic consulting arms of universities and research institutions facing income-generating imperatives. This development 'industry', as international development policy and fashion changes, also regularly creates lucrative sub-industries, including over the past two decades for example, sub-industries on governance, gender, capacity development and, most recently, aid effectiveness itself. Any new model for regional economic and development cooperation in East Asia, if it is to address the needs of the CLMVs, and contribute to narrowing the development divide, will need to address this fundamental issue, particularly in relation to long-term human resource and institutional capacity development.

5. Human Resource and Institutional Capacity Development: Fundamental Building Blocks for Economic Inclusion, Equitable Development and Regional Integration- Some Lessons Learned

As discussed above, one of the most pressing unresolved challenges in regional economic integration and development cooperation, particularly for the CLMVs, is the issue of 'institutional capacity building or development', what it really means, how it can be achieved, and what it means for development cooperation design. Other issues are its focus on priority institutions critical to the achievement of key national development goals, and its management and resourcing. These issues have very significant implications for how we see, for example, the role of technical assistance. They imply a move away from short-medium term technical assistance or training, to deeper longer term institutional capacity building, more selectively utilizing experts who actually have a demonstrated capacity and commitment to transfer skills and knowledge, to share relevant lessons learned elsewhere on the region, and to foster the talents of local populations in their local economic, political, social, and cultural contexts. This would involve quite radical change.

The Cambodian experience over the past two decades suggests that effective institutional capacity development involves a combination of at least the following elements:

- The integration of capacity development and training as one component, within the context of long-term institutional strategic planning and policy making, organizational development and continuous learning;
- Institutional needs analysis, design and strengthening;
- The upgrading of educational and professional qualifications and skills by means of postgraduate education, professional development and training programs;
- The provision of consistent high quality expert technical advice, knowledge and skills transfer by people with deep local knowledge, experience and sensitivity to local needs;
- The value of longer term institutional collaboration between weaker and stronger research institutions, particularly in the countries of our region (ASEAN, China, South Korea and Japan) where longer term economic and development relationships will lie, including long term collaborative research, technical advice and support, and professional development.

The challenge of capacity building for key local institutions in developing countries should be located within this broader institutional context, but particularly so in LDCs, where institutions are often weak, and one of the major objectives of development assistance is their strengthening. These principles, while often reflected in development partner policy statements, are seldom reflected in the design of donor-driven development programs and projects, particularly in relation to training initiatives. The recent OECD Development Cooperation Working Paper, *Training and Beyond: Seeking Better Practices for Capacity Development* (Pearson, 2011), demonstrated an emerging consensus in the international development community itself on this issue:

- Training should not be seen as synonymous with capacity development, even though it can be an important component if it is located in a broader capacity development strategy and context – individual, institutional and sectoral;
- Training individuals is rarely an adequate capacity development response in itself, but is most effective as only one component of institutional capacity development;
- Training must be located within the capacity development and strengthening of institutional processes and systems that support learning;
- Sustainable capacity development is long term; short term activities like training must be located in longer term capacity development strategies and goals if they are to be effective. They should ideally be long term programs

rather than short term projects, and be set within long term collaborative institutional relationships;

- Training by international development agencies has often been of poor quality, inappropriately used, and poorly implemented, with limited long term individual and institutional benefit.

Why focus on this issue of capacity development, in the CLMVs, and their broader East Asian context? Because it remains a critical issue for any more effective approach to development cooperation in East Asia. Better outcomes in institutional and human resource capacity development are needed, and these can best be achieved through a regional approach.

6. Toward a New Development Model for East Asia: What the ASEAN LDCs Need from It

If there is to be a new approach to regional economic and development cooperation, what would the CLMVs most need from it? As this writer argued in an earlier paper (Strange, 2006) presented to the 2006 Korea Institute for International Economic Policy (KIEP) East Asian Institutes Forum, such a regional approach should reflect the following features:

- a greater respect for and sensitivity to local needs and local ownership;
- a reduction in overt or covert conditionality in the provision of development assistance;
- a focus on long-term institution building and capacity development; a more sophisticated understanding of the complexity of anti-corruption and governance strategies in different systems, and their role in poverty reduction and sustainable development;
- 'long-termism' in ODA design and delivery; a more effective role for ODA-private sector partnerships;
- a greater respect for and mobilization of local experience and expertise, and the sharing and developing of solutions and regional models;
- and very importantly, the establishment of long-term collaborative institutional partnerships between governments, the private sector, education, policy and research institutions, and civil society organizations in the East

> Asian region - all useful building blocks for regional development cooperation, but also all building blocks for a future regional community.

Of particular importance for the CLMVs would be; the more effective linkage of national, sub-regional and regional development strategies; cooperation with and assistance from ASEAN and ASEAN+ regional economic cooperation and integration mechanisms and initiatives; long term partnerships and investment in infrastructure, human resource development, education and health, and private sector development; a focus on the strengthening of key institutions; learning from other recent East Asian development success stories and not being driven by ideology; avoiding institutional design and development models imported from or imposed by Western-dominated agencies and institutions; and linked to regional integration, trade and investment facilitation and private sector development cooperation mechanisms and resources.

The already strong and deepening engagement of China in the GMS's LDCs is an increasingly important factor in the current and future character of regional integration and cooperation. China is now, for example, Cambodia's major source of both development assistance and foreign direct investment. China has a similarly deepening engagement and influence with Laos and Myanmar, both bilaterally, and through its significantly increased financial contribution to the ADB's GMS program. This will have fundamental implications for economic, political and security issues in ASEAN, given the possible role of the Greater Mekong Sub-region as the bridge between Southeast and Northeast Asia.

If ASEAN's regional integration aspirations, according to the ASEAN Charter, are to be realized, ASEAN LDCs need GMS, ASEAN & ASEAN + 3 partnerships; to deliver on the ASEAN charter commitment "to alleviate poverty and narrow the development gap within ASEAN through mutual assistance and cooperation"; as agricultural producers and potential food processors to better exploit the real and potential benefits of ASEAN + China/Korea/Japan FTAs, especially provisions like the Early Harvest Program in the ASEAN-China FTA,; and to promote awareness and engagement of the private sector in the ASEAN Economic Community, GMS and broader East Asian 'connectivity' and economic integration opportunities and processes. Related to this will be the importance of ensuring the coordination and

synchronization of GMS-ASEAN-East Asian development cooperation, and regional integration processes, to include a focus on sustained growth and 'narrowing the development gap'. This will call for associated regional investment in long-term institutional capacity development in the LDCs (Cambodia, Laos and Myanmar. This could be 'transformational' for these economically and strategically important smaller ASEAN economies.

7. Conclusion: The Political Economy of a New Economic and Development Cooperation Model for East Asia and its Benefits for Smaller Less Developed Economies – Some Policy Priorities and Recommendations

Enhanced regional development cooperation, as a support for and compliment to regional economic growth and integration, provides a real opportunity for region and community building in East Asia, and real benefits for the ASEAN smaller less developed economies. Driven by the private sector through enterprise, investment and trade, within a supportive government policy environment,. it would enable the developing nations of the region, particularly the LDCs, to genuinely drive their own development priorities and programs. The LDCs are the most aid-dependent economies in the region, but could develop away from aid in partnership with their more developed East Asian neighbors. , They would need to ensure real local ownership of development strategies and outcomes, whilst learning from the experiences of their neighbors, and drawing on regional technical and entrepreneurial expertise. This know-how would be sensitive and relevant to local conditions and politico-economic systems.

The 2009 Final Report on EAFTA Phase II Study: Desirable and Feasible Option for an East Asia FTA (Lee, *et al.* 2009), specifically addressed this issue. It pointed out that 'For the efforts to narrow the development gap among East Asian countries, myriad development cooperation projects have either been implemented or are being carried out or have been agreed upon' with wide sectoral coverage. It noted, however, that 'The spatial and sectoral distribution of development cooperation in East Asia appears to be too widespread to produce meaningful effects on a lasting

basis'. To address this, the report recommended that an optimal EAFTA should be comprehensive in scope, including all the existing cooperation efforts in the region. In its early stages, however, it would need to include specific cooperation programs directly linked to Trade and Investment Facilitation (TIF), to ensure their effective implementation, so as to enable less developed countries to fully utilize an EAFTA. The recent commencement of negotiations between China, Japan and South Korea on a free trade agreement, which would then have the potential to 'dock' with ASEAN as the basis for an EAFTA, with the complex challenges it presents, will have major implications for the future feasibility and momentum of an EAFTA, and for its capacity to integrate regional economic and development cooperation provisions, commitments and resources.

While this focus on trade and investment facilitation remains a major priority, along with the promotion of intra-regional trade and investment following the GFC and its aftermath, if it is to be effective for the region and for the CLMVs, it will need to be supported by inter-related development cooperation initiatives on:

- Hard and soft infrastructure development and 'connectivity', particularly local institutional capacity strengthening of carefully targeted key national agencies involved in TIF, the cross-border movement of goods and people, and the creation of a positive environment for private sector development and employment creation;
- A greater investment in education at all levels. Priorities would be to improve retention rates at primary and secondary levels, to upgrade tertiary and vocational education and training in the light of local labor market needs, and to ensure the provision of effective health-care systems to enable the achievement of education goals;
- Intra-regional labor movement policy and administration;
- Land management policies to promote productive land use for agricultural diversification and productivity, and the promotion of agribusiness and light industry;
- All strategic components of more inclusive growth and the narrowing of the development divide and promoting competitiveness in ASEAN and East Asia.

The role of regional trade and economic cooperation and in particular the key roles of Japan, China, India and South Korea, in helping to build 'a durable economic

and trade alliance that could lead the world' are vital. This was emphasized most recently in a statement to the Nikkei Summit in Tokyo in June 2012 ,by the outgoing ASEAN Secretary General, Surin Pitsuwan, in promoting the concept of a new regional mechanism- a 'Regional Comprehensive Economic Partnership (RCEP)- that had been initiated at the ASEAN summit in Bali in 2011(Bangkok Post, 2012). This commitment was also reflected in the statement of the 2012 ASEAN Summit, which committed ASEAN, amongst other things, to:

'Further enhance ASEAN's relations with both FTA and Economic Partners and Dialogue partners to deepen economic integration based on mutual interest, transparency and best practice. Recognizing the benefits of sound and sustainable economic relations, ASEAN will also engage its FTA partners through new initiatives such as the ASEAN Framework for Regional Comprehensive Economic Partnership and adhering to the work plan which will broaden and deepen ASEAN's economic relations with the global community. (Phnom Penh Declaration on ASEAN April 2012)

The difficult question is whether there is sufficient political will, shared regional and national self-interest, and commitment amongst the leadership of the developed and developing nations of ASEAN and broader East Asia, on how this might be achieved. This could be through existing or innovative new regional institutions and processes. It is also not clear what changing global and regional economic environments and power relations will mean for the future architecture of the East Asian region, and what the role of regional economic and development cooperation will be.

8. Some Policy Priorities and Recommendations

(i) CLMV Development Priorities. To achieve more inclusive growth and sustainable development, and narrow the development divide in ASEAN and East Asia, the CLMVs, their private sectors and development partners must focus on hard and soft infrastructure for connectivity; economic diversification and private sector development; agricultural development, diversification and productivity; trade, transport and investment facilitation; regional integration and the capacity to implement domestic policy for the

cross-border movement of goods, services and people, particularly for education and labor market responsive skills development; institutional strengthening and governance; aid effectiveness and graduation from aid dependency.

(ii) Lessons from the Region- Development Policy Focus. As 'latecomers', learning from the development experiences of other successful regional economies, particularly the NIEs, the CLMVs need to focus on the following reform policies for regional economic convergence and cohesion; human capital formation; a conducive investment climate and sound macroeconomic fundamentals; distribution of land ownership and mitigation of asset inequality.

(iii) GMS-ASEAN-ASEAN+3- Coordinated Priorities for Development Cooperation. The strategic coordination of GMS, ASEAN and ASEAN+3 regional integration initiatives is imperative for the CLMVs. This would involve better coordination, resourcing and investment in long term reform and institutional capacity building on transport, connectivity, trade and investment facilitation and customs reforms, plus a greater awareness and engagement of their private sectors in regional integration mechanisms and their potential opportunities.

(iv) ODA – The Case for Change. To achieve better aid effectiveness and more concrete development outcomes, the provision and coordination of ODA, from both traditional and non-traditional development 'partners', must share the following features; demand rather than supply driven; strong recipient country leadership, ownership and coordination; long term program planning and implementation with integrated institutional strengthening and human resource capacity building; mutual transparency and accountability; sector-wide approaches linked directly to recipient governments' national planning strategies and priorities; limited conditionality.

(v) An Investment in Long Term CLMV Institutional Capacity Development. Quality development outcomes for the CLMVs will require the stronger integration of capacity development as a key component of long term institutional strategic planning, policy making, and organizational development in key government priority areas. These include trade and investment, private sector development and employment creation, labor market responsive vocational education and training, and sectoral development priorities. There has to be exploration of longer term institutional collaboration between weaker and stronger agencies and

institutions in ASEAN, China, Japan and South Korea and other regional development partners.

(vi) A New Development Model Responsive to CLMV Needs. To meet the needs of the CLMVs, any new model for regional economic and development cooperation should have the following features; greater respect for, and sensitivity to, local needs and local ownership; a reduction in overt or covert conditionality in the provision of development assistance; a focus on long-term institution building and capacity development; a more sophisticated understanding of the complexity of anti-corruption and governance strategies in different systems, and their role in poverty reduction and sustainable development; long-term thinking in ODA design and delivery; a more effective role for ODA-private sector partnership; a greater respect for, and mobilization of, local experience and expertise, and in the sharing and developing of solutions and regional models; and very importantly, the establishment of long-term collaborative institutional partnerships between governments, the private sector, education, policy and research institutions, and civil society organizations in the East Asian region - all useful building blocks for regional development cooperation, but also all building blocks for a future regional community.

(vii) ASEAN-ASEAN+3 Development Cooperation. To maximize benefit for the CLMVs, regional economic and development cooperation in East Asia should include; more effective linkages of national, sub-regional and regional development strategies cooperation and assistance to ASEAN and ASEAN+ regional economic cooperation and integration mechanisms and initiatives; long term partnerships and investment in infrastructure, human resource development, education and health, and private sector development; a focus on the strengthening of key institutions; learning from other recent East Asian development success stories; programs not driven by ideology, avoiding institutional design and development models imported or imposed by Western dominated agencies and institutions; and linkages to regional integration, trade and investment facilitation and private sector development cooperation mechanisms and resources.

(viii) ASEAN Charter Commitment on Narrowing the Development Gap and ASEAN-ASEAN+3 Delivery. If ASEAN's regional integration aspirations, according to the ASEAN Charter, are to be realized, ASEAN LDCs need GMS, ASEAN & ASEAN + 3 partnerships to; deliver on the ASEAN charter commitment "to alleviate poverty and narrow the development gap within ASEAN through mutual assistance and cooperation"; to better exploit the real

and potential benefits of ASEAN + China/Korea/Japan FTAs, especially provisions like the Early Harvest Program in the ASEAN-China FTA, as agricultural producers and potential food processors; and promote awareness of, and engagement of the private sector in, the ASEAN Economic Community, GMS and broader East Asian 'connectivity' and economic integration opportunities and processes.

(ix) Towards an East Asia Free Trade Area and Community, with Integrated Economic and Development Cooperation. ASEAN, China, Japan and South Korea should fast-track negotiations for the establishment of an East Asia Free Trade Area as a building block for an East Asian Community. The FTA should have; integrated economic and development cooperation features focused on trade and investment facilitation, including the promotion of intra-regional trade and investment; hard and soft infrastructure development and 'connectivity', particularly local institutional capacity strengthening of carefully targeted key national agencies involved in TIF and the cross-border movement of goods and people; the creation of a positive environment for private sector development and employment creation; a greater investment in education at all levels, improving retention rates at primary and secondary levels, along with upgrading tertiary and vocational education and training in response to local labor market needs, plus effective health systems to enable the achievement of education goals; intra-regional labor movement policy and administration; land management policy to promote productive land use for agricultural diversification and productivity, and the promotion of agribusiness and light industry; and other strategic components of more inclusive growth, the narrowing of the development divide and promoting competitiveness in ASEAN and East Asia.

(x) From ASEAN Regional Comprehensive Economic Partnership to East Asian Convergence and Development Fund. The Regional Comprehensive Economic Partnership (RCEP) that was initiated at the ASEAN summit in Bali in 2011 to facilitate and resource regional economic and development cooperation, and which was recommitted to by ASEAN leaders at the 2012 ASEAN Summit, should be reconfigured at the 2012-13 ASEAN+3 Summits as an ASEAN+3 or East Asian Convergence and Development Fund, as a building block for an East Asia Free Trade Area and eventual East Asian Community, involving ASEAN +3 as its core but inviting the participation and support of other ASEAN regional dialogue and development partners.

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CHAPTER 10

Moving toward an Integrated Regional FTA System in East Asia

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This chapter addresses the issue of forming a region-wide FTA in East Asia. After reviewing the current status of intra-regional trade in East Asia as well as the FTA web among East Asian countries, it underscores the rationales for a region-wide FTA in East Asia and highlights the impending challenges related to advancing its formation. On the basis of these analyses, it proposes several road maps towards a region-wide FTA in East Asia.

Keywords: Trade, Economic Integration, Free Trade Area

JEL classification: F1, F15

1. Introduction

Economic regionalism began in Europe in the 1950s and became a worldwide phenomenon in the 1990s, when many developing countries and transition economies also began moves toward regionalism. However, it was only at the turn of the century that East Asian countries started to jump aboard the Free Trade Agreement (FTA) bandwagon.

In East Asia, the regional economic integration process had mainly been driven by market forces without much help from governments. However the Asian financial crisis of 1997-8 prompted the East Asian countries to seriously consider regionalism. First, the leaders of the Association of South East Asian Nations, (ASEAN) +3 (China, Japan and Korea) gathered in Kuala Lumpur in December 1997, then the ASEAN+3 Summit Meeting became an annual event. Thus, the ASEAN+3 framework, in which East Asian countries could discuss economic cooperation issues among themselves, was gradually established.

In addition, East Asian countries began to conclude FTAs, many of them with other East Asian countries. Within a relatively short period of time, they concluded so many bilateral and plurilateral FTAs that the so-called "spaghetti bowl phenomenon"[1] has become prevalent in East Asia.

In fact, the idea of forming a region-wide FTA in East Asia first emerged in the early 2000s. The East Asia Vision Group (EAVG) recommended the establishment of an East Asian Free Trade Area (EAFTA) in a report to the leaders of ASEAN+3 in October 2001,[2] and the East Asia Study Group (EASG) also proposed the formation of an EAFTA in November 2002.[3]

There have been two major joint expert studies on the feasibility of a region-wide FTA: the EAFTA Joint Expert Group Study[4] involved experts from ASEAN+3 countries, and CEPEA (the Comprehensive Economic Partnership in East Asia)

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[1] Spaghetti bowl phenomenon or spaghetti bowl effect refers to a complication which arises from application of different rules of origin in concluding FTAs.

[2] East Asia Vision Group Report (2001).

[3] Final Report of the East Asia Study Group (2002).

[4] A Report by Joint Expert Group for Feasibility Study on EAFTA (2006); Final Report on EAFTA Phase II Study (2009).

Track II Study[5] included experts from the ASEAN+6 countries including India, Australia and New Zealand. The outcomes of their research were reported to the ASEAN+3 Economic Ministers (AEM+3) Consultations, held in Bangkok in August 2009. The Ministers welcomed the final reports of both EAFTA and CEPEA and agreed to upgrade the joint studies to government-level discussions on a region-wide FTA by forming working groups. Later, this decision was confirmed at the 12th ASEAN+3 Summit and the 4th East Asia Summit. However, since then, no real progress has been made for the establishment of a region-wide FTA in East Asia.

In the meantime, the world economy has suffered from two severe crises. The global financial crisis, considered the most serious financial crisis since the great depression, hit the world economy, affecting the advanced economies in particular. Immediately afterwards, before it had time to recover from the previous crisis, the world economy was facing a more formidable challenge. Unlike the global financial crisis, which originated in the United States, the ongoing European sovereign debt crisis involves many countries and is evolving gradually; so its negative effects on the world economy are likely to last longer.

East Asian economies are not immune to the deteriorating global economic environment. They have to face the new crisis, even though most have not entirely recovered from the previous one. East Asian economies therefore need to come up with region-wide coordinated and/or common responses in order to meet the new challenge from outside the region.

Under these circumstances, this chapter will review the current status of intra-regional trade in East Asia as well as the FTA web among East Asian countries. It will then strive to underscore the rationales for a region-wide FTA in East Asia and highlight the impending challenges related to advancing its formation, before proposing road maps to a region-wide FTA in East Asia.

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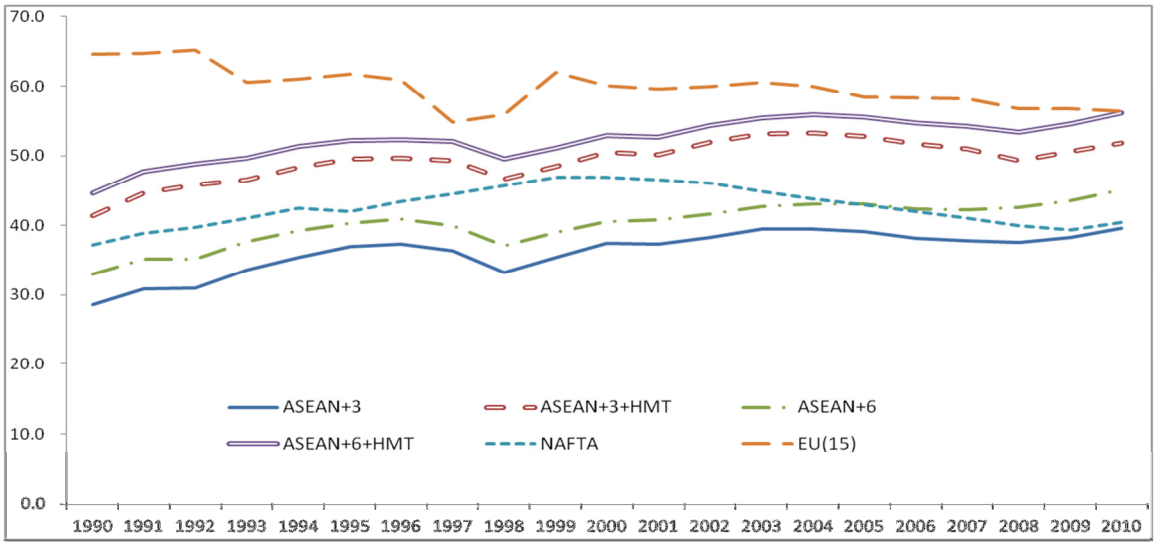
[5] Report of the Track Two Study Group on Comprehensive Economic Partnership in East Asia (CEPEA) (2008); Phase II Report of the Track Two Study Group on Comprehensive Economic Partnership in East Asia (CEPEA) (2009).

2. Current Status of Intra-regional Trade in East Asia

2.1. Trends in Intra-regional Trade in East Asia

Functional economic integration seems to have proceeded rather smoothly in East Asia. As a consequence East Asian countries are currently much more dependent on one another in terms of trade than 20 years ago. As shown in Figure 1, the share of intra-regional trade in East Asia has in general increased between 1990 and 2010. It rose from 28.6 percent in 1990 to 39.7 percent in 2010 among the ASEAN+3 countries, and from 33.0 percent to 45.1 percent among the ASEAN+6 countries during the same period.

Figure 1: Trends in Intra-regional Trade in East Asia, North America and the European Union (Unit: percent)



Source: Appendix Table 1.

Furthermore, the intra-regional trade dependency in East Asia increases even more when Hong Kong, Macao and Taiwan (HMT) are also included. The shares of intra-regional trade among ASEAN+3+HMT and ASEAN+6+HMT rose from 41.3 percent and 44.6 percent, respectively, in 1990 to 51.9 percent and 56.2 percent, respectively, in 2010.

The growing share of intra-regional trade in East Asia seems more evident when it is compared to those of NAFTA and EU. The share of intra-regional trade among the ASEAN+6 countries was lower than that of NAFTA (37.2 percent) in 1990, whereas the share of intra-regional trade of ASEAN+3 was close to that of NAFTA

(40.5 percent) in 2010. Additionally, it is notable that the share of intra-regional trade of ASEAN+6+HMT reached the level of the EU-15 (56.3 percent) in 2010. Thus, as of 2010, although the share of intra-regional trade of East Asia narrowly defined was comparable to that of NAFTA, when East Asia is broadly defined, its share of intra-regional trade was comparable to that of the EU-15.

2.2. Trade Interdependency among East Asian Countries

Despite the generally rising trend towards trade interdependency among East Asian countries, the level of trade dependency differs enormously from country to country. In 2010, the share of intra-regional trade in national total trade varied from 26.8 percent in China to 84.5 percent in Lao (among the ASEAN+3 countries), while it ranged from 29.7 percent in India to 94.3 percent in Brunei (among ASEAN+6 countries) (see Table 1).

ASEAN countries' intra-regional trade dependency is higher than that of China, Japan and Korea. Among the Northeast Asian countries, China has the lowest intra-regional trade dependency, and Korea has the highest, while Japan's intra-regional trade dependency has increased the most over the past 20 years. Australia's and New Zealand's, intra-regional trade dependencies are higher than those of the Northeast Asian countries, whereas India has the lowest intra-regional trade dependency level among the East Asian countries.

Table 1: Intra-regional Trade Dependency Rates of East Asian Countries

(Unit: percent)

	ASEAN+3		**ASEAN+6**	
	1990	**2010**	**1990**	**2010**
Brunei	81.7	77.5	83.4	94.3
Cambodia	68.6	60.8	71.6	61.5
Indonesia	51.6	58.4	55.9	66.1
Laos	85.7	84.5	86.5	85.7
Malaysia	49.6	60.6	53.8	65.6

	ASEAN+3		ASEAN+6	
	1990	**2010**	**1990**	**2010**
Myanmar	58.7	80.8	65.4	90.5
Philippines	32.8	58.1	36.1	60.3
Singapore	39.5	48.9	43.3	55.0
Thailand	42.6	50.4	45.6	56.6
Vietnam	27.8	52.7	28.6	57.2
China	21.3	26.8	23.2	32.0
Japan	21.2	41.5	26.1	47.0
Korea	29.1	45.7	32.5	50.5
Australia	-	-	42.9	63.5
India	-	-	17.7	29.7
New Zealand	-	-	44.1	58.8
East Asia	28.6	39.7	33.0	45.1

Source: Calculated from IMF (2011), *Direction of Trade Statistics*.

2.3. Export Structure of East Asian Countries in Terms of Production Process

As shown in Table 2, below, intermediate goods constitute about half of East Asian countries' total exports. Their share in intra-regional exports, however, in particular those destined for ASEAN+3 countries, is relatively higher and increasing over time, representing 61.9 percent in 2009. , Consumer goods on the other hand constitute around 22-23 percent of the total exports of East Asian countries, but there share in intra-regional exports is lower and decreasing, representing about 14 percent in 2009.

Table 2: Structures of East Asian Exports in Terms of Production Process

Destination	Production Process		ASEAN+3		ASEAN+6	
			1995	2009	1995	2009
East Asia	Intermediate	Parts	26.2	26.3	24.2	23.7
		Semi-finished	32.0	35.6	32.8	34.7
	Capital		19.3	18.3	17.9	16.9
	Consumption		17.2	14.1	17.6	13.9
EU	Intermediate	Parts	27.3	20.2	25.3	18.8
		Semi-finished	16.6	18.9	17.7	21.1
	Capital		27.1	28.3	24.9	25.7
	Consumption		26.8	31.0	28.2	31.9
US	Intermediate	Parts	33.2	19.7	32.3	19.1
		Semi-finished	10.5	13.5	11.5	14.6
	Capital		26.0	28.4	25.2	27.3
	Consumption		28.8	37.4	29.4	37.8
World	Intermediate	Parts	26.4	23.7	24.6	21.7
		Semi-finished	24.4	26.9	25.7	28.0
	Capital		22.9	24.2	21.3	22.3
	Consumption		23.1	22.2	23.6	22.4

Source: Calculated from the UN Comtrade Database.

When it comes to East Asia's exports destined for the EU and the US, the situation is quite different. In 2009, for instance, the shares of intermediate goods and consumer goods in ASEAN+3 countries' exports destined for the EU represented

39 percent and 31 percent, respectively, while those destined for the US represented 33 percent and 37 percent, respectively.

3. FTA Webs among East Asian Countries

East Asian countries have concluded many FTAs, and most of them have already gone into effect. In addition, there are quite a few FTAs under negotiation or under preparation involving East Asian countries (see Table 3).

The first Regional Trade Agreement (RTA) concluded among Asia-Pacific countries was the Asia-Pacific Trade Agreement (APTA)[6], which was signed by Bangladesh, India, Korea, Laos and Sri Lanka in 1975 and went into effect in June 1976. Then the Laos-Thailand Preferential Trading Arrangement was concluded in 1991. These two agreements were reported to the General Agreement on Tariffs and trade (GATT) as preferential trade agreements under the 'Enabling Clause'.

The ASEAN Free Trade Area (AFTA) was signed among six ASEAN countries, namely, Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand, in January 1992. Vietnam joined in 1995, Laos and Myanmar in 1997, and Cambodia in 1999. The AFTA was also reported under the Enabling Clause but was additionally reported to the GATT as an FTA.

However, it was around the turn of the century when East Asian countries joined the worldwide trend of regionalism by concluding FTAs under GATT article 24. The New Zealand-Singapore Closer Economic Partnership (ANZSCEP) went into effect in January 2001 and the Japan-Singapore Economic Agreement for a New-Age Partnership (JSEPA) went into effect in November 2002.

The countries of East Asia have subsequently concluded many FTAs among themselves as well as with non-regional countries. As shown in Table 3, most ASEAN countries, with the exception of Singapore, have concluded FTAs mostly

[6] The APTA was previously known as "the Bangkok Agreement" until it was renamed in November 2005. China joined in 2001.

with regional countries, while Korea, China, Japan as well as India and Australia have also concluded quite a few FTAs with non-regional partners.

Among the many FTAs concluded among regional countries, it is noteworthy that ASEAN have concluded FTAs with China, Korea and Japan, as well as with Australia, New Zealand and India. ASEAN signed a Trade in Goods Agreement (November 2004), a Trade in Services Agreement (January 2007) and an Investment Agreement (August 2009) with China. ASEAN also signed separately a Trade in Goods Agreement (August 2006), a Trade in Services Agreement (November 2007) and an Investment Agreement (June 2009) with Korea. With Japan, ASEAN signed the Comprehensive Economic Partnership Agreement in June 2008.[7] In addition, the ASEAN-Australia and New Zealand FTA was signed in February 2009, and the ASEAN-India Trade in Goods Agreement was signed in August 2009.[8]

Table 3: FTAs involving East Asian Countries and Regions

	Concluded		**Under Negotiation**		**Proposed**	**Total**
	Signed and in Effect	**Signed but not in Effect**	**Framework Agreement Signed/ Under Negotiation**	**Under Negotiation**		
ASEAN	6(6)	0	0	1(0)	3(2)	10
Singapore	18(13)	3	1	9	5(2)	36
Thailand	12(11)	0	3(1)	4	6(3)	25
Malaysia	10(9)	2	1	5(1)	7(3)	25
Indonesia	7(7)	2	1	4(2)	6(2)	20
Brunei	8(8)	0	2	1	5(2)	16
Philippines	7(7)	0	0	1	5(2)	13

[7] Since the ASEAN-Japan CEP does not contain anything substantial regarding trade in services and investment, it is regarded as a de facto trade in goods agreement.

[8] http://www.aseansec.org/4920.htm.

Vietnam	7(7)	1	1	1	7(3)	17
Laos	8(8)	0	0	1	3(2)	12
Myanmar	6(6)	0	1	1	3(2)	11
Cambodia	6(6)	0	0	1	3(2)	10
China	12(8)	0	2(1)	4	7(6)	25
Japan	12(9)	1	0	2(1)	8(6)	23
Korea	8(4)	1	2	5(2)	15(10)	31
Australia	8(4)	0	2(1)	8(5)	3(1)	21
New Zealand	9(8)	0	1	5(2)	4(3)	19
India	13(6)	0	4(1)	9(3)	7(2)	33
Hong Kong	2(2)	1	0	0	1	4
Taipei	5(1)	0	1	1	2(1)	9
Mongolia	0	0	0	0	3(3)	3

Note: As of January 2012; figures in parentheses are FTAs among East Asian economies.
Source: ADB (http://aric.adb.org/10.php).

Table 4: FTAs among East Asian economies

	Signed and in Effect	**Under Negotiation**	**Proposed**
ASEAN	AFTA, Australia and New Zealand, India, Japan, Korea, China		EAFTA, CEPEA
Singapore	AFTA, Korea, China, Japan, India, Australia- New Zealand, New Zealand, Australia, Korea, China, Japan, India, TPSEPA		EAFTA, CEPEA

	Signed and in Effect	Under Negotiation	Proposed
Thailand	AFTA, Korea, China, Japan, India, Australia- New Zealand, Japan, Laos, China, Australia, New Zealand	India	Korea, EAFTA, CEPEA
Malaysia	AFTA, Korea, China, Japan, India, Australia-New Zealand, Japan, India, New Zealand	Australia	Korea, EAFTA, CEPEA
Indonesia	AFTA, Korea, China, Japan, India, Australia-New Zealand, Japan	Australia, India	EAFTA, CEPEA
Brunei	AFTA, Korea, China, Japan, India, Australia- New Zealand, Japan, TPSEPA		EAFTA, CEPEA
Philippines	AFTA, Korea, China, Japan, India, Australia- New Zealand, Japan		EAFTA, CEPEA
Vietnam	AFTA, Korea, China, Japan, India, Australia- New Zealand, Japan		Korea, EAFTA, CEPEA
Laos	AFTA, Korea, China, Japan, India, Australia- New Zealand, APTA, Thailand		EAFTA, CEPEA
Myanmar	AFTA, Korea, China, Japan, India, Australia- New Zealand		EAFTA, CEPEA
Cambodia	AFTA, Korea, China, Japan, India, Australia- New Zealand		EAFTA, CEPEA

	Signed and in Effect	Under Negotiation	Proposed
China	APTA, Hong Kong, Macau, ASEAN, New Zealand, Singapore, Thailand, Taiwan	Australia	India, Korea, Mongolia, CJKFTA, EAFTA, CEPEA
Japan	Singapore, Malaysia, Philippines, Thailand, Brunei, Indonesia, ASEAN, Vietnam, India	Australia	Korea, New Zealand, Mongolia, CJKFTA, EAFTA, CEPEA
Korea	APTA, Singapore, ASEAN, India	Australia, New Zealand	Japan, China, Indonesia, Malaysia, Thailand, Vietnam, Mongolia, CJKFTA, EAFTA, CEPEA
Australia	New Zealand, Singapore, Thailand, ASEAN	China, Japan, Korea, Indonesia, Malaysia, India	CEPEA
New Zealand	Australia, Singapore, Thailand, China, ASEAN, Malaysia, TPSEPA, Hong Kong	Korea, India	Japan, CEPEA, Taipei
India	APTA, ASEAN, Singapore, Korea, Japan, Malaysia	Thailand, Australia, New Zealand, Indonesia	China, CEPEA
Hong Kong	China, New Zealand		
Taipei	China		New Zealand
Mongolia			China, Japan, Korea

Note: As of January 2012; Underlined countries are under ASEAN+1 FTAs.
Source: ADB (http://aric.adb.org/10.php).

Singapore has concluded bilateral FTAs with all regional countries, in addition to its FTAs under ASEAN. Japan has also concluded separate bilateral FTAs with the ASEAN-6 members and Vietnam. Additionally, other bilateral FTAs concluded that involve ASEAN members include the Thailand-China FTA, the Thailand-Australia FTA, the Thailand-New Zealand FTA, the Malaysia-New Zealand FTA and the Malaysia-India FTA. Among ASEAN dialogue partners, there are the Australia-New Zealand FTA, the Korea-India CEPA, the Japan-India FTA and the China-New Zealand FTA; when other economies in the region are included, the list of concluded FTAs extends to the China-Hong Kong Closer Economic Partnership Arrangement (CEPA), the China-Macao CEPA, the New Zealand-Hong Kong Closer Economic Partnership Agreement and the China-Taipei Economic Cooperation Framework Agreement (see Table 4).

In addition, the Thailand-India FTA, the Malaysia-Australia FTA, the Indonesia-Australia FTA, the Indonesia-India FTA, the China-Australia FTA, the Japan-Australia FTA, the Korea-Australia FTA, the Korea-New Zealand FTA, the Australia-India FTA and the New Zealand-India FTA are under negotiation, and many other FTAs are under preparation.[9]

Apart from these FTAs, the Trans-Pacific Strategic Economic Partnership Agreement (TPSEPA)[10] was signed among Singapore, Brunei, New Zealand and Chile in June 2005 and went into effect in May 2006. The United States, Australia, Vietnam, Peru and Malaysia have also begun negotiations with the original P4 countries (Brunei, Chile, New Zealand and Singapore) to join the Trans-Pacific Partnership (TPP).

[9] In addition, the China-Korea FTA has been under negotiation since May 2012, and the China-Japan-Korea FTA negotiation was agreed to be launched within 2012.

[10] Also called P4.

4. Rationales, Challenges and Roadmap for a Region-wide FTA in East Asia

4.1. Discussions on a Region-wide FTA in East Asia

The idea of a region-wide FTA in East Asia first emerged in October 2001, when the East Asia Vision Group (EAVG) recommended the establishment of an East Asian Free Trade Area (EAFTA) in a report to the leaders of ASEAN+3; the East Asia Study Group (EASG) also proposed the same thing in November 2002. The, ASEAN+3 Economic Ministers (AEM+3) decided to set up an expert group initiated by China to conduct a feasibility study on an EAFTA in 2004. The Joint Expert Group reported the outcome of the study to the AEM+3 in August 2006. Then, Korea proposed a follow-up in-depth study, which was welcomed by the leaders at the 10th ASEAN+3 Summit in January 2007. The outcome of the EAFTA Phase II Study was presented at the AEM+3 Consultations in Bangkok on August 15, 2009.

At the second East Asia Summit (EAS) in January 2007, however, the leaders also agreed to launch a Track Two study on Comprehensive Economic Partnership in East Asia (CEPEA), to deepen integration among EAS participants. This was initiated by the Japanese government[11]. The outcome of the Track Two study on CEPEA was also presented at the AEM+3 Consultations in Bangkok on August 15, 2009.

The Ministers welcomed the final reports of both EAFTA and CEPEA and, on the basis of their recommendations, the Ministers agreed to upgrade to government-level discussions the joint studies on a region-wide FTA in East Asia conducted by the region's experts, by establishing working groups on rules of origin, tariff nomenclature, customs-related issues, and economic cooperation. Later, this decision was confirmed at the 12th ASEAN+3 Summit and the 4th East Asia Summit.

4.2. Rationales for a Region-wide FTA in East Asia

As in other FTAs, a region-wide FTA in East Asia would produce economic

[11] Namely the ASEAN+6 countries' including India, Australia and New Zealand in addition to ASEAN+3 countries. The United States and Russia joined the Summit at the sixth EAS in October 2011.

benefits to all participating countries. However, given its regional nature, it would also provide political benefits. According to the Report by the Joint Expert Group submitted to the AEM+3 in August 2006, the rationale for an EAFTA lies firmly in both the economic and political interests of all East Asian countries. Its economic benefits would exceed those from any bilateral and sub-regional arrangements. At a minimum, an EAFTA would increase overall Gross Domestic Product (GDP) of East Asian countries by 1.2 percent.[12]. In addition, an EAFTA would increase awareness of a common destiny, institutionalize dialogues and contacts, and increase mutual understanding and cooperation.[13]

Second, the economic logic of a region-wide FTA in East Asia seems evident considering the high level of economic dependency among East Asian countries. As mentioned above, the share of intra-regional trade increased from 28.6 percent in 1990 to 39.7 percent in 2010 among the ASEAN+3 countries, while it rose from 33.0 percent to 45.1 percent among the ASEAN+6 countries during the same period.

Third, a unique rationale for a region-wide FTA in East Asia comes from the growing number of bilateral and plurilateral FTAs among East Asian countries. With differing rules of origin (ROOs) and tariff reduction/elimination schedules, the multitude of FTAs has already created a spaghetti bowl phenomenon, increasing transaction costs for intra-regional trade and raising production costs for production networks in East Asia.

Last but not least, new developments in the wake of the global financial crisis and the European fiscal crisis provide an additional rationale. In fact, the trade volumes of East Asian countries declined significantly after the global financial crisis. Moreover, the European fiscal crisis has already affected negatively not only the financial sector but also the real sectors in most East Asian countries. Due to the global financial crisis and the ongoing European fiscal crisis, the world markets (those of the EU and the US, in particular) are not likely to recover in the near future. In order to compensate for those contracted markets, East Asian countries need to increase their trade volume within the region. Thus, a region-wide FTA would help

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[12] According to the Report of the Track Two Study Group on CEPEA, a CEPEA would increase overall GDP of East Asian countries by 1.30 percent or 2.11 percent [Report of the Track Two Study Group on Comprehensive Economic Partnership in East Asia (CEPEA) (2008)].

[13] A Report by Joint Expert Group for Feasibility Study on EAFTA (2006)

enhance the resilience of the East Asian regional economy against external shocks and sustain regional economic growth.

4.3. Challenges to be Met in Forming a Region-wide FTA in East Asia

In order to realize a region-wide FTA in East Asia, East Asian countries will need to overcome existing obstacles and meet new challenges. The income gap issue is one of them. In fact, East Asian countries differ significantly in terms of the size of their populations and economies as well as in their levels of economic development. In particular, the huge gap in per capita GNI between Singapore (US$ 43,117), Japan (US$ 42,783) and Brunei (US$ 29,675), on the one hand; and Myanmar (US$ 742), Cambodia (US$ 814) and Laos (US$ 1,004), on the other; should be taken into consideration in the process of forming a region-wide FTA in East Asia (see Annex Table 2). (Data relate to 2010)

A recent pending issue impeding the process of forming a region-wide FTA in East Asia has been choosing which countries would participate in the four working groups, namely, the ASEAN+3 countries or the ASEAN+6 countries. This dilemma was also revealed in Chairman's Statements of both the 12th ASEAN+3 Summit and the 4th East Asia Summit, when they stated that "EAFTA and CEPEA could be examined and considered in parallel."

In order to break the deadlock, China and Japan agreed to establish three new working groups for trade and investment liberalization under the EAFTA and CEPEA and this joint proposal was accepted by ASEAN. Consequently, the decision was made at the 19thASEAN Summit to establish three Working Groups (WGs) in the areas of Trade in Goods, Trade in Services and Investment.[14]

Additionally, at the 19th ASEAN Summit, the ASEAN leaders agreed on the ASEAN Framework for Regional Comprehensive Economic Partnership (RCEP) to establish an ASEAN-led process by setting out principles under which ASEAN will engage interested ASEAN FTA partners in establishing an RCEP agreement, and then subsequently engage external economic partners. ASEAN thus reconfirmed its

[14] Chairman's Statement of the 19thASEAN Summit, Bali, 17 November 2011. The Working Group on Trade in Goods is supposed to follow up on the outcome of ASEAN Plus Working Groups on Rules of Origin, Tariff Nomenclature and Customs Procedures.

intention to assume a leading role in establishing a regional FTA.

However, ASEAN's efforts could run into obstacles in various forms. First, with regard to the new ASEAN + WGs, many questions have yet to be answered. How will they function differently compared to the old ones? Could China and Japan be more cooperative in the new WGs? In what way will ASEAN demonstrate its leadership in the new ASEAN + WGs? How can the balance between ASEAN centrality and other participants' rights achieved?

In addition, there remains a fundamental obstacle. Although ASEAN+1 FTAs were concluded between ASEAN and China, Korea and Japan, respectively, there is still no FTA among the three Northeast Asian countries, where the biggest trade flows in the region take place. However, a significant breakthrough was recently made in this regard. At the Trilateral Summit Meeting which was held in Beijing in May 2012, the leaders of China, Japan and Korea agreed to launch the China-Japan-Korea FTA (CJKFTA) negotiation by the end of 2012. This new development could influence enormously the formation process of a region-wide FTA in East Asia.

Lastly, the Trans-Pacific Partnership (TPP) could also affect the formation of a region-wide FTA in East Asia. As mentioned above, in addition to four original members, namely Brunei, Chile, New Zealand and Singapore; there are five countries including the US, Australia, Vietnam, Peru and Malaysia; have been negotiating to join the TPP. So, four out of ten ASEAN members and six out of 16 ASEAN+6 countries are already involved in the TPP process. In addition, Japan has many times showed its interest in joining the group. Therefore, the TPP could affect the formation of a region-wide FTA in East Asia and, could even be its competitor.

4.4. Role of a Region-wide FTA

After the global financial crisis and the European fiscal crisis, East Asia is expected to become the engine of growth for the world economy. In order to meet such high expectations, East Asia should maintain its economic dynamism by raising its economic efficiency as well as by enlarging its internal market.

In this regard, a region-wide FTA would promote intra-regional trade by lowering transaction costs. In fact, despite, perhaps also because of, the

proliferation of bilateral and plurilateral FTAs among East Asian countries, businesses in the region are not able fully to benefit from them due to the complexity of differing rules of origin in the FTAs. A region-wide FTA would mitigate this spaghetti bowl effect. In particular, a region-wide FTA with simple and liberal rules of origin would allow more businesses to benefit from the FTA by lowering the transaction costs involved in intra-regional trade. Furthermore, a region-wide FTA would create an East Asian market that would be comparable in scale to those of the EU and NAFTA.

Additionally, one of the main characteristics of East Asian economic cooperation is its substantial and growing production networks. A region-wide FTA would also greatly stimulate production networks in East Asia. It would make existing production networks more efficient by lowering their production costs.

Another key characteristic of East Asia is the huge income gaps among the countries. As mentioned earlier, in 2010, the per capita GNIs for Singapore and Japan were US$ 43,117 and US$ 42,783, respectively, while those of Myanmar and Cambodia stood at US$ 742 and US$ 814, respectively. It is a fact that there are less developed countries in East Asia, and a region-wide FTA will have to take this reality into account. They might not be able to fully realize the benefits from FTAs because of their insufficient administrative capacities. Therefore, a region-wide FTA should include some trade facilitation measures such as the ones related to rules of origin and customs procedures, backed up by appropriate funding mechanisms and adequate resources. In this way, a region-wide FTA could narrow the development gaps between East Asian countries.

Lastly, unlike bilateral or plurilateral FTAs, a region-wide FTA could increase community spirit among East Asian countries; this means that it could become a key element in the East Asian Economic Community and the first step toward building the East Asian Economic Community and the East Asian Community.

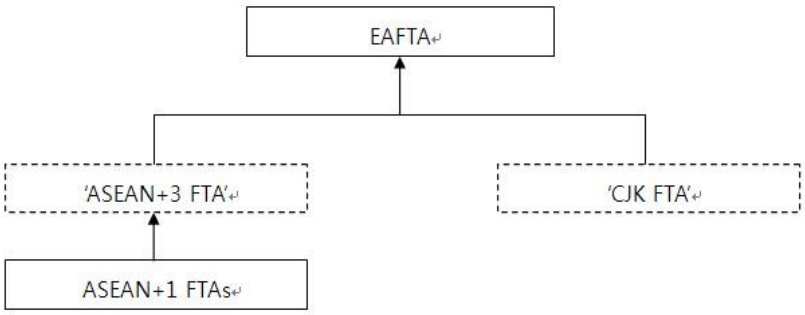
4.5. Roadmap towards a Region-wide FTA in East Asia

As mentioned earlier, many FTAs have been concluded among East Asian countries. The most important of the region-wide and ASEAN+1 FTAs are those between ASEAN and China, Japan, Korea, Australia, New Zealand and India, Given these

ASEAN+1 FTAs, it would be realistic to utilize them as the basis upon which to form a regional FTA. In fact, the leaders of the East Asian countries have noted that the ASEAN Framework for Regional Comprehensive Economic Partnership "sets out the general principles for broadening and deepening ASEAN's engagement with its FTA partners, using as a basis the ASEAN Plus One FTAs and the template that would be developed taking into account the EAFTA and CEPEA initiatives …"[15]

The key question would therefore be how to move from the group of ASEAN+1 FTAs to a region-wide FTA in East Asia. The first option would be to form an EAFTA by consolidating the three ASEAN+3 FTAs, namely those between ASEAN and China, Japan and Korea.

Figure 2: Concept of Forming an EAFTA from ASEAN+1 FTAs



As shown in Figure 2, we denominate the consolidated status of the ASEAN+1 FTAs as 'ASEAN+3 FTA.' Since the three Northeast Asian countries are also involved, in addition to ASEAN, in this process of consolidation, the 'ASEAN+3 FTA' can be regarded as an FTA at the ASEAN+3 level. But, in the absence of an FTA among the three Northeast Asian countries, it would be a conceptual FTA for ASEAN countries only.

In order to achieve an EAFTA, therefore, the consolidation of the ASEAN+1 FTAs will not suffice. An FTA arrangement will be needed between China, Japan and

[15] Chairman's Statement of the 14th ASEAN Plus Three Summit, Bali, Indonesia, 18 November 2011; Chairman's Statement of the 6th East Asia Summit, Bali, Indonesia, 19 November 2011.

Korea that we can nominate as a 'China-Japan-Korea FTA (CJK FTA)'; this could be a China-Japan-Korea FTA, a series of bilateral FTAs, or a de facto FTA among the three countries. In fact, without some kind of an FTA between the three countries, the consolidation of the ASEAN+1 FTAs would be meaningless. Only when both the 'ASEAN+3 FTA' and the 'CJK FTA' are concluded can we achieve an EAFTA by consolidating them. In fact, the EAFTA Phase II study addressed the'ASEAN+3 FTA,' and the working groups mentioned in its recommendation were also likely to deal mostly with an 'ASEAN+3 FTA.'

In fact the leaders of the three countries agreed in May 2012 on the launch of a CJK FTA negotiation within the year, and the China-Korea FTA negotiation began in May 2012. The lack of FTAs between China, Japan and Korea that constituted, in my view, the most fundamental obstacle to the formation of a region-wide regional FTA is therefore beginning to disappear.

Considering the urgent, growing need for a region-wide FTA in East Asia, due to the continuing proliferation of FTAs among East Asian countries as well as the global financial crisis and the European fiscal crisis, this option of starting with the ASEAN+3 countries seems to have a definite advantage. It is also in line with the recommendations of the EAVG, EASG and EAFTA reports. It could later be extended to the ASEAN+6 countries, and others.

The second option is forming a CEPEA by consolidation of the five existing ASEAN+1 FTAs. In this case, instead of an 'ASEAN+3 FTA,' and a 'CJK FTA, 'we would need an 'ASEAN+6 FTA' and a 'CJK FTA.' In addition, we would need a series of bilateral FTAs between China, Japan, Korea Australia, New Zealand and India. Thus, although the difference would not be enormous from the perspective of ASEAN, the whole process would be much more complex than using the EAFTA route.

The third option is to set a template for the Regional Comprehensive Economic Partnership, led by ASEAN, which countries could join separately. This might be in line with the ASEAN Framework for the RCEP. A problem might arise if ASEAN wanted to include many countries in the RCEP, because ASEAN partner members may choose to utilize bilateral FTAs among themselves and even with ASEAN countries, so that the RCEP could become a rather symbolic regional FTA along with

many effective bilateral FTAs in a multi-layered structure of FTAs

5. Policy Recommendations

There were two impediments to forming a region-wide FTA in East Asia: one was a pending issue and the other was the fundamental obstacle. The former was the initial membership issue of ASEAN+3 vs. ASEAN+6. The latter was the lack of FTAs between China, Japan and Korea. Recent new developments have, however, taken place on both fronts. On the 'fundamental obstacle' front the leaders of China, Japan and Korea agreed on the launch of the Trilateral FTA negotiation by the end of 2012, and the first China-Korea FTA negotiation took place in May 2012. On the 'pending issue' front, in order to overcome the deadlock related to initial membership China and Japan jointly proposed the three new ASEAN Plus Working Groups, while ASEAN proposed the ASEAN Framework for Regional Comprehensive Economic Partnership.

Of course, it is likely to take several years to realize a CJK FTA or a series of FTAs among the three Northeast Asian countries. One remaining problem is that it is still not clear whether these proposals could overcome the membership issue. Which countries will attend the new WGs, will they be the ASEAN+3 or the ASEAN+6 countries? And who will devise the template for the Regional Comprehensive Economic Partnership, ASEAN, ASEAN+3 or ASEAN+6?

In my view, given the increasingly urgent need for a region-wide FTA, if East Asian countries want to move forward within a relatively short period of time, they should start with the EAFTA among the ASEAN+3 countries, because it would be relatively simple, unless the three Northeast Asian countries were unable to form FTA(s) among themselves. In this case, the three Northeast Asian countries should realize the fact that a prompt realization of a CJK FTA would greatly facilitate the formation of a region-wide FTA in East Asia. Furthermore, they should also have the EAFTA in mind when they negotiate their Trilateral FTA, especially regarding the rules of origin they choose.

In order to realize a CEPEA, along with efforts to prepare its formation among

the ASEAN+6 countries, ASEAN FTA partner countries should strive to conclude bilateral FTAs among themselves. In addition to FTA(s) among the three Northeast Asian countries, the following missing links need to be completed: India-China, India-Australia, India-New Zealand, Australia-China, Australia-Japan, Australia-Korea, New Zealand-Japan and New-Zealand-Korea.

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Annex Table 1: Trends of intra-regional trade in East Asia

(Unit: Percent)

	ASEAN+3	ASEAN+3 +HMT	ASEAN+6	ASEAN+6 +HMT	NAFTA	EU(15)
1990	28.6	41.3	33.0	44.6	37.2	64.5
1991	30.9	44.6	35.2	47.8	38.9	64.7
1992	31.0	45.8	35.1	48.8	39.7	65.2
1993	33.7	46.6	37.7	49.6	41.0	60.6
1994	35.4	48.4	39.3	51.3	42.4	61.0
1995	36.9	49.6	40.3	52.2	42.0	61.7
1996	37.4	49.6	40.9	52.3	43.4	60.9
1997	36.4	49.3	39.9	52.1	44.4	54.8
1998	33.2	46.7	37.1	49.5	45.7	55.9
1999	35.4	48.5	39.0	51.1	46.8	62.0
2000	37.4	50.5	40.6	52.9	46.8	60.0
2001	37.3	50.1	40.7	52.6	46.6	59.5
2002	38.3	52.0	41.6	54.3	46.0	59.9
2003	39.4	53.1	42.7	55.4	44.8	60.6
2004	39.5	53.3	43.1	55.8	43.7	59.9
2005	39.1	52.7	43.0	55.5	43.0	58.4
2006	38.2	51.7	42.3	54.7	42.0	58.2
2007	37.8	51.0	42.2	54.2	41.0	58.1
2008	37.5	49.3	42.6	53.3	40.0	56.7
2009	38.3	50.6	43.5	54.6	39.4	56.7
2010	39.7	51.9	45.1	56.2	40.5	56.3

Sources: Calculated from IMF (2011), *Direction of Trade Statistics* and Taiwan Bureau of Foreign Trade, Trade Statistics [online].

Annex Table 2. Diversity among East Asian countries

(As of 2010)

	Population (Millions)	GDP (Billions of USD)	Per Capita GDP (USD)
Brunei	0.4	12.4	29,674.8
Cambodia	14.3	11.6	813.8
Indonesia	237.6	706.7	2,974.0
Lao PDR	6.4	6.4	1,003.7
Malaysia	28.2	237.9	8,423.2
Myanmar	61.2	45.4	742.4
Philippines	94.0	199.6	2,123.0
Singapore	5.1	222.7	43,116.7
Thailand	63.9	318.9	4,992.4
Vietnam	88.2	103.6	1,173.5
China	1,341.4	5,878.3	4,382.1
Japan	127.6	5,458.8	42,782.5
Korea	48.9	1,014.5	20,756.2
ASEAN	599.3	1,865.2	3,112.3
C·J·K	1,517.9	12,351.6	8,137.3

Sources: IMF World Economic Outlook Database [online]; UN National Accounts [online]

CHAPTER 11

Role of Regional Institutions in East Asia

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Institutional building in East Asia has plaid an important role in nurturing the regional cooperation spirit, promoting the economic integration and cooperation. ASEAN has developed highest level of the institutional building in East Asia, there other regional institutions, like 5 "10+1" FTAs, CJK cooperation framework with the secretariat, East Asia Summit including 18 members, Chang Mai Initiative framework with AMRO, newly initiated RCEP, as well as the research institution ERIA. In order to enhance the regional governance and meet new challenges, East Asia needs make more efforts on facilitating the process of the institutional building and strengthen the role the regional institutions, not just for economic development, but also for making the new regional relations.

Keywords*: regional institutions, ASEAN, East Asia Summit, RCEP*

JEL classification：F02, F13, F15, N75

1. Introduction

One significant area of progress in East Asia has been in building regional institutions. Southeast Asian countries have played a pioneering role in nurturing the regional institutions from a dialogue framework to community building. Moreover, ASEAN has also played an active role in developing regional institutions in East Asia, such as "ASEAN +1", "ASEAN +3" and the East Asia Summit group. China, Japan and the Republic of Korea (ROK) initiated an independent cooperation framework from 2008. The roles of these institutions are varied, from community building to economic integration and cooperation, as well as political dialogue and cooperation.

ASEAN started as a political forum in the late 1960s and focused more on economic integration in the early 1990s. ASEAN now has a clear agenda for establishing the ASEAN Community (ASEAN Economic Community (AEC), ASEAN Security Community (ASC), and ASEAN Social and Cultural Community, ASCC) by 2015. Although the features of the institutional building for the ASEAN Community are different from those of the European Union (EU), regional governance through the ASEAN Community will be greatly enhanced.

In East Asia, an East Asia community has also been proposed and widely discussed but has not been put on the agenda in the regional cooperation process. The "ASEAN+" frameworks focus mainly on economic integration and cooperation, as well as political dialogue and policy coordination. The five "ASEAN +1" (China, Japan, ROK, India, Australia and New Zealand) frameworks are Free Trade Area (FTA)/Closer Economic Partnership (CEP) in nature, but also have comprehensive economic and political cooperation agendas. The main function of ASEAN +3 (China, Japan and ROK), is to promote economic integration and cooperation, while the East Asia Summit (EAS), starting from "ASEAN +6" (China, Japan, ROK, India, Australia and New Zealand) and now with the US and Russia as members, serves as

a strategic dialogue forum.[1] The agenda of the trilateral framework in Northeast Asia (China, Japan and ROK) covers both economic and political issues, with the former as its priority. There are also some functional institutions, such as the CMI (Chiang Mai Initiative), the Greater Mekong Sub-region (GMS), Regional Comprehensive Economic Partnership (RCEP) and the research-based Economic Research Institute for ASEAN and East Asia (ERIA) etc., which have played vital roles in promoting cooperation and capacity building in the related areas.

There are some other regional institutions, including the Asia-Pacific Economic Cooperation (APEC), the ASEAN Regional Forum (ARF), the Asia-Europe Meeting (ASEM) that were initiated by ASEAN and other East Asia countries. APEC is more institutionalized than others, and includes 21 members from both sides of the Pacific and aims at realizing the goal of free trade and investment in the Asia-Pacific area. APEC follows the principle of "concerted individualism and open regionalism", which means that liberalization does not require negotiation, and the region does not seek to become an exclusive bloc. However, this principle has been challenged by the launch of the Trans Pacific Partnership (TPP) which intends to negotiate a high level FTA agreement, led by the United States.

East Asia has benefited from these regional institutions. Take ASEAN as an example; by establishing this regional organization, the Southeast Asian region has achieved peace, stability and economic progress. In the East Asia area, the regional institutional building has helped to improve regional relations and peacemaking through high level dialogue and cooperation. It has also helped to reduce the barriers to trade, investment and services by establishing FTAs, to strengthen market confidence and security by developing the regional financial and monetary cooperation regime and to generate economic dynamism through capacity building for less developed economies and through connectivity initiatives, especially for the regional infrastructure network.

[1] EAS also discusses issues of strategic importance, such as energy, the environment, climate change and global governance.

Institutional building in East Asia is, however, still in its early stages, and its role in managing regional relations, regional integration and cooperation and providing effective public goods seems limited. There remain many challenges and difficulties that need to be dealt with and overcome.

The new challenges to East Asia are not just results of the global economic crisis, but also include internally generated problems, ranging from the export led growth model in the region to the imbalance of social-economic structure to sustainable development. East Asia needs to do more in moving toward a new model of economic and social development, for example towards domestic-demand-led, rather than export-led growth. It must also move to a green and sustainable development model, and away from its traditional "catching up model" of development. To succeed, it is vital that each individual country puts the new strategy at the top of its national agenda, and that the regional cooperation mechanisms make joint efforts to move towards a new East Asia.

Integration of the East Asian market has made significant progress by establishing FTAs. However, the current multilateral FTA frameworks have also made new barriers to business, since the overlapping of different FTAs creates the "noodle bowl effect". The countries of East Asia have not yet achieved consensus on a concerted approach to integrating all these FTAs into one framework, and competition between the TPP and the East Asian Free Trade Area (EAFTA) or the Closer Economic Partnership of East Asian (CEPEA) seems to be making East Asia more divided than before in its views and strategy. As for the other functional institutions, such as the GMS, connectivity, the Chiang Mai Initiative (CMI), a real input of resources (for example, funding) is still limited.

In its regional relations East Asia is experiencing a new transition in the light of the forthcoming ASEAN Community, the rise of China and India, as well as with the US and Russia as new members of the EAS. Institutional building is becoming more complex than before, and it seems that power competition and emerging

disputes ranging from nationalism to marine resources and islands are making the achievement of an international consensus more difficult (Zhang, 2010). The multilayered frameworks in the region provide a flexible environment for different players, but at the same reduce efficiency and sometimes may create ambiguity, even conflict.

In the past, two fundamental factors ensured the economic success of East Asia. These were the market liberalization and integration leading to development of regional production networks, and official dialogue and cooperation leading to peace and stability. In future both restructuring the regional production networks and moving toward a sustainable model of development require further liberalization and integration and stronger institutional building.

Real progress in institutional building in East Asia is becoming crucial for ensuring economic dynamism, political stability and peace. East Asia's institutional building should not be inward looking, however, since the regional economies are highly integrated into the world economy and they should play a strong and active role in global governance.

2. Progress of Institutional Building

There is no single and integrated regional institution in East Asia, and many kinds of institutions with different backgrounds and roles in the region have been developed. East Asia has this unique diversified feature due to its complex historical, cultural and religious heritage, security relations, and political systems. In the past decades, market-led economic integration has created close economic connections and shared interests among East Asian economies. As its production networks expand to more economies, East Asia is forming an identical economic region networked by multinational corporations and supported by government business

friendly policies on cross border trade, investment and service. The building of regional institutions has emerged onto the agenda gradually, led by the regional members, though in a multilayered structure with different interests, concerns and initiatives.

2.1. ASEAN and the ASEAN Community

ASEAN was initiated by some Southeast Asian countries in 1967 and was gradually enlarged to include all 10 countries in the region. A big step was made when ASEAN decided to establish the ASEAN FTA (AFTA) in 1992, since it started to take concrete steps to liberalize and integrate the region, which have been crucial for regional dynamism. To build the ASEAN Community will be another big step for ASEAN that aims at creating a united region with strong institutional governance.[2] By establishing AFTA, the Southeast Asia region became an open market area that can facilitate the mobility of production factors within the region and also attract an outside capital flow into the ASEAN region. Benefiting from the integration process, Southeast Asian economies have realized high economic growth and rapid expansion. Although the 1997 financial crisis caused serious damage to the ASEAN economies, regional integration and cooperation helped the economies moved out of the crisis quickly. ASEAN Community building, based on three identities, i.e. the ASEAN Economic Community, the ASEAN Security Community and the ASEAN Social and Cultural Community, intends to make Southeast Asia into a more open and cooperative region with comprehensive and higher level institutions for governance and management. Guided by its Charter, the ASEAN Community building becomes a vehicle to develop the regional institutions and enhancing the role of regional cooperation and governance (ASEAN Study Center, 2008). ASEAN Community building follows its own way, i.e. the ASEAN way, which is different

[2] The idea to build ASEAN Community was put forward in 1997 by calling on a concert of Southeast Asia nations. In 2003, ASEAN members adopted a new document to build ASEAN Community by 2020, and in 2007 the ASEAN Charter was adopted and the time of ASEAN Community was advanced to 2015.

from the European approach (Soesastro, 2003).

Importantly, ASEAN has become an active initiator and a center for broader regional cooperation in the East Asian region, for example the "ASEAN+" frameworks, the EAS, CMI, ARF, ASEM etc. By bridging the networks for dialogue and cooperation, the role of ASEAN is central since it unites 10 countries together in Southeast Asia and shares its experience and spirit of cooperation with other countries in East Asia. (Frost, 2008).

2.2. The "ASEAN +" Frameworks

ASEAN, as a pioneer in developing regional institutions and building a Community, has also played a leading role in networking the regional cooperation in East Asia. ASEAN, with 10 members together, stands in the center of the extended regional cooperative frameworks on the one hand and plays a leading role in forming the cooperative agenda in the region on the other hand. Under ASEAN's initiative, there are several regional frameworks which nurture the spirit of cooperation and pave the way for institution-building in East Asia.

ASEAN plus Three (APT)

The 1997 financial crisis brought about the cooperation framework of "ASEAN+" starting with APT (ASEAN plus China, Japan and ROK). [3] APT serves as a platform to develop cooperative mechanisms, for example, the APT Summit, APT Ministers' Meetings and APT Senior Officials' Meeting (SOM). Since it began in 1997, APT cooperation has achieved progress ranging from the economic areas of trade facilitation, financial cooperation, food and energy security, narrowing the development gaps, environmental protection and sustainable development, to the non-traditional security areas of human trafficking, transnational crime and

[3] The separate "ASEAN +1"frameworks are also conducted at the same time during the leaders' meeting and other high official meetings. Actually, some major progress has been made at the ASEAN+1 levels, for example, ASEAN+1 FTAs (with China, Japan, ROK, India, Australia and New Zealand), special funds, regular consultation mechanisms.

counter-terrorism. In 2007 a new 10 year Work Plan was adopted that provides strategic guidance for the future direction of APT cooperation, and an APT cooperation Fund (APTCF) was established in 2008 to facilitate the implementation of the Work Plan. To date APT has established 57 dialogue and cooperation schemes covering more than 20 areas. (ASEAN Secretariat).

The East Asia Vision Group (EAVG) recommended that the long term goal for APT should be to build an East Asian community supported by economic, financial and political cooperative institutions. The feasibility study on an integrated APT FTA (EAFTA) was conducted in 2004 and the policy report was presented to APT leaders in 2006. No real progress has yet been made on EAFTA, however, due to differences on approach and strategy.[4] Upon the decision of the APT leaders, EAVG II was set up in early 2012 and a new vision report will be submitted to the APT leaders in which the experts will recommend establishing a higher level institution for economic integration and policy coordination.

East Asia Summit (EAS)

The EAS, which grew out of the APT +3 (India, Australia, New Zealand) in 2005 and expanded to 18 members (plus the United States and Russia) in 2011, is a forum for dialogue on broad issues of strategic, political and economic significance. The EAS is designed to be a strategic forum based on members' shared interests and concerns, and aims to promote dialogue and cooperation for peace, stability and economic prosperity in the region. The EAS, as an open, transparent and outward-looking forum, and a platform for leaders to meet together, intends to discuss important issues of mutual concern, and to promote cooperation. The issues discussed by EAS members range through trade, finance, energy, education, public health, disaster management, climate change, the environment, marine security and

Japan proposed a different approach. This was CEPEA, (closer economic partnership of East Asia), based on EAS 16 members, rather than 13 APT members. The study group for CEPEA was set up in 2006 and a report on CEPEA was presented in 2008 to the EAS leaders.

regional relations. Several functional ministers' meetings, including foreign affairs, trade, energy and the environment, have been held regularly to progress leaders' initiatives. The EAS is perceived as the most balanced of the regional structures, because it is ASEAN based and includes all the major regional powers. It could be the most capable structure for achieving the goal of accommodating the ambitions of major powers, building trust and transparency in key areas including security, politics, finance, and trade, and binding all by a common set of rules.(Ernest Z. Bower). From viewing all documents created by the EAS, real progress on cooperation still seems limited, though great potential is expected due to the group's size and structure.

2.3. Cooperation of the Northeast Asia Three

China, Japan and the ROK (CJK) began their cooperative dialogue in 1999 under the APT summit framework. Significant progress was made in December 2008 when a trilateral summit was held, formally separating itself from the APT process and acquiring its own identity (Joel Rathus, 2010). CJK cooperation, led by the annual meeting of states and supported by 18 ministers' meetings, covers more than 20 areas. These include the nations' economic integration, their environments, energy, finance, science and technology, education and culture. Also included are security and global issues such as financial reform, the G20 and so on. In September 2011, the Trilateral Cooperation Secretariat (TCS) was established in Seoul with the aim of providing support for trilateral cooperation.

CJK initiated the academic feasibility study for a trilateral FTA in 2003, and an official joint study was launched in May 2010 and concluded at the end of 2011. This set up the basic principles for the negotiation of the trilateral FTA. During the CJK Summit in May 2012 a trilateral investment agreement was signed, and later on the trade ministers announced that the negotiation of a CJK FTA would start by the end of 2012. Due to the structural differences among the three, the negotiation of

such an FTA will not be easy. However, the launch of the negotiations for the CJK FTA could facilitate the process creating a broad FTA in East Asia, since it would bring pressure on ASEAN to take active steps to keep its centrality. ASEAN initiated a new agenda for the Regional Comprehensive Economic Partnership (RCEP) during the Summit meeting in 2012, which was supported by all 16 countries (ASEAN+6). The preparation for negotiation started in early 2013. However, it is still not clear how to make the plan into practice within the time table.[5]

2.4. Asia-Pacific Economic Cooperation (APEC)

APEC is one of the important regional institutions that the East Asian economies have participated in, and in which they have played active roles. APEC was established in 1989 and started its first informal leaders' meeting in 1993. It is a unique regional grouping, which brought together developing, newly industrializing and advanced industrial economies into one process of regional integration and cooperation in the vast Asia-Pacific region. . APEC members committed to reducing barriers to trade and investment and enhancing their economic and technical cooperation following the approach of concerted unilateral and collective actions.

At the top level, APEC is directed by the 21 APEC leaders through the informal leaders meeting. Recommendations are provided by APEC Ministers, as well as the APEC Business Advisory Council (ABAC). [6] At the working level, APEC's activities and projects are guided by APEC Senior Official Meetings (SOM). Several high level committees have also been established at the working level. APEC is supported by a permanent Secretariat based in Singapore, though it is still limited in size and functional activities.[7]

APEC is a regional forum without management power, but with real agendas, clearly defined goals and action-oriented programs. The 'Bogor Goals' is a key

[5] The negotiation of RCEP intends to conclude within 2 years.

[6] ABAC, formed by business leaders, is considered as an important part of the APEC process.

[7] Currently, there are 6 task forces under the SOM, 15 groups under the CTI, 11 working groups and another 3 groups or initiatives.

agenda of APEC's activities which was designed to achieve free and open trade and investment in the Asia-Pacific within a defined time-table.[8] In order to achieve the agreed goals, APEC worked out agendas and action plans, for example the Osaka Action Agenda (OAA,1994), the Manila Action Plan for APEC (MAPA,1995), the Busan Roadmap (2005), the Ha Noi Action Plan (2006), the APEC Trade Facilitation Action Plan (TFAP I,2001), the Investment Facilitation Action Plan (IFAP, 2008) etc. However, APEC finds itself restrained in setting goals and realizable agendas since its voluntary nature gives it no enforcement power to turn voluntary commitments into real actions.

Due to its 'soft' approach, real progress in liberalization and economic cooperation seems limited. This is considered to be part of the explanation for the great efforts put in by APEC members to negotiate their FTA/EPAs outside the APEC framework. Most APEC member economies are involved in the negotiation of FTAs. The United States announced that it would lead the negotiation of the Transpacific Partnership Agreement (TPP), with 9 initial members.[9] Actually, the Asia-Pacific market is now divided by different FTAs and it is not clear how the region can move to an integrated approach lead to an FTAAP as proposed in the past, since the TPP's model, with high standards of internal policy consolidation, has been questioned by some economies, and the East Asian economies are also managing to negotiate their FTA/CEP in the region[10] (Simon S. C. Tay, 2010).

2.5.Greater Mekong Sub-regional Economic Cooperation (GMS)

The GMS was initiated by the Asian Development Bank (ADB) in 1992. It aims to promote sub-regional economic cooperation for economic prosperity. Six

[8] For developed members, by 2010, for developing members, by 2020.

[9] The nine members comprise the four initial TPP members (Singapore, Chile, New Zealand and Brunei), the US, Malaysia, Vietnam, Peru and Australia. Japan applied to participate in the consultation process in 2012, and Canada and Mexico announced its intention join TPP negotiations in 2012.

[10] Simon Tay argued that the United States and other major economies have ceased to regard APEC as being sufficiently important to be used as a mechanism for enabling and managing economic cooperation and integration between APEC members.

initial members (China, Myanmar, Laos, Thailand, Cambodia and Vietnam) agreed to hold an annual ministers' meeting, and a summit meeting has been held every three years since 2002. The main areas for cooperation are infrastructure, cross border trade and investment (facilitation arrangements), human resources, environment and natural resources, tourism, agriculture and telecommunications. Several hundred projects have been jointly designed and financed. One of the GMS's achievements has been cooperation on Mekong River navigation since 2001, which makes the river as a convenient water route for trade between China and other Mekong basin countries. Japan has also been an active participant in the GMS cooperation, and organized a Japan-ASEAN-GMS members' meeting. India is also very active in promoting cooperation with ASEAN's GMS members. In 2000, India and 5 ASEAN GMS countries established the Ganges-Mekong Cooperation Committee and a Ganges-Mekong Action Pan was issued. Even the United States has shown its strong interest in developing cooperation with the ASEAN GMS countries through institutional arrangements. For example, the United States and ASEAN GMS countries began a "Lower Mekong Action Plan" in 2009 and a virtual secretariat was also established. The cooperation programs cover broad areas, ranging from the environment and infrastructure to education and public health. The main problem of the GMS is still under-development. The GMS seems to be an open framework involving 'inside' and 'outside' regional countries. One of the problems is that among different players and schemes, there is a lack of close coordination. Although the ADB initiated the GMS as the main mechanism for sub-regional cooperation, the other players and initiatives or institutional arrangements have become very active (Shen Minghui, 2012)[11]. More coordination among GMS institutions is necessary and would be beneficial (Qing Yaqing , 2010).

[11] Some argued that this competitive structure makes GMS complex and may create negative effects on regional development.

2.6.Research Institutions

The Economic Research Institute for ASEAN and East Asia (ERIA) was established in 2007 based on the EAS framework at the initiative of the Japanese government. Its objective is to improve the research capacity of the region, and to provide intellectual knowledge for regional integration, cooperation and sustainable development. It also creates a network in cooperation with other research institutions and organizations in East Asia. Its main activities include undertaking research, policy analyses, strategic planning and providing policy recommendations. It offers a tripartite-type forum for policy dialogue and interactions among researchers, policymakers and civil society.[12] ERIA works closely with the ASEAN Secretariat and plays an important role in carrying out policy oriented research on East Asian economic development and economic integration.

Another regional cooperative research institution is NEAT (the Network of East Asia Think-tanks) which was set up in 2003 as a coordinating research institution under APT. It aims at providing intellectual support to APT process by integrating the research resources in the region and promoting academic exchanges. It intends to study the key issues related to East Asian cooperation, to work out strategic ideas, to make concrete policy suggestions for the regional integration and submit research reports.[13]

3. Role of Regional Institutions

The success of East Asian economies in the past has relied on an open and liberalized market environment. The integration of the East Asian economies has been gradually achieved as more and more economies followed the trend, and thus

[12] ERIA history, www.eria.org
[13] About NEAT, see www.neat.org.cn

the chains of production networks have been extended. Along with economic integration, the process of institution building has also been carried forward. The role of the institutions in the region is summarized as in the following four aspects.

3.1. Promoting Market Liberalization

FTAs are the major institutional building blocks in East Asia. In general, they provide rule-based arrangements for market liberalization. Modern FTAs include not only reductions of tariff and non-tariff barriers, but also new issues relating to facilitation arrangements, IPR, standards, the environment, labor and competition policy, as well as economic cooperation. However, the key role of an FTA is to promote market liberalization through institutional building by signing legally binding agreements. (Masahiro Kawai and Ganeshan Wignaraja , 2011)

ASEAN initiated the ASEAN FTA agenda in 1992. This was the first institutional effort to bring about comprehensive market liberalization in the region. The primary mechanism for achieving this target is the Common Effective Preferential Tariff (CEPT) scheme, for goods originating within ASEAN, with a zero tariff rate by 2010 (for the new members by 2015). The goal of AFTA is to increase ASEAN's competitive edge as a production base. In order to improve customs coordination, ASEAN also adopted the ‘single window’ project that allows importers to submit all information related to a transaction to be entered electronically, once only. Additionally, ASEAN adopted an agenda on ASEAN Investment Area (AIA) in 1998 for implementing coordinated ASEAN investment cooperation and facilitation programs, granting immediate national treatment, eliminating investment barriers and liberalizing investment rules and policies in the sectors.

The role of AFTA is significant since it helps to create an integrated ASEAN market and improves the economic development environment. For example, intra-ASEAN trade increased from a very low base to currently 1/4 of the regional trade, and investment within the region has also increased remarkably. ASEAN

institutional building will be further enhanced by establishing the ASEAN Community, since this will create a higher level harmonization of laws and regulations, closer coordination of policies and more effective implementation of agreements. The establishment of the political and security community will provide a solid foundation for ensuring shared prosperity, peace and stability.

The role of ASEAN Community building could be summarized as the following:

- Establishing institutions and frameworks for regional cooperation, bringing together leaders, administrators, the business community and civil society

- Making rules for opening up markets and economic integration, relating to trade, investment, services, competition policy, standards, labor mobility etc.

- Taking initiatives for regional cooperation agendas and programs, aiming at promoting regional economic development, for example a Master Plan for ASEAN connectivity, an ASEAN strategic transport plan etc.

- Nurturing the Community spirit for regional cooperation, prosperity and peace, based on the principles of democracy, the rule of law and good governance.[14]

Aside from its internal integration efforts, ASEAN is also playing an active role in developing the "ASEAN +" FTAs. These FTAs develop the links between ASEAN and its partners through negotiated agreements covering the liberalization of trade in goods, service and investments. This facilitates trade and investment between ASEAN and its partners. Take the ASEAN - China FTA as an example. This has promoted bilateral trade significantly between the two sides since more than 90% of the traded goods are tariff free. China is becoming the largest market for ASEAN, and the investment from China to ASEAN has increased quickly, moving from being resource-oriented to manufacturing and service areas. Following the conclusion of FTAs between ASEAN and Japan, ROK, India, Australia and New Zealand, their trade is also benefiting remarkably from tariff and non-tariff barrier

[14] See The ASEAN Charter, www.asean.org

reduction, and their other economic cooperation agendas are also being promoted intensively. East Asia, as a result of lowering cost, has seen intra-regional trade and investment increase sharply. For example, the share of intra-regional trade increased from about 1/3 in 1980s to more than 1/2 in 2010 (Daisuke Hiratsuka, 2006)[15].

Turning now to APEC's role, we can see that over the past 20 years APEC has become an important framework within which members can project and initiate cooperation programs. However, APEC's voluntary approach seems not to have worked well. The failure of implementation of the Bogor Goals revealed that concerted actions based on voluntarism were difficult to organize, despite the goals of free trade and investment in the region. APEC is now in a transitional period, and there has been debate on its role and direction. 12 APEC members have now participated in the TPP project, led by the United States, which has changed the nature of APEC as a forum based on non-binding voluntary commitments[16]. The future of an integrated Asia-Pacific FTA is not clear. Faced with diverse efforts on FTAs in the Asia-Pacific region, the challenge for APEC is to restructure itself to give emphasis to its role as an intergovernmental dialogue and co-operation mechanism, since it is argued that APEC should play an important role in handling regional as well as global issues, and that it is the only organization that could fulfill such a role." (Andrew Elek)

3.2. Promoting Economic Cooperation

Promoting economic cooperation has been one of the most important areas for East Asia's institutional building. As distinct from bilateral economic assistance, economic cooperation, under regional frameworks, covers broader programs. Almost all FTAs/CEPs have intensive economic cooperation content, ranging from market access, financing, technology, infrastructure to capacity building. For example, in

[15] It is considered that Asia's FTAs provide flexible policy tools in terms of speed, scope and sequencing, and can be designed with large degrees of freedom so as accommodate the policy issues of participating economies.

[16] *Associated Press*, November 14, 2006.

the Framework Agreement on Comprehensive Economic Co-Operation between ASEAN and China, several priority sectors were listed for cooperation. These included agriculture, information and communication technology, human resources development, investment and Mekong River basin development (MRBD), banking, finance, tourism, industrial co-operation, transport, telecommunications, intellectual property rights (IPR), small and medium enterprises (SME), the environment, bio-technology, fishery, forestry and forestry products, mining, energy and sub-regional development. [17] They have been implemented gradually by specific projects with joint planning and funding. The ASEAN-China EXPO (CAEXPO) that has been organized on an annual basis in Nanning, China since 2004 is a good example of the progress of economic cooperation. It has played an active role in bridging the business gaps between China and ASEAN, as well as other partners in the region and world. Moreover, the cooperation programs in agriculture through training and technological transfer, transport infrastructure by joint design and investment, and sub-regional projects, have been significant in improving the agricultural production of less developed ASEAN members, and the connectivity between two sides.(Do Tien Sam edited,2008)[18]

In the Japan-ASEAN Framework for Comprehensive Economic Partnership signed in 2003, economic development cooperation covers substantial areas, including IPR (intellectual property rights0, ICT (information, communication technology), HRD (human resource development), SMEs (small and medium enterprises), energy (in oil stockpiling, natural gas utilization and promotion of energy efficiency), transportation and logistics (for efficient cargo transport systems, safe and sustainable shipping and safe and efficient air transport), standards and conformance and mutual recognition arrangements. Other areas covered include the environment, the automobile industry, bio-technology, science and technology,

[17] Framework Agreement on Comprehensive Economic Co-Operation Between ASEAN and the People's Republic of China Phnom Penh, 4 November 2002.

[18] The cooperation under the GMS and PBGS (Pan Beibu Gulf sub-region) projects has also been promoted, and progress has been achieved.

sustainable forest management, competition policy, food security and financial services co-operation.[19] Development of "economic corridors", such as the East-West corridor, the Southern economic corridor and a maritime economic corridor with more than 30 flagship projects, shows that economic cooperation among the participants is working.

Under the APT framework, many economic cooperation programs have been initiated and well implemented. The most significant progress has been made in financial cooperation through the Chiang Mai Initiative (CMI) of 2003, which began with a series of bilateral currency swaps for mutual financial assistance. CMI multilateralization (CMIM) was achieved based on completion of the bilateral swaps, and can provide financial support through multiple currency swap transactions among APT countries in time of liquidity need. The CMIM is monitored by the APT Macroeconomic Research Office (AMRO). With the double-sized CMIM ($US240 billion) agreed in Manila in 2012, and improvement of AMRO, it is expected that this institutional building will help East Asia to enhance its capacity to prevent another such financial crisis as that in 1997. The Asian Bond Market Initiative (ABMI) was also implemented. Under the ABMI framework, the Credit Guarantee and Investment Facility (CGIF) and the APT Bond Market Forum (ABMF) have helped to contribute to the development of efficient and liquid bond markets in the region. Since the start of its activities in 2003, the ABMI has pushed for the better utilization of the large savings in the region and an increase in investments[20].

In other areas, the APT has developed food and energy security cooperation, supported by the APT Emergency Rice Reserve Agreement (APTERR) signed in 2011. This serves as a permanent scheme (with a Secretariat in Bangkok) for meeting emergency requirements and achieving humanitarian purposes. At the same time,

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[19] Framework for Comprehensive Economic Partnership between the Association of Southeast Asian Nations and Japan, Bali, Indonesia, 8 October 2003, Summary of the Third Executive Report on Progress of Implementation of the ASEAN-Japan Plan of Action,2005.

[20] www.asean.org/20164.htm

an APT comprehensive strategy on food security and bio-energy development was also endorsed. This provides an umbrella for multi-sectoral cooperation among APT countries in ensuring long-term food security and bio-energy development. In the social and cultural areas, many cooperation programs have been initiated, including for example, the APT Emerging Infectious Diseases (EID) Programs. An APT education cooperation meeting was held in 2011 in Bali, Indonesia, in which the future direction of APT cooperation in education was discussed and projected.

Cooperation in the GMS has made significant progress in the areas of infrastructure, agriculture, trade facilitation and investment promotion, tourism and human resource development.[21] A new 10-year cooperation framework was signed by GMS members in 2011, which identified 8 priority areas for cooperation, ranging from the GMS economic corridor, connectivity and a single tourism area, to sustainable agriculture.

Development cooperation is one of the key agendas for APEC, which hopes to reduce the gaps in development in the region. The main scheme directed at this objective is APEC's economic and technical cooperation program (ECOTECH). ECOTECH does not follow the traditional Official Development Assistance (ODA) approach, operating instead by promoting capacity building for less developed economies along with the Trade and Investment Liberalization and Facilitation Account (TILF).[22] ECOTECH, however, aiming at helping the developing economies to enhance their capacity to achieve economic development, seems not to be functioning well, since the economic gaps among APEC members seem to be becoming wider.[23]

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[21] For example, by the end of 2010, there were more than 200 projects underway with investment capital as large as 14 billion US Dollars, most of them focused on improving infrastructure. East Asia Reports, No. 2, 2012, P.2.

[22] TILF and ECOTECH are considered as two pillars of APEC.

[23] APEC actually plays a valuable role as a learning place for developing economies by participating in the discussions, policy dialogues and programming. It also acts as a mechanism for business networking.

3.3. Promoting Policy Dialogue and Cooperation

The multi-layered cooperation frameworks in East Asia have provided important opportunities for leaders, ministers and other officials to meet together to initiate the cooperation agenda and discuss economic policies. ASEAN itself has moved to a higher stage of policy coordination by establishing the ASEAN Community. Currently, the ASEAN Summit is a policy making body providing policy guidance and taking decisions on key issues. For Community building, and in order to establish a single market and production base in ASEAN, high levels of policy consolidation, harmonization and effective governance will be required.[24]

The policy dialogues on regional and global issues are conducted during the summit meetings of ASEAN +1s, APT and EAS, and the relating ministers' meetings. The policy dialogues and cooperation have played the following roles:

- Reflecting promptly on changes in the economic development environment, especially in crisis management, avoiding protectionism and contagion of the crisis by showing confidence to the market;
- Initiating a cooperative agenda for enhancing regional economic cooperation and sustaining the economic development;
- Coordinating concerns and actions on global issues, especially on governance relating to the reform of the global economic system and sustainable development.

East Asia could well keep its economic dynamics due to policy coordination and cooperation. However, the structure of multi-layered frameworks in the region restrains the role of policy coordination (Yang Xuan, 2011).

Looking to the future, economic power is continuing to shift to East Asia, which means that regional integration and cooperation need to be further enhanced. It will thus become more important to enhance institution-building in the region, in order that the region can have more effective coordination, cooperation and governance.

[24] In order to strengthen policy consolidation and implementation, an ASEAN Coordinating Council and sectoral ministers bodies have been set up.

Take FTAs as an example. The East Asian economies have negotiated FTAs with economies both in and outside the region, and the numbers of the latter are actually greater than the former. The multi-layered structure of FTAs creates the "noodle bowl" effect due to overlapping FTAs with different tariffs, tariff reduction modalities and rules of origins (ROOs). This actually increase business costs in production networks. For example, different ROO criteria have been used in different FTAs, including RVC (regional value content) and CTC (change in tariff classifications). This makes it difficult for the companies to manage their business, when operating in different markets, crossing different agreements, if they want to use the FTAs. (Masahiro Kawai and Ganeshan Wignaraja, 2011, p. 10-11)

Moreover, the role of the regional institutions seems focused mainly on enhancing the current economic growth model, i.e. expanding the current production networks linking to export to outside markets, and extending the industrializing networks to more economies. The institutions may not be helpful in movement to a new development model.

East Asian institutional building does not yet meet the demands of the new regional development strategy. The region needs to make a more concerted effort to harmonize overlapping arrangements, engage in a more effective policy dialogue and create a stronger role for regional governance.

Turning to the Asia-Pacific region, it is clearly very necessary to strengthen the policy dialogue and improve cooperation because of the financial /economic crisis (economic recovery, anti-protectionism), the challenge of Regional Trade Agreements (RTA)s, especially the TPP, as well as cooperation on global issues (global economic recovery, financial reform and governance, climate change etc.). For East Asian economies, it is in their interests to continue the engagement of APEC and to support any efforts moving towards an integrated and liberalized market in the Asia-Pacific region.

4. The Future Perspective

East Asia economic development is facing new challenges, which require new strategies and policies. (Indermit Gill and Homi Kharas, 2007) Generally speaking, the following two aspects are of vital importance.

First, moving towards a new inclusive development strategy and generating internal demand by reducing the imbalance between economic and social development. For many developing economies, the "growth priority policy" makes social policy incompatible with economic development, which leads to weak domestic demand. It is highly desirable to build up a basic social safety net system in each economy, thus enhancing the strength of internal demand and largely reducing dependency on the external market for economic growth.

Secondly, searching for a new development model, different from the traditional industrial one. East Asia has a very large population, and the simple "catching up strategy" has met and will further meet the resource constraints of energy and the environment. If East Asian countries are to continue their dynamic growth, they must determine to change and move toward a new model that is energy saving, environment friendly and green in nature.

Aside from the efforts of every individual country, East Asia as a region needs to further enhance its regional institutional building. East Asia's economies are integrated together closely, and no single country could meet the challenges alone. The regional institutions should be more effective in designing, positioning and implementing a cooperative agenda aimed at achieving a genuinely sustainable model for development.

4.1. Moving toward an East Asia Economic Community (EAEC)

As the first step, East Asia needs to integrate its multilayered FTAs. Efforts towards developing a region-wide FTA has been on-going since 2004, when the

expert group on the feasibility study of an East Asia FTA (EAFTA) for ASEAN +3 was established. The group's report recommended that the EAFTA should be negotiated as early as possible, since it could overcome the negative "noodle bowl effect" created by the existing overlapping arrangements (rules of origin in particular). Due to differences in approach and strategy, an integrated regional FTA framework has not been achieved.ASEAN+6 countries have started the RCEP negotiation, which is intended to integrate 5 ASEAN+ 1 FTAs into one framework. Considering the great need for restructuring the current economic development model, however, it is really necessary to go beyond an FTA/CEP to an Economic Community. This seems possible since ASEAN will inaugurate its Community by 2015 and the negotiations on a broad regionally based FTA/CEP will be also completed. The EAEC will be helpful for policy coordination and cooperation on stimulating regional demand, while moving toward a social-economic balanced development structure. Under EAEC, the various institutions of the community could be more effective in regional economic governance.

It seems that it is still not possible to make a major step toward an integrated approach on EAEC. As a practical step, the CJK FTA may go ahead, since the trilateral investment agreement has already been signed and further negotiation on trade in goods and services was launched by the end of 2012. The CJK economies are highly interconnected by a sub-regional production network, and the higher level liberalization of the CJK markets through FTA arrangements will surely help to develop a close economic area among the three countries. Additionally, progress with the CJK FTA will facilitate the process of a FTA/CEP in East Asia. Moreover, as CJK accounts for 80% of East Asia's economic size, their cooperation and role in redirecting regional trade, investment and demand is vital for the whole of East Asia.

The process of forming the EAEC has to find its own approach and model. One of the possible approaches is the ASEAN Community way, which means that the institutional building does not involve creating a super-regional body for

management, but seeking to develop the most effective possible coordinating scheme.

4.2.Enhancing Financial and Monetary Institutions

With the enlargement of the CMIM and establishment of AMRO, financial and monetary cooperation in East Asia has entered into a second stage in moving towards an integrated and effective regional institution. This institution should play three major roles:

- Defending market security by creating a large reserve fund in case the financial market shows weakness or any member in the region falls into crisis;
- Helping the region to recycle capital through developing the regional capital market; the region has large reserves of foreign exchange, but held in markets outside East Asia;
- Improving regional governance of financial markets and macro-economic activity.

In order to achieve the above goal, it is necessary to go a step further beyond the current CMIM mechanism to a regional fund framework combining the above three major roles. The size of the CMIM was doubled to $US240 billion recently, and it could be doubled again in the near future. It should become more independent of the IMF in its operations, and put more effort into developing the regional capital market through the Asian bond market. For example, East Asia needs to mobilize a large amount of capital to finance its huge infrastructure needs in developing connectivity within and across its economies. Infrastructure projects are usually long-term in nature. Given this huge requirement, one of the possible ways to bridge the financial gaps is to tap Asia's large savings and international reserves, and to channel them to infrastructure investment. At present, a large portion of these savings is invested in the markets of developed economies. This huge financial resource may provide an effective solution to the financial gap problem, enabling

local and regional capital to be channeled towards long-term infrastructure projects and other productive investments through the bond markets (Biswa N. Bhattachoryay, 2011). AMRO's role in monitoring regional financial and macro-economic development should be strengthened, and it should become an integrated unit of the fund.

4.3. Institution for Facilitating East Asia Connectivity

Connectivity has a broad and comprehensive dimension, including physical, institutional, and people-to-people connectivity. For physical connectivity land, air and marine linkages need to be developed, while for institutional connectivity, legal, regulatory and technological frameworks are needed and for people-to-people connectivity the key is facilitation of business travel and labor flows. Deepening connectivity has been taken as an essential step for ASEAN in creating the ASEAN Community and also to its position of centrality and role of leading regional integration and cooperation. In fact the connectivity has two tiers: connectivity within ASEAN and connectivity between ASEAN and its dialogue partners. The Master Plan adopted in 2010 provides a clear guideline and roadmap for developing the connectivity in all areas.

To secure success, two factors are crucial: the right mechanism and the necessary resource. Although ASEAN has set up a connectivity cooperation fund and a coordinating council to support and coordinate the connectivity master plan, there is still a challenge due to limited capital resource. It is important to establish an East Asia-based coordinating framework to plan the regional infrastructure network, mobilize funds, consolidate regulations and facilitate progress. For example, the China-ASEAN FTA has set up a solid foundation for comprehensively developing and further deepening the relations between the two sides. But large gaps in connectivity, in both physical and institutional fields, present many constraints. Enhancing connectivity by focusing on developing transport infrastructure, seaport

systems, maritime transport, aviation, information technology and people-to-people exchange is therefore of special significance (ADB, JBIC, World Bank, 2005).

In order to help develop connectivity, it is necessary to link all committed funds under "ASEAN+1s", "ASEAN+3" and EAS, and to use the existing sub-regional cooperation mechanisms, like GMS. Under GMS, progress has been made in both physical and institutional infrastructure development, albeit still at a low level. Special efforts should be made in the area of people to people exchanges, easy business travel and business working visa arrangements, as well as tourism networks.

Due to the great regional diversity, and to features of the "East Asia model", the institutional building should follow an "East Asia way", and the "ASEAN way" may provide valuable experience here (Frost, 2008, p.16). The core of the ASEAN way is to follow an approach of gradual progress, using the soft management power of the regional institutions. The aim of the institutional building is to create an integrated market by reducing all kinds of barriers, and to share resources for common welfare. For East Asia, as for ASEAN, institutional building in the political area is also crucial, since both confidence building and the peaceful settlement of disputes require close political consultation and cooperation. The purpose of regional institutional building is to provide a framework for policy makers, especially top leaders, to meet together and share commitments. EAS, by bringing major powers and other regional members together, should play a stronger role in improving the political environment for regional peace and sustainable development.

5. Policy Recommendations

Institutional building is perhaps the most important part of the process of regional integration and cooperation. Progress has been achieved in this area in East Asia, and it has played a positive role in facilitating integration and cooperation

in the region. However, due to the multilayered structure of the regional cooperation frameworks, the role of the institutions in the East Asian region is still limited. In the past the major efforts on regional cooperation seemed to focus on promoting market liberalization, which is of course most important in the context of the developing regional production networks. Future efforts need to be more directed at restructuring and rebalancing the economies, and moving towards an inclusive and sustainable model. Since no single country could do this individually, collective efforts are absolutely required, based on the cooperative institutions in East Asia. On the foundation of the above evaluation and analysis, I would like to make the following policy recommendations:

1. East Asian economies are facing new challenges both from the changing international environment and from internal vulnerability and imbalance. As they are highly interdependent, both individual and regional efforts are necessary in restructuring the economies internally and in promoting reforms of the international system globally. From this perspective, regional institutions need to play more active and important roles in these areas.

2. Although the institutional building should follow a gradual, step by step approach, there seems to be a new feeling that the steps should be bigger and that the speed of movement needs to be quicker in integrating a market currently fragmented by the multiple FTAs into a "noodle bowl". Priority should be given to an integrated framework of FTAs in East Asia, moving towards an EAEC.

3. Although further liberalization and integration of the regional market is important, the role of regional institutions in coordinating development strategy and policy, as well as searching out a new development model, should be emphasized more, and better reflected in all regional cooperation agendas. It would be of great significance to the world if East Asia could restructure its economies and build on a new sustainable development model(Simon Tay, 2010).[25]

[25] As Simon Tay emphasized correctly; "Time, however, is not an infinite resource in Asia. The

4. The institutional building process in East Asia is not exclusive; i.e. it is not intended to create an inward-looking identity. The success of East Asian economic development has been facilitated by an open, liberalized and cooperative global system. Thus, the institutional building in East Asia needs to strengthen regional governance on the one hand and improve global governance on the other.

5. A strong process of institution-building in East Asia will call for a favorable political environment and a cooperative spirit. The currently emerging nationalism, land and marine disputes, competitive power relations etc., may all have increasingly negative effects on the progress of regional institutions. The various current political and security issues should be put on the agendas of all regional summit meetings.

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crisis has placed a premium on it, as governments have to cooperate and coordinate more closely to address fast-moving events under tremendous pressure".

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CHAPTER 12

Development and Restructuring of Regional Production/Distribution Networks in East Asia

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This chapter attempts to investigate the features of development and restructuring patterns of production/distribution networks in East Asia, mainly in machinery sectors, using international trade data at the most disaggregated level, to discuss their resilient nature, and to provide policy implications for the regional production networks and the economic development in the region. Although the negative impacts of the Global Financial Crisis (GFC) in 2008 were initially transmitted through the networks, the production/distribution networks in East Asia rather revealed their resilient nature. Our empirical analysis demonstrates that intra-regional machinery trade has been enhanced and contributed as a source of quick recovery from the GFC, and that the restructuring of regional production/distribution networks has been accelerated with the GFC as a trigger. Our study on trade patterns in terms of extensive margins also demonstrates clearly how the extent and depth of regional production networks have been changing, particularly after the GFC. Based on our empirical investigation, we discuss challenges and policy implication for the further development of the production networks and economic development and integration in the region.

Keywords: The extent and depth of regional production networks, East Asia, Extensive margins, Regional integration

JEL classifications: F14, F23

1. Introduction

The formation of international production/distribution networks in East Asia, with extensive promotion of foreign direct investment (FDI), has enhanced regional manufacturing competitiveness and contributed to the rapid economic growth of countries in the region.[1] The competitive industrial performance (CIP) index, which is compiled by the United Nations Industrial Development Organization (UNIDO), and measures the ability of countries to competitively produce and export manufactured goods, clearly indicates that East Asian countries have strengthened their manufacturing competitiveness, and their indices are higher than the sample average in most cases. In particular, China and Vietnam have rapidly improved their competitiveness in recent years, and four out of 11 East Asian countries are ranked in the top 10 of the 118 countries in the index.

Table 1: Competitive Industrial Performance (CIP) Index and its Ranking for East Asia

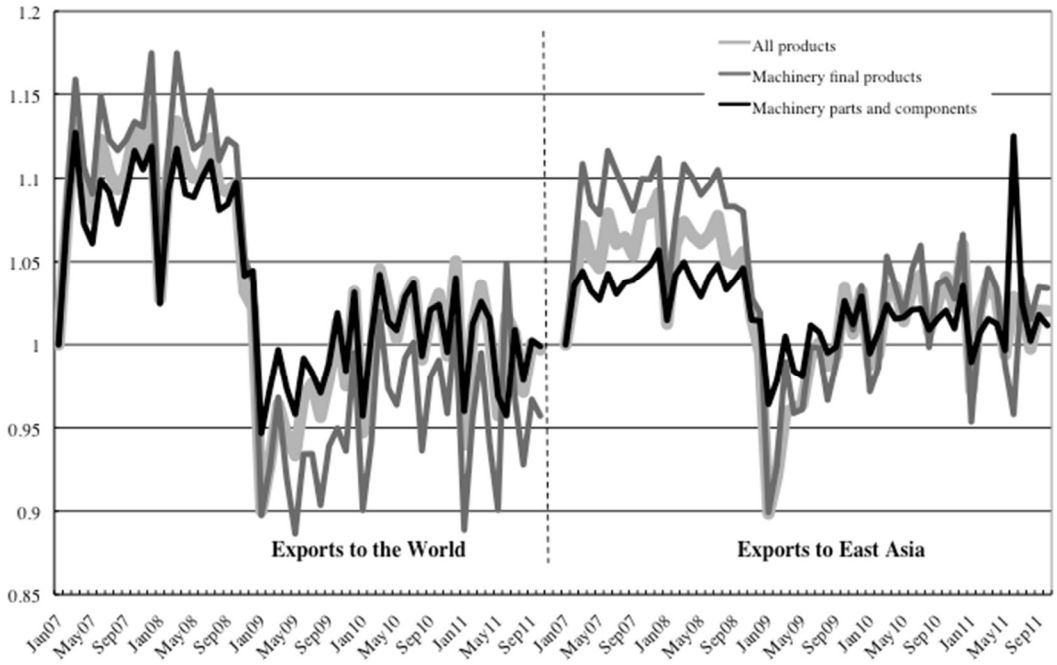
	Rank					Index				
Country	1985	1993	1998	2003	2009	1985	1993	1998	2003	2009
China	61	28	30	27	5	0.02	0.34	0.38	0.41	0.56
Hong Kong	18	6	9	13	17	0.32	0.58	0.58	0.53	0.38
Indonesia	65	60	54	47	43	0.01	0.22	0.25	0.26	0.20
Japan	2	3	4	4	3	0.73	0.74	0.72	0.72	0.63
Korea	22	17	15	9	7	0.25	0.48	0.51	0.59	0.48
Malaysia	30	20	17	19	27	0.12	0.46	0.49	0.47	0.32
Philippines	45	44	28	32	33	0.04	0.27	0.39	0.40	0.27
Singapore	6	1	1	1	1	0.59	0.84	0.89	0.90	0.64
Taiwan	19	10	12	10	11	0.29	0.51	0.55	0.54	0.44
Thailand	43	32	29	28	25	0.06	0.32	0.39	0.41	0.32
Viet Nam	...	...	99	72	58	...	...	0.11	0.19	0.17
# of samples/ sample average		100	118	120	118		0.28	0.28	0.28	0.21

Note: Indices higher than the sample average are highlighted.
Source: UNIDO database.

[1] Although international production/distribution networks have been formed in other regions, the networks in East Asia, mainly in machinery industries, are distinctive in (i) their significance in each economy, (ii) their geographical extensiveness, involving many countries at different income levels, and (iii) their sophistication in both intra-firm and arm's length (inter-firm) relationships (Ando and Kimura, 2005).

The Global Financial Crisis (GFC) in 2008 had huge and prolonged impacts on the world economy, including the East Asian market and the regional production/distribution networks mainly in machinery sectors. For instance, Japanese real exports did decline significantly, but recovered rapidly from the GFC. Such a recovery of export values, however, does not necessarily imply that trading patterns simply returned to the ones before the GFC. There seems to have been a permanent change in the extensive margins of Japanese exports; the number of exported product-country pairs at the HS 9-digit level dropped significantly and has not returned to the level of 2007 or 2008, though the number has shown a tendency to increase since January 2009 (Figure 1).[2] This suggests that the geographical distribution of their activities by Japanese firms, including those in East Asia, has been reshuffled, and that the basis of Japanese exports has been narrowed, with the GFC as a trigger.

Figure 1: The number of Japanese Exported Product-Country pairs, Indexed to January 2007



Source: Ando and Kimura (2012).

[2] East Asia here includes 14 countries/economies: the Association of South-East Asian Nations (ASEAN)10, China, Korea, Hong Kong, and Taiwan.

This chapter attempts to investigate the features of development and restructuring patterns of regional production/distribution networks, mainly in machinery sectors, using international trade data at the most disaggregated level that is internationally comparable, i.e., HS 6-digit level. At the same time, the chapter discusses the behavior of production networks when faced with demand/supply shocks, their resiliency and their contribution as a source of quick recovery.

The rest of the chapter is organized as follows; the next section briefly introduces the features of the development of regional production/distribution networks since the 1990s. Section 3 examines patterns of trade for East Asian countries after the GFC, in terms of extensive margins to investigate the extent and depth of regional production/distribution networks, and to demonstrate how the networks are being restructured. Section 4 discusses the nature of regional production/networks when faced with demand/supply shocks, and section 5 discusses challenges and policy implications.

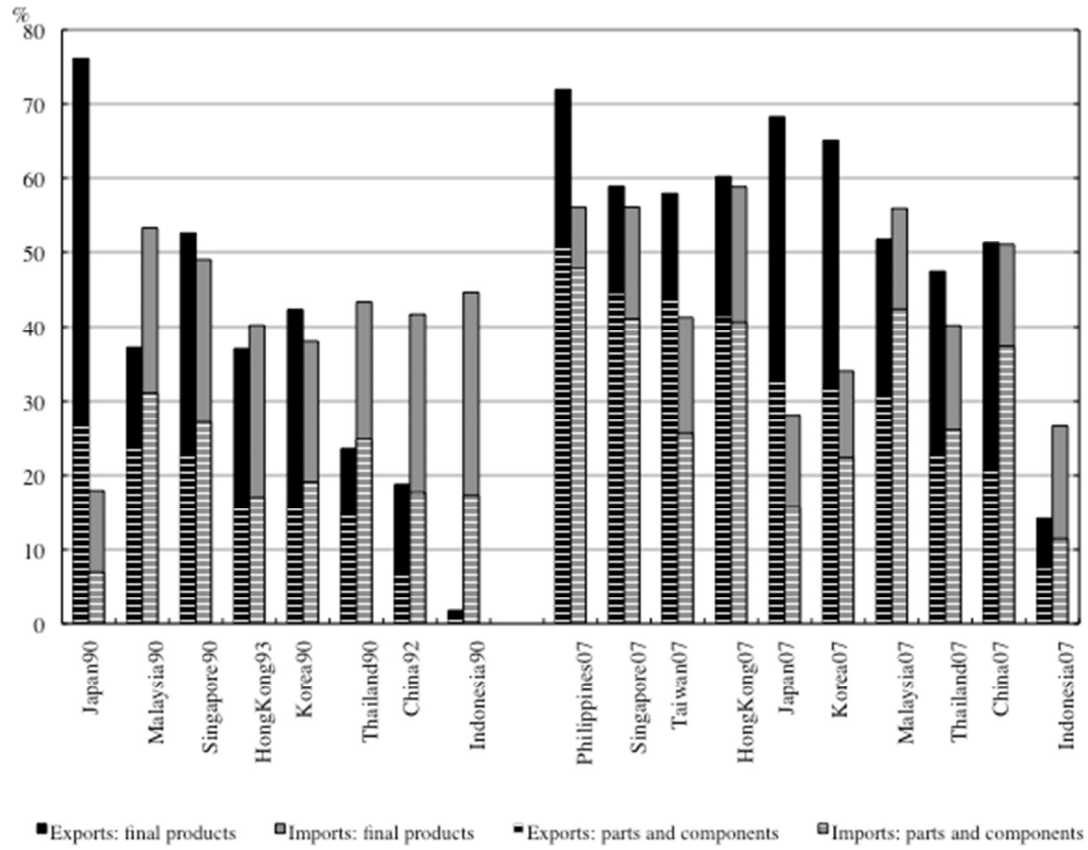
2. The Development of Regional Production/Distribution Networks

Machinery trade comprises a significant proportion of trade with the world for each East Asian economy, and the shares of machinery trade, in particular machinery parts and components trade, rapidly increased from the early 1990s to 2007 (Figure 2)[3]. In addition, the ratios of machinery intermediate goods are high for both exports and imports in East Asia. This evidence indicates the existence of export-oriented operations, as well as an active and drastically expanding vertical back-and-forth transactions, reflecting the development of fragmentation of production.[4]

[3] In this chapter "machinery goods" are composed of general machinery, electrical machinery, transport equipment, and precision machinery (Harmonized System (HS)84-92) in this chapter. See Ando and Kimura (2012) for the definition of machinery parts and components.

[4] See Jones and Kierzkowski (1990, 2001), Arndt and Kierzkowski (2001), and Deardorff (2001) for fragmentation theory.

Figure 2: Machinery Trade in East Asia: Share in Total Exports/Imports (early 1990s and 2007).



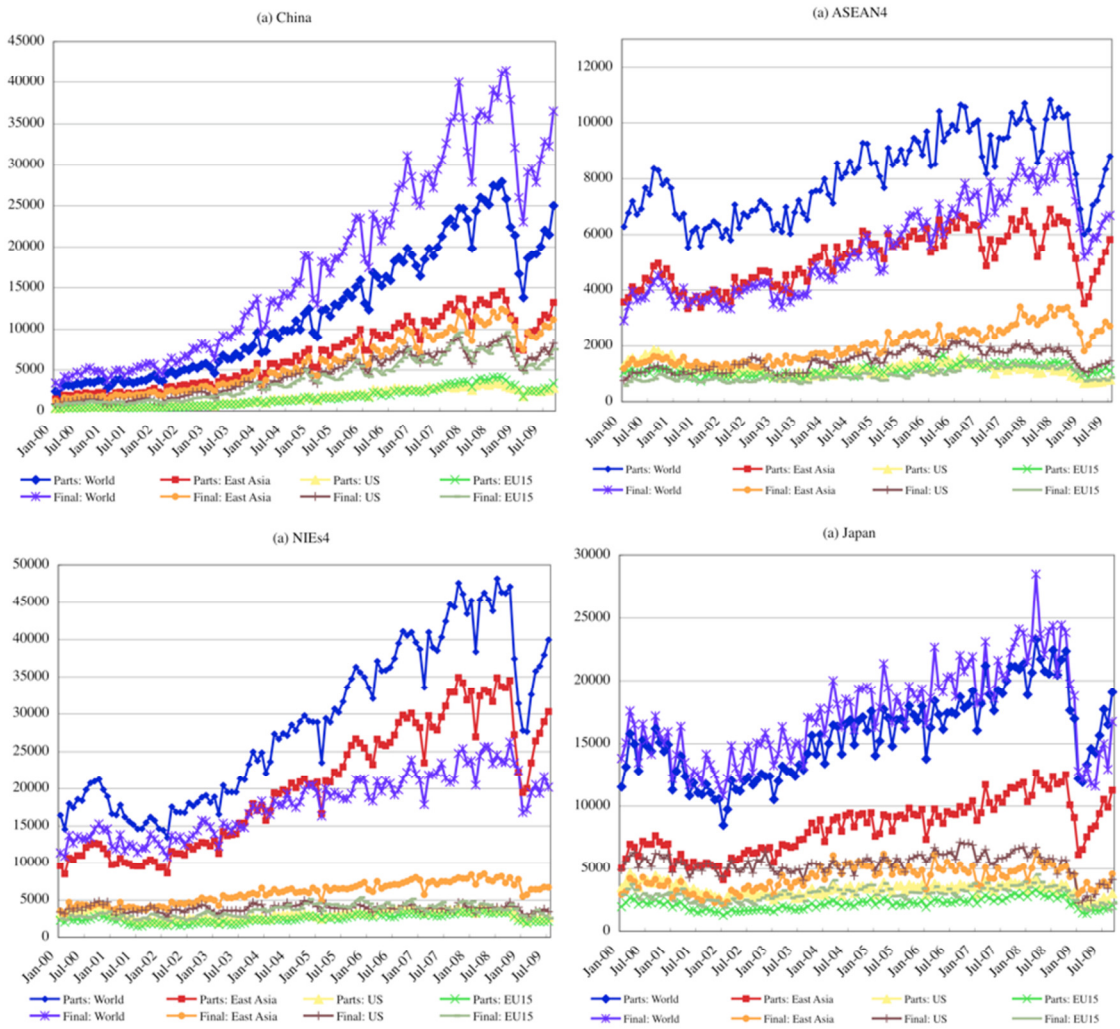
Source: Ando (2010).

The proportions of machinery trade, in particular the machinery parts and components trade, have also tended to grow for countries in other regions. While most countries with higher shares of machinery parts and components exports were developed countries in the early 1990s, however, they were replaced by East Asian countries in 2007, with much higher shares. In other words, the significance of machinery trade, mainly machinery intermediate goods trade, has shown a definite relative increase for each economy in East Asia.

A large proportion of the above-mentioned machinery parts and components trade in East Asia is intra-regional. Moreover, intra-regional trade values of machinery parts and components *per se* have significantly expanded, indicating how explosively and rapidly vertical back-and-forth

transactions in machinery parts and components had proliferated throughout the region in the 2000s, until the GFC occurred (Figure 3).[5] [6]

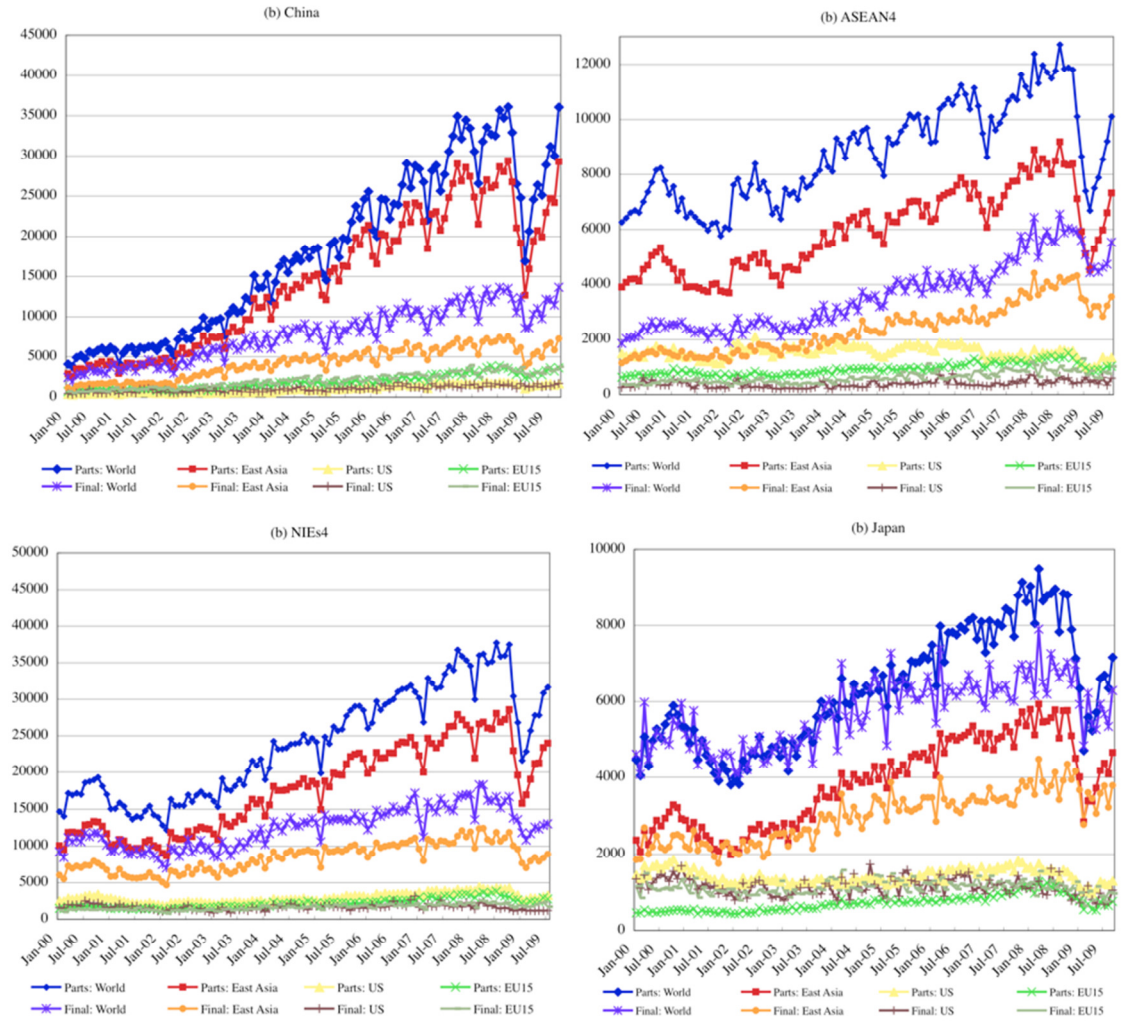
Figure 3: Monthly Machinery Trade since 2000 for East Asia
(a) exports (millions US$)



[5] East Asia in Figure 3 is the East Asia 10, including China, the ASEAN4 (Indonesia, the Philippines, Thailand, and Malaysia), the 4 Newly Industrializing Economies (NIEs4) (Korea, Hong Kong, Singapore, and Taiwan), and Japan. See Ando (2010) for the corresponding figures for imports.

[6] In the 1990s, vertical transactions, particularly back-and-forth transactions in parts and components in vertically fragmented production processes across borders, rather than the trade of quality-differentiated commodities that is supported by the theoretical model of intra-industry trade with vertical product differentiation, were drastically expanded in East Asia (Ando, 2006).

(b) Imports (millions US$)



Source: Ando (2010)

3. Restructuring Regional Production/distribution Networks after the Global Financial Crisis

Figure 3 also clearly shows that machinery trade rapidly bounced back from the significant fall caused by the GFC. In other words, there were indeed initial negative impacts from the GFC on regional production/distribution networks but, at the same time, East Asia's trade has rapidly recovered through the networks. In particular, East Asia itself is the major contributor to such a rapid recovery, in both machinery parts and components and machinery final goods trade (Ando, 2010). As

a result, intra-regional trade, particularly intra-regional machinery trade, fell below the 2007 level by only a few percent, despite the huge demand shock experienced throughout the world, at least on a nominal basis at the annual level (Table 2).[7] This finding suggests that regional production/distribution networks possess a resiliency against shocks.

Table 2 also demonstrates important further evidence that the East Asian market is rising in its significance as a market for final products. In a short period from 2007 to 2011, the intra-regional export ratio rose from 30 percent to 36 percent. This rise in the share of intra-regional exports in all exports is not only due to the demand decline in the US and EU but also to an expansion of intra-regional exports in machinery final products *per se*; their export to the world in 2011 was 1.3 times that in 2007, their intra-regional exports was up 1.5 times. Even on the import side, the intra-regional share for machinery final products were close to 60 percent, and the intra-regional value expanded by 51 percent. The inter-regional markets such as those in the U.S. and the EU, are still important, but East Asia is increasingly gaining importance not only as a production site but also as a consumption site for final products that are produced in the regional production/distribution networks.

[7] The East Asia 9 consists of the East Asia 10 excluding Taiwan. The East Asia 15 is composed of China, the ASEAN10, Korea, Hong Kong, Taiwan, and Japan. Due to the availability of data, we set the trading countries as the East Asia 9 and trading partners as the East Asia 15. Note that Taiwan is not explicitly included in the UNcomtrade database, but trade with Taiwan is said to be close to that for "other Asia, not elsewhere specified (nes)" (shown only as a partner country). Therefore, Taiwan is included here as a partner, considering that Taiwan is one of the important economies for regional production networks. The CLMV countries are Cambodia, Laos, Myanmar and Vietnam.

Table 2: Intra-regional Trade of the East Asia 9: Value and Share

	Exports					Imports				
Destination/origin	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
(a) All products										
Value (nominal): 2007=1										
World	1.00	1.13	0.93	1.21	1.35	1.00	1.03	0.83	1.10	1.35
EastAsia15	1.00	1.12	0.95	1.26	1.40	1.00	1.12	0.93	1.23	1.42
Share: World=100										
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	48.1	47.6	49.1	50.0	50.1	53.4	50.2	51.5	51.6	48.7
China	12.6	12.3	13.6	13.9	13.9	14.8	13.9	14.5	13.8	13.2
CLMV	1.5	1.7	1.9	2.0	2.2	0.8	0.9	1.0	0.9	1.1
ASEAN4	7.9	8.2	8.0	8.5	8.6	10.6	10.2	10.2	10.6	10.1
ASEAN5	9.1	9.6	9.5	10.0	10.3	11.3	10.9	11.0	11.3	11.0
ASEAN10	12.9	13.4	13.5	13.8	13.9	14.8	14.5	14.6	14.9	14.4
NIEs4	19.6	18.9	19.2	19.4	19.1	16.6	15.2	15.7	15.9	15.0
Japan	6.5	6.5	6.3	6.1	6.1	10.4	9.9	9.9	10.2	9.1
(b) Machinery parts and components										
Value (nominal): 2007=1										
World	1.00	1.06	0.94	1.19	1.31	1.00	1.05	0.91	1.19	1.27
EastAsia15	1.00	1.04	0.95	1.19	1.30	1.00	1.04	0.90	1.22	1.28
Share: World=100										
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	63.9	62.4	65.1	64.0	63.5	69.9	69.3	69.3	71.3	70.7
China	20.9	20.9	23.6	22.0	22.8	14.2	15.1	15.3	15.1	15.7
CLMV	0.7	0.9	1.1	1.1	1.3	0.3	0.4	0.4	0.5	0.6
ASEAN4	10.5	10.3	9.7	9.8	9.3	12.5	11.7	11.1	11.9	11.2
ASEAN5	11.1	11.1	10.6	10.8	10.5	12.8	12.1	11.5	12.4	11.8
ASEAN10	15.7	15.1	14.8	15.0	14.1	17.2	16.7	16.4	17.1	16.4
NIEs4	26.2	24.7	25.6	26.3	25.2	28.2	27.0	27.9	28.7	28.2
Japan	5.7	5.6	5.1	4.8	4.8	14.7	15.1	14.6	15.1	15.0
(c) Machinery final products										
Value (nominal): 2007=1										
World	1.00	1.11	0.91	1.16	1.29	1.00	1.11	0.99	1.28	1.54
EastAsia15	1.00	1.12	0.99	1.32	1.52	1.00	1.12	0.97	1.29	1.51
Share: World=100										
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	30.4	30.6	33.3	34.7	35.8	58.7	59.0	57.2	59.0	57.8
China	6.2	6.2	6.6	7.4	7.5	23.4	23.1	24.5	25.3	25.5
CLMV	0.9	1.1	1.3	1.3	1.5	0.3	1.3	0.5	0.5	0.7
ASEAN4	4.6	5.0	5.1	5.5	5.7	9.9	10.2	9.9	10.0	9.1
ASEAN5	5.2	5.8	6.1	6.4	6.7	10.2	10.6	10.4	10.5	9.7
ASEAN10	8.4	9.1	9.9	9.6	10.2	13.3	14.5	13.8	13.2	12.6
NIEs4	14.6	14.3	15.6	15.8	16.2	11.4	10.7	10.4	10.0	10.6
Japan	4.2	4.1	4.7	4.7	4.8	13.6	13.7	11.8	13.2	12.0

Source: Author's calculation, using trade data available from the UN Comtrade database.

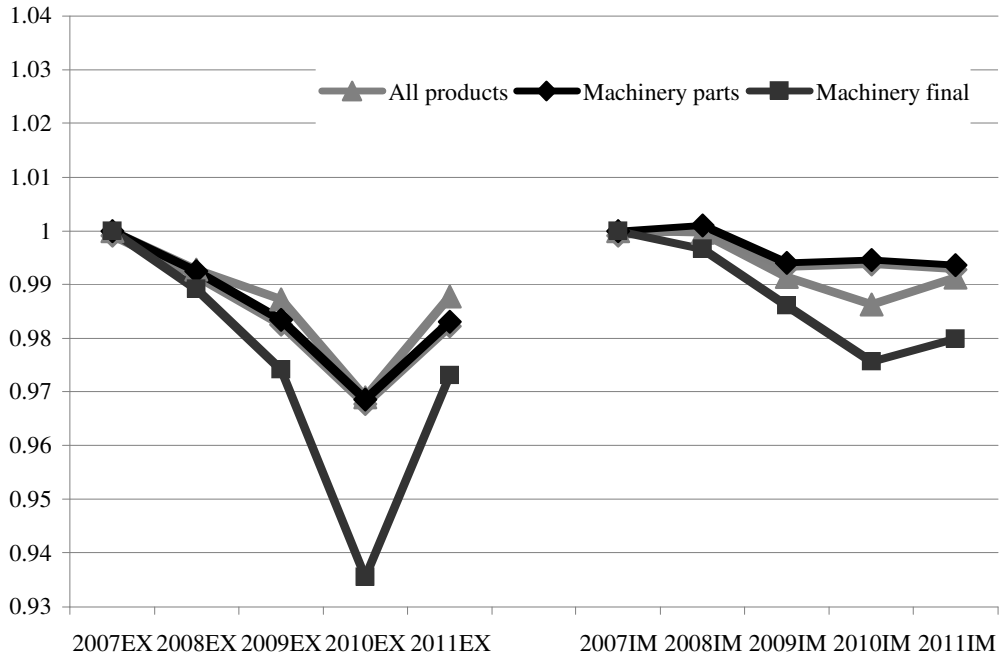
Focusing on intra-regional trade in machinery goods implies a change in the composition of trading pairs within the region or the reshuffling of regional production networking. In the period from 2007 to 2011, China and the CLMV saw their shares increase from 20.9 percent to 22.8 percent and from 0.7 percent to 1.3 percent, respectively, while the intra-regional share remained around 64 percent and Japan lost the share from 5.7 percent to 4.8 percent for machinery parts and components. In addition, China and the CLMV increased their shares even for machinery final products, while the Japan' share slightly increased. Note that Viet Nam was the main contributor to the increasing share for the CLMV, as you can guess from the difference between the share for the ASEAN 4 and that for the ASEAN 5 (ASEAN4 plus Vietnam). These suggest the restructuring of production/distribution networks as well as a greater recent participation by the CLMV, particularly Vietnam, in the regional networks, though the degree of participation is still low.

Figure 4 represents the number of products exported to/imported from the world, regardless of partner countries, for nine East Asian countries, and Figure 5 shows the number of exported/imported product-country pairs for intra-regional trade of the same countries.[8] [9] Interestingly, while the number of products exported to the world slightly declined after the GFC, the number of exported product-country pairs for intra-regional trade increased, particularly in 2011. The net increase in the sum of exported-country pairs among East Asian countries suggests that some countries began additional trade relationships with certain partners for certain products, and these new trade links exceeded the number of trade relationships ended by some countries.

[8] The number of products is expressed as an index based on the number in January 2007; the number of exported products, for all products at the HS 6-digit level was 39,069, and the corresponding number of imported products was 43,057.

[9] The number of exported product-country pairs for intra-regional trade of all products at the HS 6-digit level in January 2007 was 252,865, and the corresponding number of imported product-country pairs was 228,531.

Figure 4: The Number of Products Traded with the World by the East Asia 9 (2007=1)



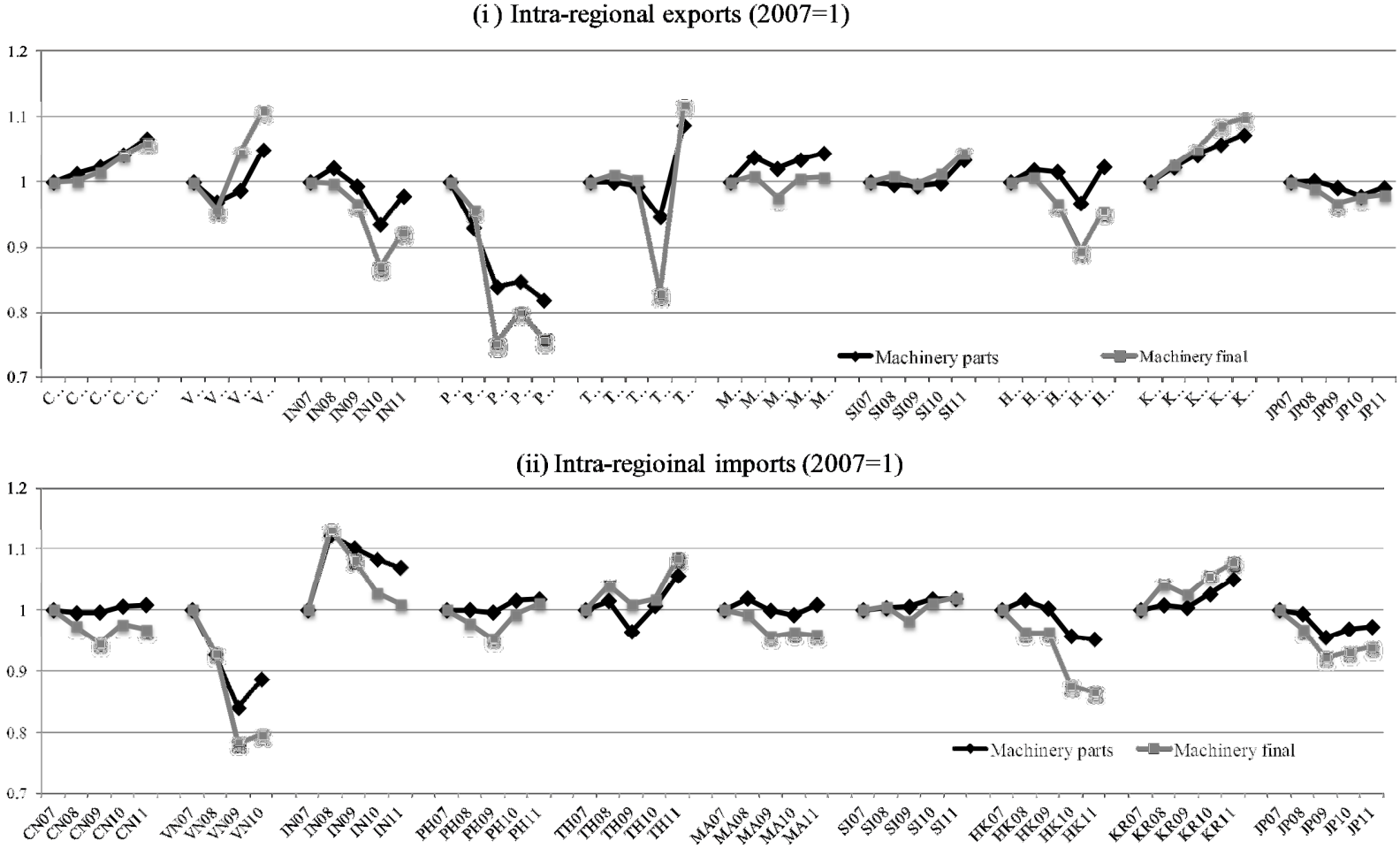
Note: The number of products traded with the world is at HS 6 digit level, regardless of partner countries.
Source: Author's calculation, using data available from the UN Comtrade database.

Figure 5: The Number of Exported/imported Product-country pairs for Intra-regional Trade: East Asian 9 (2007=1).

Note: Intra-regional trading partners are the East Asia 15.
Source: Author's calculations, using data available from the UN Comtrade database.

To investigate which countries entered the trading market and exited from it, we first examine changes in the number of exported/imported product-country pairs for each country's trade with the East Asia 15, focusing on machinery trade (Figure 6). China is steadily increased its export number in both machinery parts and components, and machinery final products. Korea also increased its number for both exports and imports in machinery parts and components as well as machinery final products, suggesting that Korea has become more active within the region. The number for Viet Nam is apparently increasing for exports, but has decreased for imports., This implies that Viet Nam began has begun to be connected to regional production networks, and has started new export relationships in place of imports. On the other hand, the Philippines has tended to reduce its number for machinery exports, suggesting that it may have been losing its position in the regional production networks in machinery sectors recently.

Figure 6: The Number of Product-Country Pairs for Intra-regional Machinery Trade



Source: Author's calculation, using data available from the UN Comtrade database

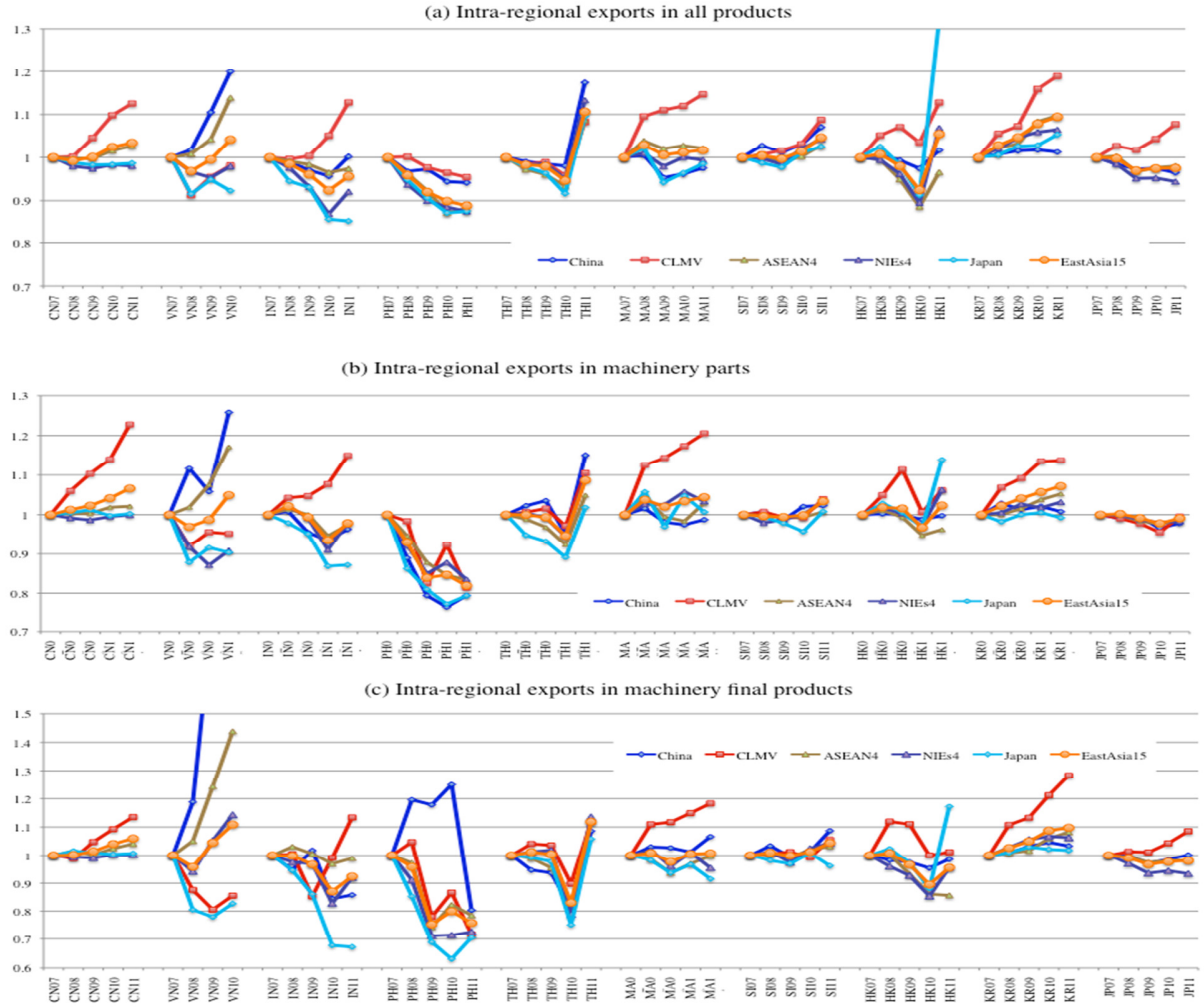
To further examine the restructuring patterns or the extent and depth of regional production networks in terms of extensive margins, we investigated the number of exported product-country pairs, by destination, for the intra-regional exports of each country; destinations are China, the CLMV, the ASEAN 4, the NIEs 4, Japan, and the East Asia 15 (Figure 7) [10]. Figure 8 shows the corresponding number of imported product-country pairs by origin for intra-regional imports. [11] These figures provide several interesting insights. First, the CLMV are rapidly becoming connected to both the machinery exports and imports of other East Asian countries. Of course, the number of products traded with the CLMV was quite small in 2007, compared with other economies/groups, and thus the index for the CLMV as a partner tends to fluctuate to a greater extent. Given this, however, the outstandingly rapid increase in the index for the CLMV implies that these countries, although mainly Viet Nam, are beginning to be connected to the regional production/distribution networks.

Secondly, China has increased the number of products traded with the ASEAN 4 and to the CLMV for both exports and imports in machinery parts and components. On the other hand, the number of machinery final products exported by China to the ASEAN 4 has increased, but the number imported from the ASEAN 4 has not. These statistics suggest that China is becoming a more important supplier of machinery final products, assembled from parts and components imported from other East Asian countries, particularly from the ASEAN countries.

[10] Figure A.1 in the Appendix represents the number of exported product-country pairs by destination for intra-regional exports of each country/group in East Asia; exporting countries/groups are China, the ASEAN 4, the NIEs 3, Japan, and the East Asia 9.

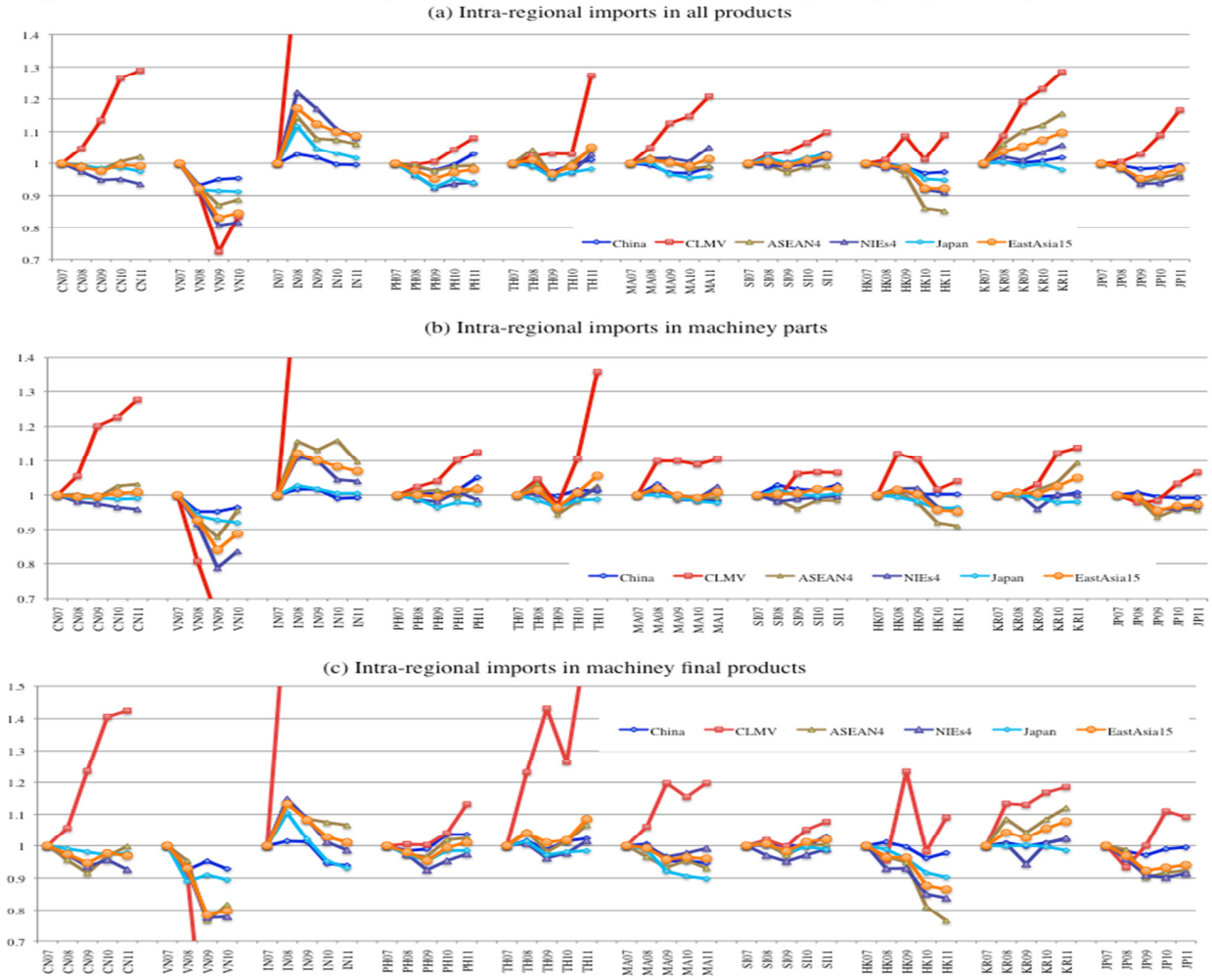
[11] See Figure A.2 for the corresponding number of imported product-country pairs by origin for intra-regional imports of each country/group.

Figure 7: The Number of Exported Product-Country Pairs by Destination (2007=1)



Source: Author's calculation, using data available from the UN Comtrade database.

Figure 8: The Number of Imported Product-Country Pairs by Origin (2007=1)



Source: Author's calculation, using data available from UNcomtrade.

Thirdly, connections between Viet Nam and China and between Viet Nam and the ASEAN 4 have been strengthening. The index for Viet Nam's exports to China/ASEAN 4 and the index for China's/ASEAN4's imports from the CLMV are increasing, both in machinery parts and components and final products, indicating that some transactions between Viet Nam and China and between Viet Nam and the ASEAN 4 have been started in recent years.

All of the discussion based on extensive margins and trade values/shares suggests that intra-regional trade has been enhanced, that it has contributed as a boost to recovery from the GFC, and that the restructuring of regional production/distribution networks has been accelerated, with the GFC as a trigger.

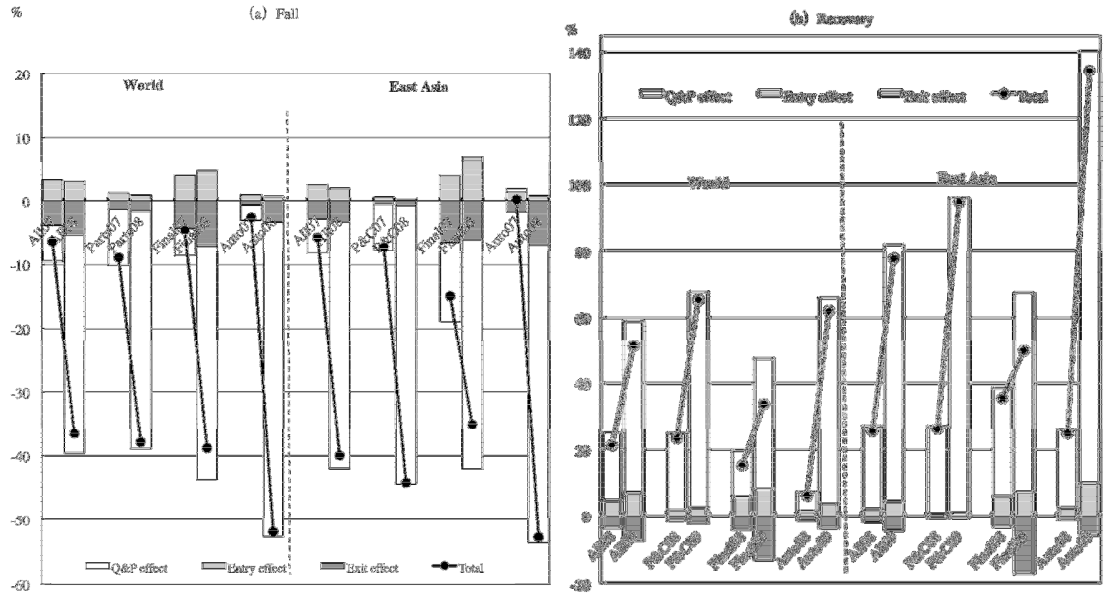
4. Resilient Nature of Regional Production/Distribution Networks

As discussed in the previous section, machinery trade rapidly recovered from the GFC and did not decline significantly in annual terns even during the GFC. This reflects the resilient nature of regional production networks. According to Obashi (2010a, 2010b), transactions within the production networks, particularly intra-regional trade in machinery parts and components, are stable, compared with other products, because the locations and firms involved in the networks are severally selected, and relation specific transactions are conducted once they are built. In addition, Obashi (2011) demonstrates that the probability of machinery trade recovery for products that disappeared at the time of the Asian Financial Crisis is higher than that of non-machinery trade.

Furthermore, Ando and Kimura (2012) demonstrate the resilience of regional production/distribution networks from the perspective of Japanese exports in face with the GFC and the Great East Japan Earthquake (EJE) that occurred in March 2012, using decomposition approach, logit estimation, and survival analysis. They decompose the fall/recovery of machinery exports into extensive margins (the entry effect and the exit effect) and intensive margins (the quantity effect and the price effect) and demonstrate that the exit effect (export decline due to discontinued trade relationships) is much

smaller in absolute terms for machinery parts and components than for other products, particularly in the case of exports to East Asia (Figures 9 and 10).[12] This evidence suggests the robust trade relationships for machinery parts and components, in particular for exports to East Asia, regardless of whether they encounter a demand shock or a supply shock.

Figure 9: Decomposition of Changes in Japanese Real Exports under the 2008-2009 Crisis (US$)

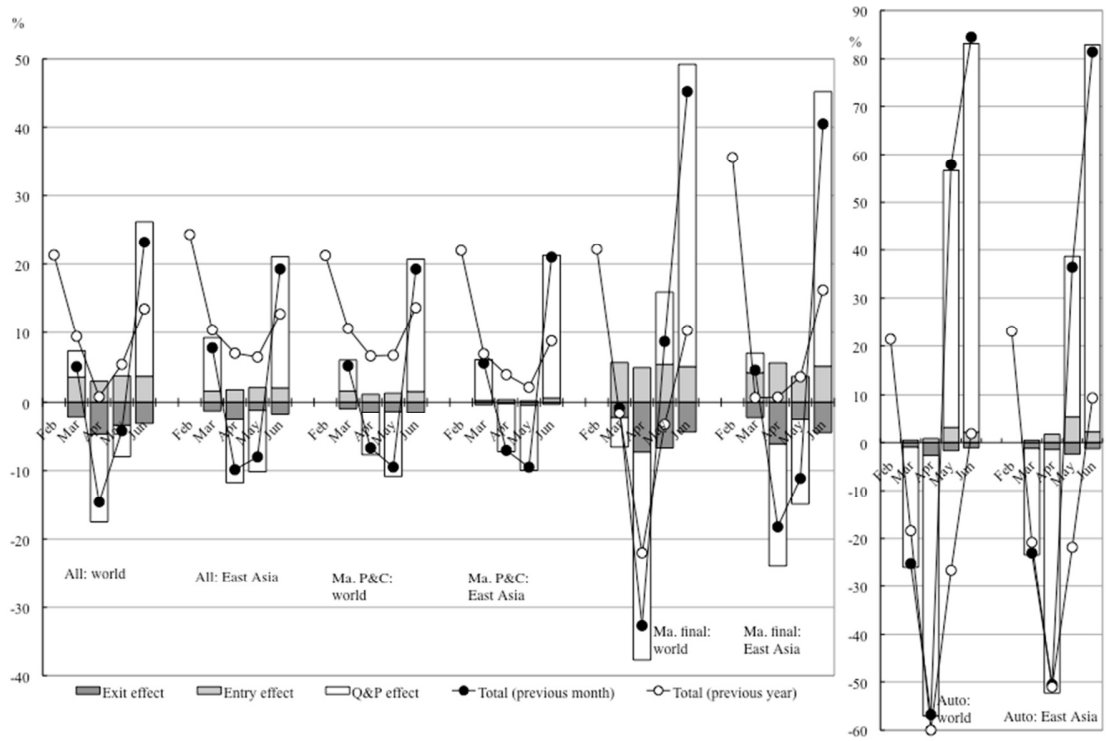


Data: author's preparation, based on the results in Ando and Kimura (2012).

Notes: Q&P effect is the sum of quantity effect and price effect. All08 (All07) for (a) Fall and All09 (All08) for (b) recovery, for instanec, denote all products in the priod from October 2008 to January 2009 and in the period from January to October 2009 (2008). P&C, Final, and Auto denote machinery parts and components, machinery final goods, and automobiles (HS87 final only).

[12] The decomposition approach allows us to decompose the percentage change in the total value of trade into the quantity effect, the price effect, the entry effect, and the exit effect. The quantity/price effects, i.e., intensive margins, are changes in trade due to changes in quantity/price for product-country pairs that continue trade. On the other hand, the entry effect and exit effect, that is, extensive margins, are changes in trade (an increase in trade values) due to trade for new product-country pairs and changes in trade (a decrease in trade values) due to trade for exiting product-country pairs, respectively. See Ando and Kimura (2012) for more detailed results and discussion.

Figure 10: Decomposition of Changes in Japanese Real Exports under the 2011 EJE (US$)



Data: author's preparation, based on the results in Ando and Kimura (2012).

They also analyze the probability of the fall and recovery of machinery exports resulting from the two crises, using logit estimation (and survival analysis).[13] The results indicate that machinery parts and components trade are less likely to be discontinued and are likely to recover even if trade ceases for a period (Table 3). The coefficient for parts and components is negative for the analysis of trade fall and positive for the analysis of trade recovery, with statistical significance. This suggests a robust trade relationship for machinery parts and components compared with machinery final

[13] For the analysis of trade reduction as a result of the 2008-2009 GFC [the 2011 EJE], those product-country pairs at the HS 9-digit level with exports in October 2008 (and/or one-month before and after) [March 2011 (and/or one-month before and after)] are employed to examine whether or not their exports existed in January 2009 [May 2011]. For the analysis of trade recovery under the GFC [the EJE], on the other hand, those product-country pairs at the HS 9-digit level with exports in October 2008 (and/or one-month before and after) [March 2011 (and/or one-month before and after)] and no exports in January 2009 [May 2011] are used to investigate whether their exports recover by October 2009 [July 2011].

products. The results also indicate that among East Asian countries, those that are heavily involved in the regional production networks tend to maintain trade relationships and are likely to recover trade even if they cease trade for a period. The coefficients for dummies of East Asian countries are mostly negative for the analysis of trade fall and positive for the analysis of trade recovery, with statistical significance; in particular, the absolute values of coefficients for countries such as China, Korea, Taiwan, and Thailand are large for both analyses, indicating the strong trade relationships in the production networks. In contrast, the coefficients for countries such as Brunei, Cambodia, Laos and Myanmar are either statistically insignificant, small in absolute terms, or even opposite. This implies that these countries are not deeply involved in regional production networks in machinery industries.

All findings confirm that regional production networks are robust even if negative impacts are initially transmitted through the networks. The fragmentation of production takes advantage of the reduction in production costs within production blocks, while the fragmentation should pay for the network set-up/adjustment cost and the service link cost. Firms try to place priority on keeping international production networks so as to minimize these costs by maintaining transaction channels for parts and components when they face demand/supply shocks.

Table 3: Probability of Trade Relationships of Japan's Machinery Exports under the Two Crises

	2008-2009 GFC				2011 EJE			
	Fall		Recovery		Fall		Recovery	
Distance (log)	-0.05	(-1.55)	0.10	(1.84) *	-0.14	(-3.87) ***	0.11	(1.98) **
Parts	-0.51	(-25.78) ***	0.28	(8.84) ***	-0.47	(-22.3) ***	0.06	(1.79) *
China	-1.74	(-18.85) ***	1.20	(7.70) ***	-2.11	(-20.4) ***	0.89	(4.81) ***
Thailand	-1.53	(-19.32) ***	1.11	(8.11) ***	-1.76	(-19.8) ***	0.79	(4.91) ***
Korea	-1.37	(-13.54) ***	1.38	(8.54) ***	-1.88	(-16.69) ***	0.96	(5.01) ***
Taiwan	-1.31	(-14.91) ***	1.05	(7.31) ***	-1.69	(-17.32) ***	0.95	(5.63) ***
Hong Kong	-1.35	(-16.16) ***	0.91	(6.54) ***	-1.58	(-17.12) ***	0.74	(4.56) ***
Singapore	-1.39	(-17.88) ***	0.68	(4.92) ***	-1.39	(-16.82) ***	0.77	(5.29) ***
Malaysia	-0.91	(-12.33) ***	0.92	(7.69) ***	-1.18	(-14.38) ***	0.77	(5.46) ***
Philippines	-0.99	(-12.17) ***	1.03	(7.90) ***	-1.18	(-13.38) ***	0.33	(2.10) **
Indonesia	-0.91	(-12.41) ***	0.86	(7.19) ***	-1.15	(-14.31) ***	0.83	(5.96) ***
Viet Nam	-0.96	(-12.11) ***	1.38	(10.92) ***	-1.30	(-15.00) ***	0.87	(5.85) ***
Brunei	0.88	(4.17) ***	-0.75	(-2.38) **	1.02	(4.05) ***	-0.38	(-1.16)
Cambodia	0.76	(4.08) ***	0.30	(1.45)	0.43	(2.75) ***	0.12	(0.55)
Laos	0.53	(1.86) *	-1.05	(-1.99) **	0.67	(2.24) *	-1.79	(-2.46) **
Myanmar	0.35	(2.21) **	0.12	(0.58)	0.06	(0.39)	-0.03	(-0.12)
US	-1.99	(-23.37) ***	0.37	(2.18) **	-1.78	(-20.61) ***	0.52	(3.22) ***
EU	-0.53	(-22.05) ***	0.07	(1.78) *	-0.50	(-19.43) ***	0.14	(3.23) ***
Constant	0.93	(2.89) ***	-2.09	(-4.38) ***	1.53	(4.48) ***	-2.06	(-3.89) ***
Log likelihood	-29744		-11949		-26132		-9749	
Number of observations	45979		20507		41827		16221	

Data: Ando and Kimura (2012).

Notes: dependent variable for the analysis of trade fall is 1 if trade stops and 0 otherwise. Similarly, dependent variable for the analysis of trade recovery is 1 if trade recovers and 0 otherwise. Figures in parenthesis are z-statistics. *** indicates that the results are statistically significant at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level.

5. Challenges and Policy Implications

This chapter investigated the features of development and restructuring patterns of production/distribution networks in East Asia, mainly in machinery sectors, and discussed their resilient nature. The development of production networks reflects the development of fragmentation of production, which involves fragmenting production processes that were originally located in one place into two or more production blocks (PBs) and locating them at appropriate places for each PB.

When PBs are fragmented, costs of service links (SLs) connecting PBs arise, while there can be a cost reduction at each PB utilizing from a location advantage. In particular, when PBs are located beyond the national border, SL costs include not only costs originating from geographical distance, such as transport costs, telecommunications costs, and coordination costs, but also costs across borders, typically trade barriers. Fragmentation thus occurs only when the SL costs are sufficiently low to make the total costs (i.e., production costs plus the SL costs) lower than otherwise.

To further utilize the mechanics of production networks, development strategies and industrial policies have to be considered as ERIA (2010) emphasizes in its "Comprehensive Asia Development Plan (CADP)". For instance, innovation in industrial agglomeration is necessary. Small and medium sized enterprises (SMEs) should play an important role in forming industrial agglomeration, and thus SME-related policies must be reviewed; better access to technology, better access to finance, fostering human resources, and establishing industrial organization may be helpful for their involvement in the industrial agglomeration and upgrading it.

It is also important to identify and resolve bottlenecks that prevent from deep participation into production networks in terms of three kinds of costs, namely network-set up cost, SL cost, and production cost. To reduce network-set up cost, policies such as investment liberalization, investment facilitation/promotion, intellectual property right (IPR) protection, and competition policies would be helpful. To reduce SL cost, policies to help the reduction of transactions costs in economic activities, including those mentioned above, tariff removal and trade facilitation, and enhancing institutional connectivity would be essential. To reduce production costs and strengthen location advantage, policies such as investment liberalization, upgrading infrastructure services such as electricity supply and creation of export processing zones (EPZs), enhancing agglomeration effects through SME development, and strengthening innovation would be beneficial.

In addition, connectivity needs to be considered, particularly to further deepen the regional production networks. East Asia is strongly connected to the outside economies, in addition to the countries in the region, through the production networks. For instance, Ando and Kimura (2013) analyzed the extent and depth of production networks in Europe from the perspective of their links with East Asia via Central and Eastern Europe (CEE) and demonstrated the strengthening competence for production networks in East Asia in machinery sectors, particularly in the electric machinery sector. Deepening regional integration and enhancing connectivity surely require open-oriented trade policies (rather than protectionism), various development strategies, and regional cooperation. While East Asia's integration has been market-driven, rather than rule-driven as is observed in Europe, free trade agreements (FTAs) must now be one of the tools for further trade and investment liberalization, and facilitation, and cooperation. This is a major challenge, and whether each economy in East Asia can implement the above-mentioned strategies and policies, depending on its stage of development and involvement in the production networks, will certainly influence whether regional production networks and regional integration/cooperation are successfully enhanced, and whether further economic development in the region is achieved.

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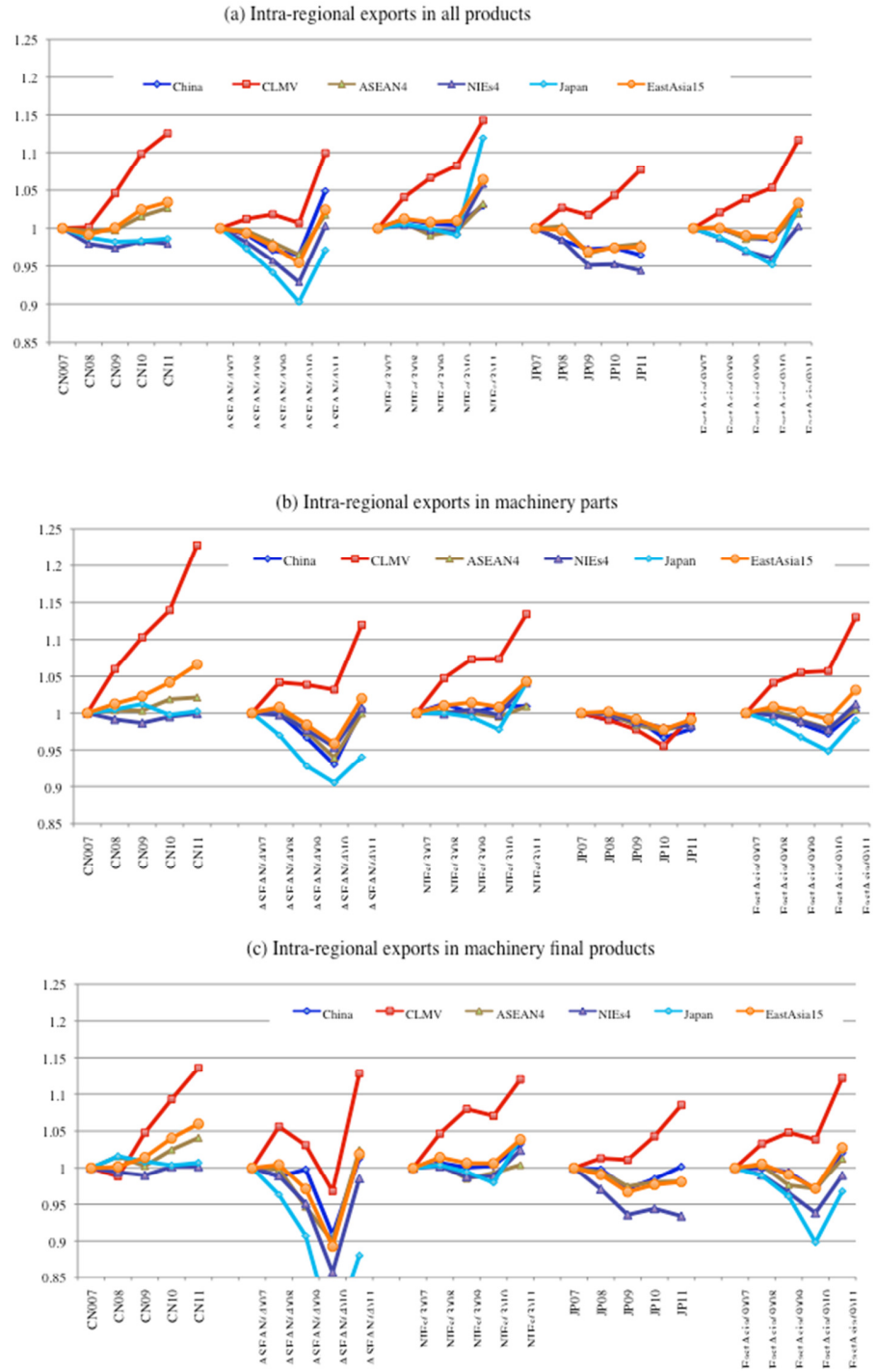
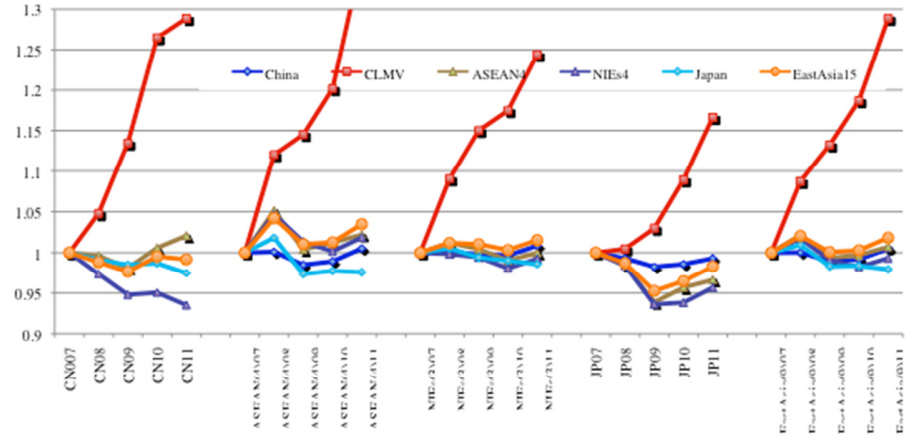
Figure A.1: The Number of Exported Product-Country Pairs by Destination (2007=1)



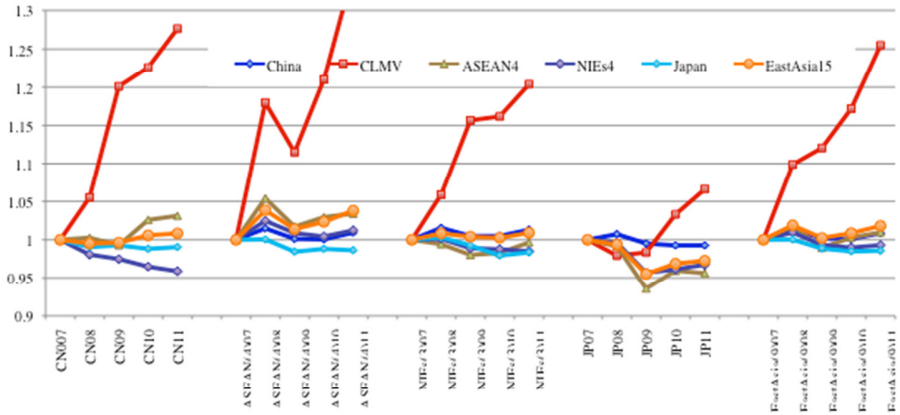
Source: author's calculation, based on data available from UN comtrade.

Figure A.2.: The Number of Imported Product-Country Pairs by Origin (2007=1)

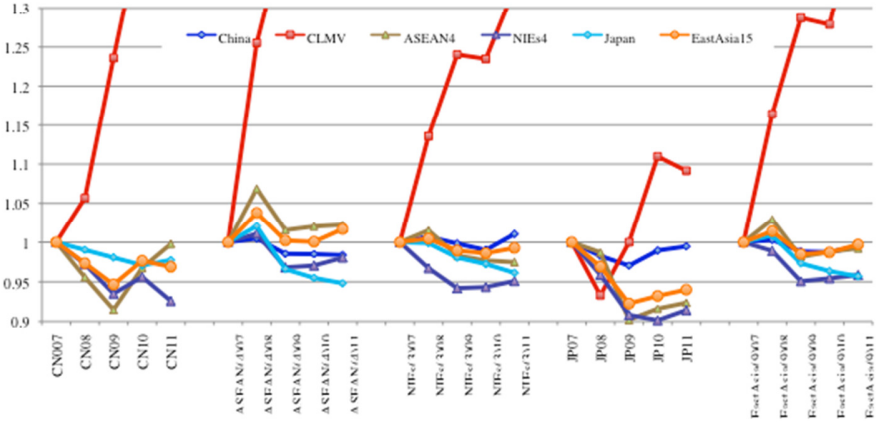
(a) Intra-regional imports in all products



(b) Intra-regional imports in machinery parts



(c) Intra-regional imports in machinery final products



Source: author's calculation, based on data available from UN comtrade.

CHAPTER 13

Building a Recycling Society: The Experience of New Zealand

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This chapter examines the issues and achievements of policies towards waste and recycling in New Zealand, identifying implications for trade and other countries in Asia. Reducing waste and making better use of materials has a role in the sustainability of economic development, but the characteristics of a country's economy affect the feasibility of recycling materials. A combination of institutional and legal changes has enabled New Zealand to decouple economic growth from waste disposed, but this achievement has depended on export of recovered materials to countries in Asia that are better placed to recycle them. The recycling of materials has implications for security of supply of scarce raw materials as well as for environmental management, and requires international co-operation that enables materials to move to where they can be used most effectively.

Key words: solid waste; recycling; sustainability; government policy

JEL classification: Q53, Q58, O13

1. Introduction

The slow recovery of markets in affluent countries following the 2008 Global Financial Crisis has caused exporting countries to reconsider the sustainability of their method of trade and the growth strategies they had previously followed. Such is the interdependence of countries in today's globalized economy that difficulties in one region are quickly transmitted to other regions, particularly where those regions are heavily engaged in trade. During such times, stimulating domestic demand and trading with a different array of countries may look increasingly appealing.

This chapter examines the role of materials recycling in counteracting the issues raised by the slow-down in economic activity and the long-term issues of the depletion of key minerals and the accumulation of new toxic waste. It analyzes how the current situation has reinforced the significance of sustainable development and investigates the contribution of recycling. It also examines the markets and market failures surrounding the management of material waste. New Zealand is studied in depth to illustrate how the characteristics of the economy affect the feasibility of recycling, as a contribution to sustainability goals. Each country in the East Asian region will have its own particular set of circumstances and solutions to managing waste and recycling, but there are complementary roles between countries and scope for international co-operation in achieving a recycling society that makes the most of the available resources.

1.1. Overview – Towards a More Sustainable Development

A fundamental problem for global development is how to meet the rising aspirations of populations in all countries without unreasonable harm to the environment that they share and their economic livelihoods. Economic growth can put pressure on the environment, such as the atmosphere and oceans and also on the stocks of some key raw materials. New technology that has been developed to reduce the environmental impacts of growth – wind turbines, hybrid vehicles, mobile phones, and rechargeable batteries – are in fact dependent upon particular rare and strategically important minerals. Yet the turnover for these products is so brisk that these materials are appearing rapidly in the waste stream, contributing to a mixture of potentially hazardous substances accumulating in disposal facilities.

The simultaneous creation of growing demands, depletion of key minerals, and the accumulation of toxic waste presents a new combination of risks for continued development in all countries. This is particularly acute in East Asia, which has experienced a recent rapid growth that is based on the very industries at the heart of these new demands. This is not just a waste disposal problem; it is also a resource management challenge (UNEP, 2012). As strategic materials become scarcer and their value increases, it will become increasingly advantageous to mine the waste streams in order to recover those materials. The feasibility, however, of doing so will depend upon the circumstances as to how those products are distributed and recovered, their dispersion across widely spaced markets, and the channels put in place for recovering them after their current uses are completed. The future sustainability of development depends on the evolution of market arrangements, but the existence of market failures and whether domestic policies or international co-operation arrangements can improve the recovery of those materials are all challenges faced by each country in their own distinct ways.

1.2. Why We Need a New Model

The arguments for why the world needs to move towards a more sustainable form of economic development stem from the notion of biophysical limits on the natural environment. World population is growing and it is expected to reach 9 billion by the mid-21st century. Much of that growth will be in countries where a considerable amount of further development needs to be done in order to attain a quality of living that approaches the standard that is enjoyed in more affluent countries. Environmental non-profit organizations, and other commentators, suggest that for these countries to attain a standard of living that is enjoyed in the USA, would create a resource demand so large that it would require another planet to accommodate them. Such "forecasts" are designed to alarm and tend to ignore the effects of change in technologies and public demand over time, but they have a point. A world with 9 billion people will be different from a world with 6 billion and it will create very different demands upon the Earth's resources than have hitherto been experienced. It will also be increasingly important to achieve efficiency in natural resource use.

The modern notion of sustainable development first came to prominence in the "Brundtland definition" at the 1987 World Commission on Environment and Development. It was enthusiastically adopted by governments and subsequent international gatherings, including the 1992 Earth Summit in Rio de Janeiro and the 2002 World Summit on Sustainable Development in Johannesburg. Countries, however, have differed over how to implement it. The Organization for Economic Co-operation and Development (OECD) (2001) reduced it to merely dealing with externalities and properly accounting for natural resources as part of the capital to be considered in pursuing growth in incomes and wealth.

Practical measures that should favor sustainability include removing subsidies that exacerbate environmental damage (e.g., on fossil fuels), extending payment for environmental services that are currently free (e.g., water abstraction and discharges), and generally raising the efficiency by which resources are used. These measures would also be in the economic prescriptions for allocative and dynamic efficiency in resource use, which has led to the suggestion that sustainability can be viewed in conventional economic terms, such as "dynamic efficiency plus intergenerational equity" (Stavins, *et al*., 2002).

The Global Financial Crisis has led governments to review their commitment to sustainable development programs based on affordability, but the underlying conditions have not changed. The crisis has reinforced the desirability of sustainable development. Financial constraints have increased the importance of value for money from investments, efficiency in resource use and taking into account the trade-offs between short-term gains and long-term effects.

1.3. Material Recycling and Sustainability

If resource use efficiency is an underlying motivation for sustainable development, then making the most of available resources should create a role for finding better ways of dealing with waste and getting more from materials by recycling them. Both developed and rapidly developing countries have adopted the 3R principle (Reduce, Reuse, and Recycle) to materials, but economic factors drive countries to implement them in different ways. Higher income countries have the capability to apply sophisticated technologies to the sorting and recycling of waste,

but high labor costs have also led them to export their wastes to be treated in other countries, where labor costs are lower. If those countries have less labor and environmental regulation or weaker enforcement, then practices can emerge that increase the potential risks to human health through serious pollution of air, soil, or water.

In order to create a common understanding of the 3R policy approach, ERIA has established a Working Group to examine the conditions of such policies in East Asian countries, with the aim of developing recommendations for promoting 3R as an industrial policy and creating a sustainable recycling society in the region (Prakash, 2011). While the principles may be the same, each country will apply them differently according to their own national characteristics, creating the likelihood of different and complementary roles for each country across the region.

From an economic perspective, material waste is simply material no longer of value in its current form, which its owner would willingly discard (Productivity Commission, 2006). This definition excludes substances that are reused or sold by the organizations that own them, but includes those of no value to their current owners, which may yet be valuable to others (e.g., recyclable materials).

Private businesses have commercial incentives for avoiding waste, but there is a limit to its value when acquiring new materials and discarding old materials are low cost options. Whether waste is reused, recycled, or disposed of in a landfill depends upon which option is most beneficial or least costly to the owner. The consideration of waste management and policy centers on the choices, incentives, and influences at the site where the materials are discarded. Ensuring the discard decisions of private individuals and businesses are beneficial to the community at large and properly reflect externalities is a justifiable issue for public policy to address.

Market failures distort the choices made in the materials use cycle and affect the relative level of disposal and recycling. Removing price distortions over the choices for waste discarding has had two effects: increasing the “frugality” amongst waste generators, and improving the viability of reuse and recycling activities. The critical questions for waste management policy are what is the extent of price distortion, the over-production of waste, and what are the most cost effective means of reducing that distortion?

Waste is perceived to be a problem for various reasons. There is the risk of waste accumulation harming the environment and human health, and the perceived scarcity of space for landfills, which increases the difficulty and cost involved in locating landfills accessible to sources of waste. There are concerns over the availability and conservation of raw materials; and some have a moral distaste at what they regard as "wasteful" over-consumption.

The contamination of water supplies, greenhouse gas enhancing landfill emissions, neighborhood nuisance effects such as smells, noise, and the attraction of vermin, are all externality effects that affect third parties and will be over-supplied if they are not adequately reflected in the price of waste services. Identifying the nature of externalities associated with waste and the extent to which the market fails to reflect them in the price of discard options is a fundamental step in an economically efficient waste policy.

Apart from market failures, it is also useful to think of waste management and recycling as part of security issues. These issues include: security of materials supply in the recoverability of scarce materials at a lower cost than the virgin supply; environmental security from reducing the risk of damage to the environment and human health; and security of economic progress and alleviation or some of the variability from unsustainable growth.

The economic approach to security is to maximize the net benefits from activities by finding where marginal benefit equals its marginal cost. In the context of waste and recycling, this would involve finding the level of waste reduction, or "abatement" activity, that minimizes the combined cost of abatement activities and the expected possible harm that arises from increasing waste. This, however, is difficult in a world of incomplete information and competing interests for resources and policy attention, but it remains a useful reminder of the possibility that in some situations there may be too much recycling rather than too little.

For most materials, the optimal level of waste is unlikely to be zero waste, because marginal abatement costs rise with successively higher levels of waste abatement. Recovering materials from the community is relatively easy and low cost when materials are concentrated and clean. When they are dispersed and contaminated in use, reuse incurs higher transport and processing costs. While some

materials are so valuable, or so hazardous, as to warrant incurring a higher cost to recover them, for waste materials in general, the optimal and economically efficient level of waste is not zero waste.

Such economic prescriptions can incorporate the environmental and social dimensions of sustainable development in the way that the effects are included and valued in the analysis. Aligning the incentives of private choices with community wide benefits requires identifying significant consequences of waste outside of private considerations that policy needs to address (i.e., market failures and externalities) and what policy measures are most effective and efficient in so doing.

1.4. Policy Approaches to Waste Management

A wide range of measures have been proposed and applied in waste management policy in different countries and there is substantial overseas experience to inform policy development. As the externalities of waste and the economics of proposed solutions to them, vary widely with local conditions, reproducing measures applied in one country may not be efficient for use in other countries.

Generally policy approaches can be divided between “soft” and “hard” measures.

Soft measures include “moral suasion” through education and information campaigns to shift society’s behavioural norms towards voluntary restraint of wastes; and self-regulation and co-management, such as industry groups that jointly agree to reduce wastes amongst their members. Harder measures include regulation and prescriptive direction of various kinds, such as regulation to effect price adjustments, regulation to set performance standards and quantity controls; and regulation to change the structure of suppliers and regulators. Market adjustment through taxes and subsidies, of which there are numerous international examples for waste policy, and market creation devices like tradable permits or quotas are particular types of regulation that use market-like instruments to change incentives. Hardest of all is direct public involvement in supplying services through ownership or partnerships with private entities.

The application of waste instruments does not always have economic efficiency as its primary concern. For example, taxes and levies on disposed waste have long

been used in Australia and Scandinavian countries, but their rates have been primarily set to raise revenue or achieve waste diversion targets and they bear little relation to the price that would be needed to efficiently reflect the full cost of externalities. Physical waste reduction targets are widely used, but with little demonstrable link to efficiency or community well-being. The targets have become an end unto themselves, rather than a means to the end of optimal waste management.

Such approaches will often be implemented in stages and adapted as conditions evolve. Hezri (2009) has identified five separate stages in the development of waste management in Japan with a distinct focus on each one. These stages include:

- public health and sanitation with the establishment of infrastructure and municipal responsibility for the collection and disposal of waste;
- environmental safety and the phasing out of uncontrolled disposal and the establishment of applied standards to waste treatment;
- waste minimization with public acceptance and adherence to the principles of reduce, reuse, and recycle;
- integrated resource recovery with the development of industrial scale capabilities for resource recovery and material recycling; and
- extracting the benefits for climate mitigation with energy recovery from waste to reduce emissions and displace alternative energy.

Hotta (2009) has also identified the need for a consistently high level of regulatory capabilities on the part of municipal authorities and the need for capacity building in local and central government for implementing waste and recycling policies. Rather than reinventing the wheel, international co-operation and development of common standards should supplement capacities in local agencies across countries and improve the efficiency of region-wide resource utilization.

Similar stages and challenges have been faced in other countries and they provide a useful framework in which to consider the evolution of policies. Nevertheless, their form can be quite different, as is shown by the example of New Zealand.

2. Building a Recycling Society: Issues and Challenges for New Zealand

New Zealand may not be typical of Asian countries, but it is still informative of the influences of waste and the recycling activity. It is a small country on the edge of the Pacific Rim with a mountainous topography and a temperate climate that is good for growing produce and converting grass to animal products. It has a strong primary production sector with respect to dairy products, meat, horticulture and fish, and other primary-based sectors, such as forest products and minerals. As an OECD member, it is accustomed to the environmental sensibilities of other affluent markets and its tourism industry attracts visitors from afar to experience its natural scenery. It is, therefore, a country that trades on its reputation for good environmental credentials.

Although it exports primary produce, its geographical location, remote from the major markets, means it must overcome the drawback of distance in order to access these markets. Transport costs, both to other countries and between regions in New Zealand, are significant concerns for exporters and a stimulus for seeking efficiencies in production. This has had a major impact on the pattern of recycling activity in New Zealand.

2.1. New Zealand and Sustainability

In New Zealand, the spirit of sustainable development found early expression in the Resource Management Act of 1991. The purpose of this Act was the sustainable management of natural and physical resources. This is not the same as sustainable development, as the Act is primarily concerned with managing the adverse effects on the environment rather than achieving socio-economic outcomes, but it defines environment to include people and communities. Sustainable development was also introduced through various central and local government initiatives. In particular, councils adopted the principles of Agenda 21 that followed from the 1992 Earth Summit in Rio, but it was not until 2003 that the New Zealand government formally launched a Sustainable Development Program of Action.

This gave effect to sustainable development by selecting four broad areas for programs of action – quality and allocation of freshwater, energy, sustainable cities, and investing in child and youth development. Other government initiatives, such as the Waste Strategy in 2002 and the Energy Efficiency and Conservation Strategy in 2001, were clearly inspired by sustainability but were not central to this program.

Internationally, governments agreed to prepare national sustainable development strategies at the Rio Earth Summit in 1992 but of the 30 OECD member countries, only 23 had prepared formal strategies by 2006 (OECD, 2006). New Zealand was not an early adopter or leader in its approach to sustainable development. Its Program of Action was both relatively late and negligible on measurable outcomes or targets and it spread responsibilities so extensively across the government sector that there was limited oversight. With a change of government in 2008, many parts of the program were revised and while work in these areas continues, it has been "rebranded" with less emphasis on sustainable development.

2.2. Emergence of Material Waste Issues

The management of waste has long been a function of local government in New Zealand. The Health Act in 1956 placed responsibility on local municipalities and rural county councils to provide for sanitary waste collection and management. Many councils took it upon themselves to provide waste collection and disposal facilities, although the law did not require them to do so. Hundreds of landfills were established across the country and many were small with minimal management standards.

By the 1970s and 80s, public concern began to escalate over waste management. Some of these concerns resulted from the increase of littering in an affluent society and some recognized a new awareness of waste management issues in other English-speaking countries, as well as the emergence of the 3R principles of reduce, reuse, and recycle. There was also a period of upheaval in economic perspectives. When the influence of Reaganomics in the USA and the Thatcherite reforms in the UK impacted New Zealand, it led to a more stringent assessment of the role of public spending and the extent to which it could be justified by market failures. This set the scene for local government reformation and environmental protection, along with

planning laws that would influence the future of waste management from the 1990s onwards.

Despite its traditionally large local government presence, waste management has also had increasing involvement of the private sector, both as contractors providing council-funded services and recently as providers of collection and landfill disposal, servicing industry and residential customers directly. The New Zealand waste management industry is commonly divided into different functional components; waste collection and delivery, including sorting for recycling; transfer stations for aggregating small loads; and waste disposal in landfills or incineration. Incineration is not used in New Zealand apart from low volume medical waste and small-scale incinerators attached to schools and other public institutions are being phased out to meet the rising standards for air quality. Some building and construction waste consists of inert material that can be buried in "clean-fills", which require less stringent management standards than mixed waste landfills. These separate functions of collection, sorting, transfer, and disposal often overlap within individual organizations and there is little official information distinguishing the entities engaged in the different functions.

Collection is a competitive business with relatively easy entry, since it has low capital requirements. Landfill establishment and operation involves higher capital requirements, making it more likely that incumbent operations will dominate the local markets. Many old landfills are council operated, but private companies are increasingly involved in the development and operation of new landfills. This private involvement infused new capital and expertise into the activity and brought economies through scale of operation and, in some instances, vertical integration with collection operations.

The recycling industry in New Zealand is diverse, difficult to quantify, and reveals varying characteristics according to materials collected. There is a strong unassisted private sector involved in the recycling of metals, paper, and glass. All these materials can be used as feedstock for large vertically integrated industries that are located in New Zealand. Plastic recycling has a more variable record with no dominant local producers and most recovered materials are destined for export, because very little recycled plastic can be used in food or medical packaging.

Recycling plastics in New Zealand tends to gravitate towards lower value uses, such as housewares and garden equipment. Export markets provide benchmark prices for most materials and are the primary destinations for materials collected in the South Island, because internal transport costs to North Island recycling plants are too high.

A number of local councils support recycling schemes, concentrating on post-consumer waste in which materials for collection are dispersed, low volume, and often contaminated with mixed materials. Much of their emphasis has been on extending the curbside collection of recyclable material at a lower cost than collection for disposal. Some councils assist non-profit organizations with facilities. Most commercial interest is in recycling industrial waste, which yields volumes that are larger, less dispersed, and not as likely to be contaminated. A recent development is the emergence of large scale recycling of green-waste for compost, often involving co-operation between councils diverting waste from their landfills and the production and marketing of compost by commercial concerns. These are particularly successful in main urban centers supplying a large demand from household gardening.

The principal incentives for recycling are market prices for recovered materials, the public relations benefit for demonstrating environmental credentials, and the reduction in costs of landfill depletion. Obstacles to recycling include high transport costs for what are often low value high volume materials and distorted incentives, which are caused by landfill charges set at less than full cost. There are also the inconsistencies of councils holding waste minimization objectives, while encouraging increases in disposal volumes to increase cost recovery from their landfills.

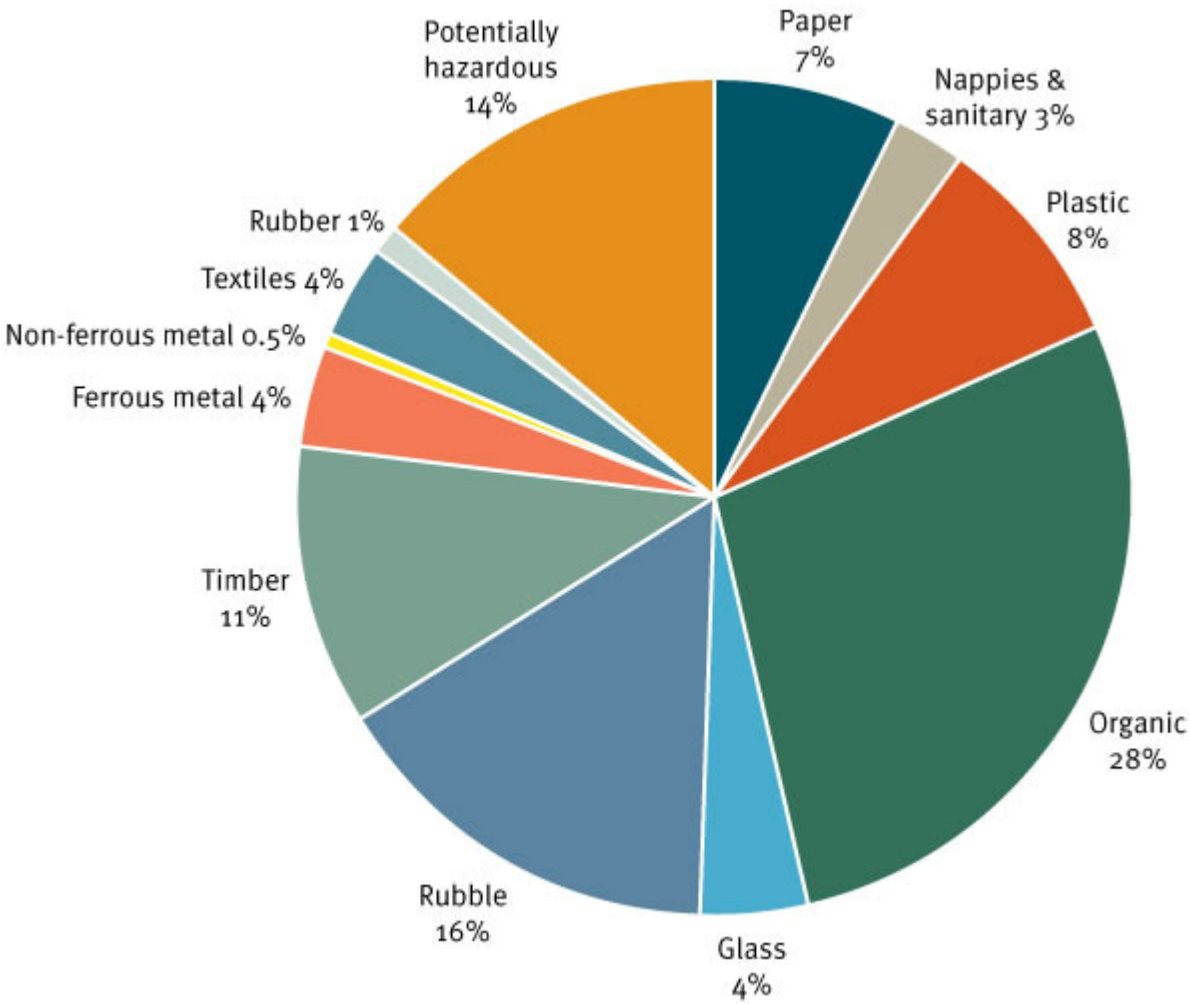
There are market failures in waste management that recycling could potentially rectify, thus creating a role for recycling in the economy. There could also be market failures that hinder the emergence of recycling options themselves. Such market failures include the conventionally defined externalities of activities that impact the environment. Other market failures act primarily on the economy and determine its structure and composition, such as the existence of monopolies, limited competition, and limited contestability in the material use cycle.

Specific market failures, with respect to recycling, that were identified in New Zealand before recent reforms include: waste collection and disposal financed through general (local council) taxation, which distorts the price of disposal (Pearce and Turner, 1993); instances when consumers are charged for disposal that may not reflect the full social cost of disposal (e.g., if landfill fees exclude significant external environmental costs of disposal); and instances when the price of virgin materials does not reflect the environmental damage that occurs in its production but not in recycled material. Therefore, market choices will be biased against recycling (Tietenberg, 1988).

The Ministry for the Environment (2012) estimates that around 8.7 million tons of solid waste (from domestic, commercial, industrial, and institutional waste sources) were generated in New Zealand in 2006, of which 2.4 million tons were subsequently diverted from landfills. This means that approximately 6.3 million tons of waste were sent to landfill and clean-fill sites that year. When averaged across the total population that represents 1,572 kilograms of solid waste per person, per year. Just over half of this figure comprised inert material, like building rubble that can be cheaply disposed of in clean-fill sites.

Waste composition proportions in landfills for national indicator sites in 2007-08 are shown in Figure 1 below.

Figure 1: Composition of New Zealand's Disposed Wastes in 2007-2008



Source: Ministry for the Environment, 2012

Major items by volume are organic waste, rubble, and potentially hazardous waste, which may include e-waste (electronic waste). There are cost saving advantages in diverting large volume materials away from landfills. For instance converting organic waste to compost to sell to home gardeners or diverting inert materials to clean-fills.

As an economy with an important agricultural sector, concerns have emerged about waste management in the rural sector, where localized contamination can occur around old timber processing sites or farm chemical stores. Poor management of on-farm disposal practices can result in a number of risks to people and the

environment. Off-farm waste management can also entail risks to people and the environment if waste plastics are not properly rinsed or cleaned.

A proposal for a commercial scale incineration plant in a rural area was abandoned in the early 2000s, partly because of concerns about perceptions of contamination of surrounding rural produce. Surveys suggest that among individual farmers, on-farm burning is the most frequently used option for managing waste farm plastics, having lower private costs per ton compared to alternatives. Such private cost takes no account of the resulting load of uncontrolled discharges. On-farm burial has an even higher private cost per ton, so avoiding the discharges of on-farm burning implies finding less costly off-farm options. The primary off-farm choice is between disposal in landfills and recycling, but the economics are highly dependent on location, transport costs, and the value of recovered material in the recycling option. The recycling of farm plastics struggles to cover its full resource input costs without external support of some kind, but there are schemes in operation that rely on farmers' returning empty containers to assembly points on their trips into town, which gather sufficient volumes for on-selling.

2.3. Changes to Waste Policy

New Zealand's waste policy has evolved through both non-statutory measures and legislative changes over the past two decades. These measures include:

- local government reorganisation in 1989, which increased the capabilities of councils through amalgamation into larger jurisdictions and created a two-tier system of local government. Regional councils set resource policy over broad areas and local territorial councils for cities. Smaller urban and rural districts provided local collective services, such as roads, waste collection, and parks;
- requirements for resource use consents (permits) and national environmental standards brought in under the Resource Management Act (1991), which prompted improved management practices at landfills and other waste facilities and led to the closure of many smaller older landfills with lower performance standards;.
- amendments to local government legislation, which required local councils to produce waste management plans and encouraged councils to become more involved in waste management and recycling;

- non-statutory guidance from the Ministry for the Environment, such as landfill full costing and best practice management, which has helped spread the adoption of cost reflective pricing and removed some of the distortions in council-run waste management services;
- voluntary producer responsibility schemes, such as the Packaging Accord (2004) between government and industry and other take-back schemes for batteries, car tires, and paints. This has reduced the volume of such materials going to landfill; and
- the Emissions Trading Scheme that applied to landfills after 2010. This gave incentive to operators to monitor and manage their greenhouse gas emissions and in some cases encouraged the use of collected methane to generate electricity to sell on the local power system.

In 2002 the government launched the non-statutory New Zealand Waste Strategy with a vision of "zero waste and a sustainable New Zealand", setting 30 targets across 9 areas of priority. In 2007, the Ministry for the Environment reported variable progress on these targets, but the strategy has been revised and continues to influence government activities in this area.

Waste management remained one of the priorities of the new government elected in 2008, even after the financial crisis slowed the pursuit of sustainability. The culmination of ten years of policy was the Waste Minimization Act of 2008. It aimed to reduce the amount of waste generated and disposed of in New Zealand and to lessen the environmental harm of waste. It also aimed to benefit the economy by encouraging better use of materials throughout the product's life cycle and by providing greater employment through local waste recovery and reprocessing. The Act imposed a levy from July 2009 on all waste disposed of in landfills in order to generate funding to assist waste reduction initiatives by local government, community organizations, and businesses. It also had provisions for helping and (when necessary) making producers, brand owners, importers, retailers, and other parties take responsibility for the environmental effects of their products through product stewardship schemes. It also allowed for regulations to be made making it mandatory for certain groups (for example, landfill operators) to report on waste to improve the information on waste minimization.

For several years before being implemented in the 2008 Act, a levy on waste deposited had been considered, with discussion on whether it should be designed primarily to charge for externalities or simply to raise revenue for supporting other waste management purposes. A single instrument cannot effectively serve both pricing and revenue aims. An externality tax will only change behavior if it is designed for particular externality effects and is large enough for consumers to notice, whereas a revenue raising tax is best spread wide and at a low level to minimize consumers' adverse response. Despite concerns that the levy would be inefficient and incur high administration costs relative to the revenue sought and that it could encourage switching to products that avoid the levy (i.e., paper packaging), the Act provides for a revenue raising levy that bears no relation to the externalities of waste or the quality of their management. In its second year of operation, a report from the Ministry for the Environment found the levy to be operating satisfactorily, although a detailed examination of the costs of its operation and its effect on industries dealing with waste has yet to be undertaken (MfE, 2011).

2.4. Effects of Policy Changes

In the past there have been demonstrable externalities in New Zealand from a relatively unregulated waste industry. These have included the contamination of surface waters and aquifers from leachates seeping from old unlined landfills; the risk of on-site fires, explosions, and toxic emissions from mixed wastes in landfills; the effects of neighborhood nuisance, such as noise, odours, and the attraction of pests and vermin to landfills; and the global effect of emissions from landfills of methane, a potent greenhouse gas.

However, since the 1991 Resource Management Act, tighter consenting requirements have increased the standards achieved by landfills and closed many facilities that could not meet the standards at a reasonable cost. The number of landfills operating in New Zealand dropped from 327 in 1995 to 54 in 2010. Price distortions have also been reduced as councils have moved to "pay per bag" charging rather than the funding of household collections from local property tax (rates). Disposal fees now reflect the full cost of landfills and there is a greater involvement

of specialist private waste management companies that bring commercial disciplines to their operations.

The disposal of waste in landfills in New Zealand has slowed recently and volumes disposed decreased by 29% per unit of economic activity between 1995 and 2006 (MfE, 2007). Existing policies were already decoupling economic growth from waste generation before the 2008 Act was implemented. The reduction in landfill disposal as incomes rise has continued throughout the financial crisis. This may reflect waste being diverted for disposal in clean-fills or other unrecorded sites, as the waste levy applies to landfills only, but there is no reliable evidence on this.

Table 1 shows the changes in landfill disposal since the mid-1990s and relates this to changes in population and income. The number of registered sites for disposal has reduced substantially as smaller and less well managed landfills have either reached the end of their useful lives, or have failed to obtain consent to continue operating. The tonnage disposed of has also reduced, contrary to the rise in population and income. Compared against a dollar of GDP in both aggregate and per capita terms, tonnage disposed has been declining. There is some ambiguity about by how much, because data on landfill disposals and diversion of waste to recycling are patchy, dependent on periodic surveys or censuses of landfill operations. The imposition of a waste levy since 2009 has improved data collection and will build a more reliable series in future.

Table 1: Waste Disposals to Landfills over Time

	Population	GDP	GDP	Disposal	Disposed	Source
	m	NZ$m	US$m	Sites	Tonnes	
1995	3,707	93.564	61.417	327	3.182.120	State of Environment Report 1997
1999	3,833	104.109	55.133	221	2.765.020	Landfill Census 1998-1999
2002	3,936	116.464	54.058	115	3.022.000	Landfill Census 2002
2005	4,127	130.874	92.187	95	2.767.400	Extrapolation from Canterbury Data
2010	4,362	134.654	97.156	54	2.532.007	Ministry for the Environment

Note: GDP estimated in constant 1995/96 dollar terms
Source: NZIER

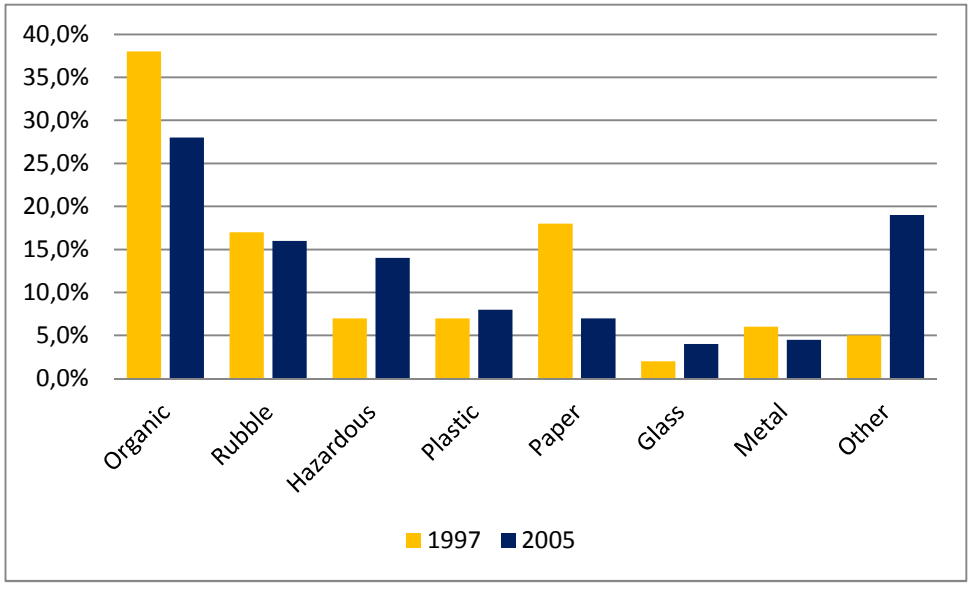
As landfills become fewer in number and subject to higher management standards and full cost pricing, the risk of externalities from them harming the surrounding environment becomes lower. Compared to many other countries, New Zealand has no lack of landfills or the space for new ones and economic

considerations suggest a different mix of material disposal and recycling would be optimal in New Zealand, more so than that found in more land-constrained countries.

Limited information exists on the quantities (either volume or weight) of items recovered for resale. The Ministry for the Environment's *Environment New Zealand 2007* reported that in 2005 2.4 million tonnes were being diverted from landfills to recycling. Of this total, 14% was from municipal waste streams and the rest was from commercial business discards. About half of that volume was clean-fill material, which would mean that the proportion of material diverted to recycling would be the equivalent of about 40% of the volume actually disposed in landfills that year.

Nevertheless, there are signs of positive moves towards reducing the volumes being disposed of in landfills. Apart from the reduction in volumes, Figure 2 summarizes the figures from the Ministry for the Environment showing changes in composition of wastes disposed of between 1997 and 2005. This shows a marked reduction in the shares of big volume items like organic wastes and paper. The increase in the share of hazardous waste may be attributable to better recording of these materials.

Figure 2: Change in Landfill Waste Disposal over Time

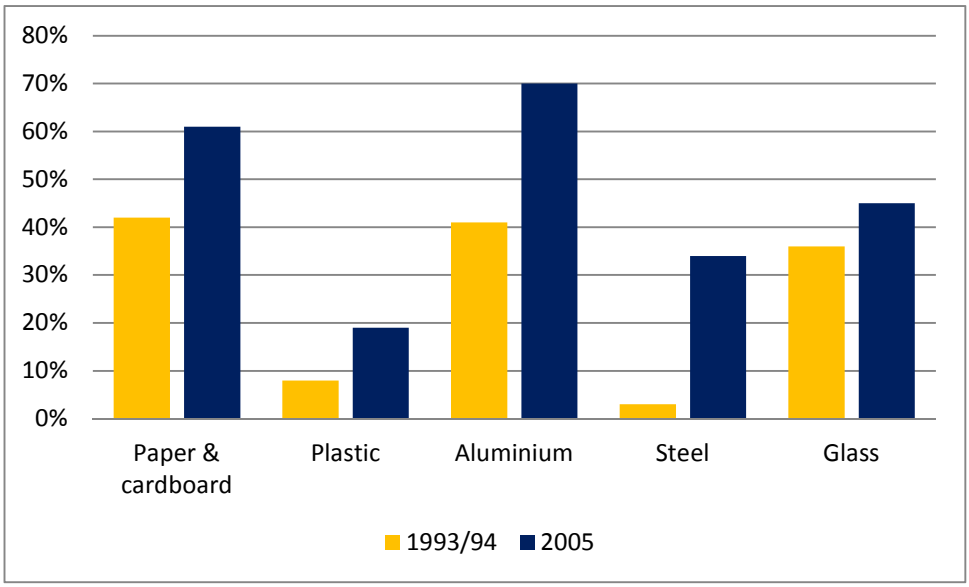


Source: Ministry for the Environment 2009a.

Information on changes in recycling activity is also incomplete. However, Figure 3 summarizes the figures from the Ministry for the Environment and the New

Zealand Packaging Council and shows that recycled volumes of the main material categories have increased as a share of each material's total use for packaging over a 10-year period (Goddard, 2006).

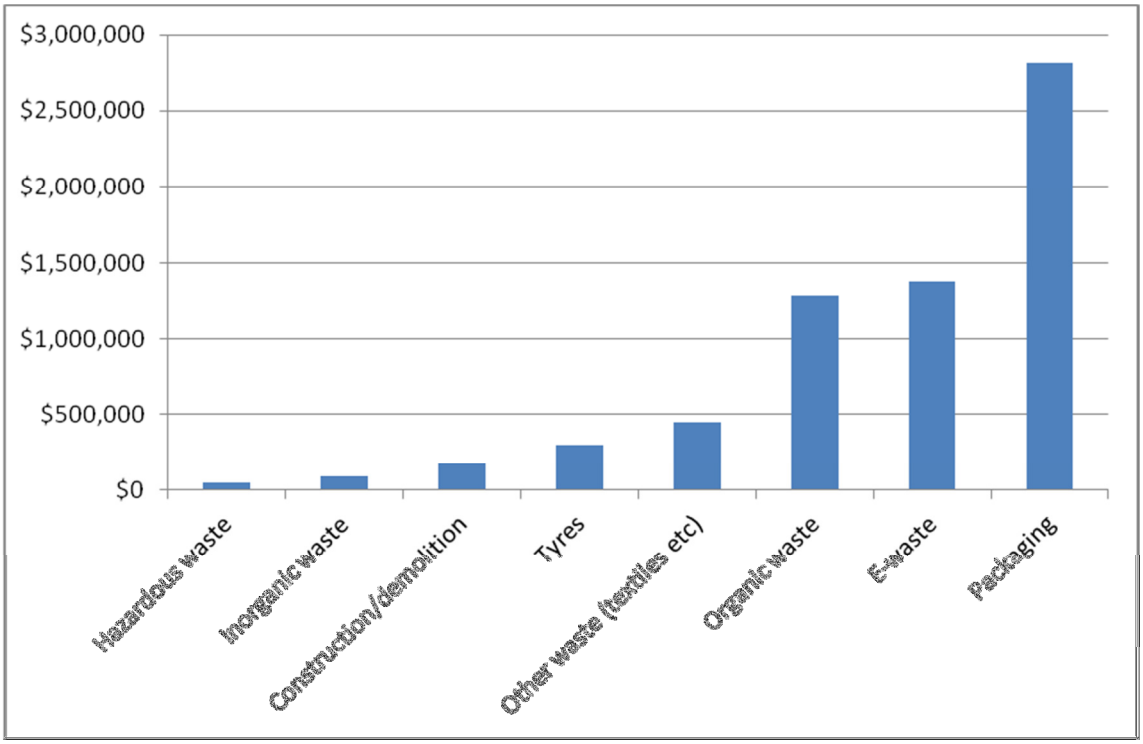
Figure 3: Change in Recycling of Packaging Materials over Time



Source: Ministry for the Environment 2009a.

The waste levy provides revenue which is split between local authorities and a Waste Minimisation Fund set up to support waste and recycling initiatives by private and non-profit organisations. Figure 4 shows the distribution of grants from that fund in 2010, the first full year of its operation. The first round of the Waste Minimisation Fund grants allocated $6,536,641 to 25 projects and attracted a further $6.5 million (approximately) contributed by project partners (MfE 2011). The largest shares went to packaging, e-waste and organic wastes.

Figure 4: Levy Funded Grants to Recycling Activities



Source: Ministry for the Environment 2011

2.5. Obstacles to More Recycling

The characteristics of New Zealand present particular challenges for the viability of recycling materials. Population density is low and waste dispersed over large areas of the country increases the cost of material collection and limits the realization of economies outside of the main cities. Because of the size and concentrated structure of industries in New Zealand, for many materials there is only one plant capable of using substantial recovered material. Processing stations are generally located at one end of the country rather than centrally. The North Island city of Auckland is the center for glass, paper, and steel; while Bluff, which is located in the southernmost South Island, is for aluminum.

New Zealand is elongated and internal transport costs are high, but the alternative of exporting recovered materials is subject to fluctuating commodity prices and exchange rates. Recycling operations may be faced with periodic price downturns and a choice must be made of bearing operational losses, storing material

until prices improve, or disposing of it at landfill, which does not look good with the publicity material that has been collected for recycling with the council's assistance.

Waste policies have increased the volume of recycling in New Zealand, but this now exceeds the capability to reprocess the material within New Zealand and the recycling industry has depended on the export of materials to China and other Asian countries. Since the global financial crisis gathered pace in 2008, the demand for such materials on the international market has weakened, leaving many recycling schemes facing reduced revenues. Council-backed free curbside collection for recycling or storing materials for which there are no current viable market outlets are coming under increasing scrutiny as councils respond to financial stringency.

New Zealand's approach to waste management has depended on voluntary commitment to measures that restrain the production of waste and its disposal. The Waste Management Act has provisions for more compulsory measures, but has yet to utilize them other than the waste levy. There are practical and economically justifiable reasons why landfill tax, product charges, and subsidy schemes have been passed over in favour of voluntary approaches to promote waste minimization and recycling. Making such measures mandatory would incur transaction costs in implementation and geographical variability increases the likelihood that uniform national measures would create inefficient distortions and cross-subsidies between locations around the country. However, that may change and more compulsory measures, like product stewardship schemes based on extended producer responsibility may arise given co-operation of the overseas suppliers of particular products.

2.6. The Case of e-Waste

E–waste, or waste electronic appliances such as televisions, mobile phones, computers, digital cameras, and other consumer electronic items, is viewed as an increasing problem in New Zealand. This is predominately because consumers and local authorities are in doubt as to how to dispose of them. Electronic products have a short effective life span and are turned over within a few years as new models supersede older ones. Technological advances and marketing trends encourage consumers to frequently replace equipment even while it is still in good working

order. Other changes, such as the impending switch from analogue to digital television broadcasting in New Zealand in 2012, also render equipment obsolete and destined for the e-waste stream.

International experience suggests that a large volume of e-waste consists of household appliances and "white-ware", such as household refrigerators, washing machines, and dishwashers. This, however, does not appear to be the case in New Zealand where the market for white-ware products is dominated by a single domestic manufacturer accounting for nearly 50% of sales. This domestic manufacturer and a major import competitor, run take-back schemes through their distributors and the industry deems that up to 95% of these white-ware products are being recycled (MfE, 2006). These items are comprised mostly of steel, which has low value yet is readily recyclable, but they also contain non-ferrous metals with higher monetary value. The recovery of refrigerant materials such as CFCs and HCFCs is made more valuable under the terms of New Zealand's emissions trading scheme for greenhouse gases. With what amounts to a voluntary Product Stewardship commitment, the white-ware companies have adopted "Design for Environment" principles to avoid waste production and aid material recovery. These companies assert that the take-back schemes facilitate their domestic sales and improve turnover of the national appliance stock, along with the removal of older less efficient appliances from circulation.

The majority of other types of old appliances in New Zealand are disposed of in landfills without any attempt to recover the toxic and sometimes valuable materials within them. There is believed to be a large quantity of obsolete electronic equipment held in private premises by people who have upgraded their appliances, but are reluctant to dispose of the old models in landfills as they regard this as an irresponsible disposal option.

Periodically suppliers of such equipment will offer trade-in deals, taking back old equipment for a discount on new models, but this is by no means a universal practice. In recent years a charitable trust has organised "eDay" collections of such equipment in the main cities across New Zealand, when private individuals can deliver their e-waste to a collection point. The trust is able to sort and recover some materials for local recycling or arrange for the export or responsible disposal of the

remainder. Another charitable foundation raises funds for child health services by collecting old mobile phones and sending some to Hong Kong for reconditioning and resale and others to a local recycler to recover the metals.

But there are costs of e-waste that are currently hidden and "off-budget" from the viewpoint of the waste industry, local authorities, and non-profit bodies involved in their recycling. These are borne across the community, by the volunteers who give up spare time on work associated with eDay activities, by those who store e-waste while seeking a responsible disposal option, and by the community at large facing the risk of environmental and health costs associated with their disposal in landfills.

The risk of contamination from landfilling e-waste is low, yet a preference for responsible disposal persists. New Zealanders seem less willing to pay for it to be removed than they are to put up with storing old e-waste and taking the time to deliver it on eDay. However, the characteristics of e-waste create obstacles to commercial recovery in New Zealand. There is not a uniform or concentrated market for electronic appliances and the diversity of products makes it difficult to achieve economies of scale in disassembling products to extract small quantities of valuable materials. The diversity of suppliers also creates a risk of free-riding on collective industry initiatives to recover and accumulate materials into exportable quantities (EDay NZ Trust, 2011).

Within New Zealand, those involved in e-waste favor a product stewardship scheme that takes responsibility for recovering e-waste, but this has not yet been implemented. Product stewardship is about product suppliers understanding, controlling, and communicating a product's environmental health and safety issues and the related effects through its life cycle, from production to final disposal or reuse. Under the Waste Minimization Act, five accredited product stewardship schemes exist for waste oil, farm plastics (two schemes), refrigerants, and glass. Similar voluntary schemes exist for selected suppliers of computer equipment and vehicle batteries and two of the main mobile phone service providers also have take-back schemes. However, voluntary product stewardship schemes for e-waste are susceptible to free-riding possibilities, thus raising questions over whether such schemes would require compulsion. If so, the industry would prefer a co-regulatory structure overseeing the scheme, in which government and industry co-operate in

setting and enforcing the rules, but in a sector of such diverse players, agreement on such an arrangement has yet to emerge.

Gathering sufficient volume to cover collection costs and transport to larger manufacturing centers is a constraint on the handling of e-waste in New Zealand. Smaller nations have limited recycling capabilities and are typically limited to the disassembly and separation of major components, such as plastics, metals, and circuit boards. Countries with a large manufacturing base have in-country recycling facilities capable of extracting valuable materials for reuse. There are complementary roles between countries in the recovery and reuse of electronic materials.

There is a growing reluctance among developing countries to be seen as a dumping ground for e-waste from richer countries and as incomes rise in these countries low labor costs will become less of an advantage for disassembly and material recovery. Restricting trade in such materials can also represent lost opportunities for recovering materials that are becoming scarcer. For countries like New Zealand, where conditions of remoteness and high labor costs are not favorable for high volume recovery of such materials, there is a risk that the materials embedded in these products will get locked into a one-way flow to disposal because of obstacles to effectively recover and recycle them. Economic factors push to such an outcome, but could be compounded by regulatory or administrative arrangements adding further obstacles to trade in waste materials.

Countries with a comparative advantage in recovering e-waste may miss an opportunity for securing materials and employment if they are not open to receiving it. Avoiding this may require international agreement on the standards for e-waste that would be acceptable for trade. It would also be assisted by the companies that manufacture products that quickly become e-waste, putting more effort into designing products that can be easily up-graded or disassembled and making provision for recovering the materials through stewardship undertakings.

2.7. Further Moves on Waste and Rrecycling

Waste management policy in New Zealand has achieved much over the past decade, but further extensions for sustainability purposes are questionable. Its

achievements include improvement in the access to and use of recycling services; more stringent application of regulatory requirements; the rationalization of waste management facilities; increased uptake of best practice guidelines for managing disposal facilities; and the strengthened regulatory framework of the Waste Minimization Act 2008 (MfE, 2010). Nevertheless, the Waste Minimization Act's levy on waste disposed in landfills bears no relation to measurable externalities coming from landfills, most of which are now relatively new and managed to high standards. As a revenue raising device the levy is inefficient, as it collects off a narrow tax base. Pursuing targets for waste minimization and maximizing material recovery, reuse, and recycling without explicit consideration of the costs and benefits will itself be wasteful of non-material resources, such as labor, energy, and capital diverting them from other activities of value to the community.

Despite these improvements, waste management policy formulation continues with a direct but narrow interest in waste management. The Ministry for the Environment's "*Environment New Zealand* 2007" report states explicitly that, "the development of the New Zealand Waste Strategy and its targets illustrates a shifting focus away from controlling effects of waste disposal towards minimizing the amount of waste requiring disposal and increasing how efficiently valuable resources are used" (p.140). In other words, waste policy is no longer guided by the "effects basis" of the Resource Management Act, but minimizing waste is an end in itself. The language of waste minimization and the slogan "towards zero waste" may have resonance in social marketing, but in economic terms is a costly and practically unachievable goal due to diminishing marginal returns from waste abatement.

There is a risk that popular conceptions of waste reflect an outmoded picture of past waste problems, rather than the current situation and are an unreliable guide for policy direction. In a public discussion document on waste minimization (MfE 2009b), the Ministry for the Environment cited an *Environmental Performance Review of New Zealand* by the OECD (2007), which noted that household waste sent to landfills roughly tracked gross domestic product and it saw little sign that waste would not track GDP in future (MfE, 2009b). Yet in the same paragraph the Ministry noted that between 1995 and 2006 the weight of solid waste disposed in landfills had increased by 14% (similar to population growth), whereas real GDP had

increased by 40%, suggesting some decoupling of waste from economic growth was already occurring. When the government revised its Waste Strategy in 2010 (MfE, 2010), it identified its "zero waste vision" of the 2002 Strategy as having too many targets that were unable to be measured or achieved. Its revisions sought a simpler more flexible approach through two high level goals, reducing the harm caused by wastes and improving the efficiency of resource use.

Concerning recycling, the existing statistics make it difficult to isolate this activity from the wider functions of the manufacturing and distribution industries. In respect to commodities (metals, paper, plastic, and glass), the potential for additional employment is likely to be restricted mainly to an increase in collection and sorting activities. That is, the introduction of curbside recycling collections and drop-off facilities in those parts of the country where they do not already exist and sorting of the collected materials. However, these require local government funding.

Local governments support curbside collection as it is popular with constituents and provides residents with the "warm glow" of discarding their waste responsibly, but it results in a predominance of high volume low value commodity materials in most recycling operations. Markets for recovered material are limited and generally require high transport costs to reprocessing points or export ports. They are also prone to international price volatility. Those employed in the collection, sorting, and recycling are generally low skilled or unskilled, labor.

Some in the recycling industry claim there is limited capital available to develop the recycling industry, but this may simply reflect the lack of long term sustainability of small recycling businesses with an inability to present sound investment proposals in respect of materials that are low in value and subject to price variations. This means that the industry relies on funding from agencies such as councils and non-profit organizations to supplement the resources they generate internally.

The problem with further policy progression is the lack of reliable and comprehensive data on waste volumes and the economic cost of all the current activity. This would give a clear picture in quantitative terms of what is being achieved and the value attached to these achievements in terms of recoverable material and the avoidance of other costs (e.g., the depletion of landfill space). There

is little basis for assessing whether the targets being pursued are worth achieving when the waste volumes and their associated externalities are unknown.

Without comprehensive information on the waste being deposited in landfills, it is difficult to gauge the scale of adverse effect and externality caused by landfilled wastes. However, overseas evidence suggests the economic values of residual externalities of wastes in modern well-managed landfills are less than the general operational costs of such landfills.

There is also a risk that without a better basis for assessing the costs and benefits of measured achievements, pursuing set targets will overshoot the efficient level of waste abatement and recycling and will result in excessive costs imposed on the economy. These costs are felt not only by those directly affected by the targets, but also by all consumers of waste services and other products (such as packaging). These consumers include households and businesses using material inputs into their own goods and services with potential impacts on their competitiveness.

The risk for any future policy is that now the benefits of easy waste management improvements have been achieved, the pursuit of further improvements will encounter diminishing returns to effort, and increasing cost in implementing policy. Continuing changes in the policy environment not only divert resources in affected businesses from productive activities, they also create uncertainty over what may or may not be required in future with a potentially negative effect on investment. Every dollar diverted to waste abatement has opportunity cost in alternative uses forgone, such as other environmental remediation, education, health, or business investment. If this is made explicit it may be more valuable to the public than further waste reduction.

New Zealand is not alone in losing sight of economic implications in its approach to waste management policy. Environmental impacts of waste management in OECD countries have diminished over the past 10 years in response to improved regulation and standards on incinerator emissions, landfill practices, and new technologies for handling wastes. Yet current disposal capacities continue to be regarded as insufficient in many countries and poor past practices have created a legacy of contaminated sites that exert undue influence over perceptions of the current industry. In response, local authorities set waste management charges that do

not reflect environmental externalities and fail to provide a rational basis for choosing between potential measures for waste management (OECD, 2004).

2.8. Lessons from the New Zealand Experience

A number of conclusions can be drawn from the New Zealand experience with waste and recycling. Changing the regulations and incentives improve the outcomes for the environment, but it also helps to have an institutional structure that can effectively implement the changes. In New Zealand's case, a wide range of institutional changes in the structure of local government and regulatory arrangements has contributed to cleaning up the waste management, apart from specific measures targeting waste management. In tandem, these have contributed to the de-coupling of economic growth from waste disposal growth.

The introduction of pay-per-bag charging enabled private collection and disposal services to increase their presence and increase competition in the market. This injected new commercial disciplines and efficiencies into waste management, but it also created casualties. There was at least one rural council that built a new landfill to service its residents in the 1990s, but then found that the volumes and fees it anticipated were uncompetitive with private services that hauled waste to more distant landfills.

However, given the low volumes of highly dispersed material with fluctuating prices it is difficult to build up the recycling of many materials to a scale that is sustainable and significant for the economy at large. Recycling may assist manufacturers of steel, pulp, and plastic products to secure some of their inputs, but it does not create substantial jobs or domestic demand.

Recycling businesses can be self-sustaining in large urban centers with access to substantial volumes of industrial waste, but elsewhere recycling in New Zealand has relied on non-commercial inputs from local government and non-profit sectors. These supported recycling activities have tended to focus on the less commercial end of the recovery and recycling spectrum, namely household wastes with low volume and mixed materials yielding a lower net return on recovery. This reflects a popular demand for better waste management and if it did not, local government input and voluntary contributions to non-profit bodies can be expected to reduce. This,

however, does mean there is a strong political involvement and influences from interest groups on the choice of supported activities, which may not result in the most economically beneficial activities being selected for support. The waste levy may perpetuate a portion of the industry that is dependent on the distribution of its revenues and other sources of support.

The information available on the generation of wastes and the overall waste management system in New Zealand has limitations, which hinders good management. This, however, is improving with the implementation of new legislation and should enable better assessment of the options in the future.

The evolution of waste policy in New Zealand has gone through stages similar to those identified in Japan by Hezri (2009) with a varying focus on sanitation, environmental safety, waste minimization, resource recovery, and climate policy. But the resource recovery stage has not produced a robust, industrial scale recycling sector in New Zealand. The future is likely to involve the extension of product stewardship schemes, but the experience will be different from that which is in the more populous parts of Asia. For many of the products that are being recovered and recycled, there is no large local industry to use the materials or adopt Design for Environment principles to improve the recyclability of products. The example of the e-waste sector in New Zealand is informative. The white-ware industry, which has domestic production and relative dominance of a few suppliers, has voluntarily adopted product stewardship arrangements, whereas the more diverse and less organized sectors supplying information technology appliances have yet to find a unified view of how that should be achieved.

3. New Strategy and Implications for East Asia

East Asia is a region that has experienced rapid economic growth in its bid to raise the standard of living of its peoples to similar levels as those enjoyed in developed countries. Rapid economic development has raised some pressing issues, such as dealing with the increase in waste production; and the internationalization of

waste and material flows and the simultaneous risks of some countries' low cost structures attracting waste from other countries in excess of their capacity to handle them). There are also risks of environmentally unsound waste management practices, such as those arising from the trade in second hand appliances, which are repaired by consumers and result in possible toxic or hazardous components disposed of in the general waste stream.

Rapidly growing countries need to break the link between waste production and growing affluence, as rapid growth creates a risk of wastes overwhelming the capacity to deal with them. Compounding the issue are questions of material resource security and the availability of critical strategic materials and also dealing with the slow recovery from the financial crisis in traditionally affluent markets.

East Asian countries face their own particular circumstances and need their own customized approaches to waste and recycling (APEC, 2010). Many of them already have advanced policies in this area. China, Japan, and Korea have incorporated the concept of a circular economy into laws and regulations on how discarded materials are treated, generally with the objective of recovering and reusing materials where possible and reducing reliance on imported raw materials (Lee and Na, 2010). Some have also put restrictions on imports of waste materials from other countries to avoid the accumulation of excessive waste and importation of cheaper scrap that undermines the development of domestic recycling.

New Zealand faces very different demographic and economic development conditions. Its waste policies to date, like those of other Asian countries examined by ERIA's 3R Working Group, have been oriented towards environmental protection rather than creating a strong industry around reduction, reuse and recycling, and improving resource use efficiency (Prakash, 2011). Some of the lessons from this experience include the following:

- Recycling will be under-developed if there is mis-pricing of the waste stream with the external costs of disposal that is unaccounted for.
- Recognition of the externalities of waste and the alternatives to disposal is required to build support with industry for change.
- As people become more affluent the demand for more responsible waste disposal will also grow, although it may not be sufficient for commercially viable operations.

- Municipal authorities and non-profit organizations that harness voluntary contributions can enable recycling that would not be commercially worthwhile, but there is a risk of:
    - concentrating on the low value mixed residential waste streams; and
    - losing sight of the economic rationale for diverting material from the waste stream, i.e., realising value from the net return of recovered materials and / or reducing other costs of landfill operation or environmental externalities.
- Risks and volatility in materials markets mean few countries are likely to be able to recycle all materials and will be better off trading to locations able to recycle materials.
- Waste recovery and recycling does not need to be a "race to the bottom" by countries competing to handle waste economically and compromising their environmental conditions.
- East Asian countries already have scale and other advantages with their local manufacturing capabilities for recycling, which give them greater benefits from regional co-operation and specialisation.

Encouragingly, New Zealand has apparently broken the link between economic growth and growth in waste disposal. Policy has evolved with incomplete and unreliable data on the scale of activity nationwide. An unambiguous advantage of the newly introduced waste levy is that it has improved the monitoring of volumes disposed in landfills, so there will be better information on which to base future policy.

New Zealand is a country that has championed the notions of comparative advantage and free trade by dismantling tariff protections for a range of manufacturing industries, such as car assembly and tire manufacture since the mid-1980s. However, it has little comparative advantage in recycling a variety of materials. As a small country that imports manufactured goods and appliances, its recycling capabilities are largely limited to the recovery and separation of major components, such as glass, plastics, metals, and some electronic componentry like circuit boards. The economic viability to extract valuable elements like gold, silver, copper, or rare minerals resides in countries with larger manufacturing bases and the scale to extract and reuse materials. The roles of large and small countries are complementary, but require free movement of materials between countries to make

the most of the available resources. This in turn requires clear standards on trade in materials and enforcement across trading partners (Wendell, 2011).

With the scarcity of rare earth minerals that have proved useful in developing greener technologies, such as wind turbines or the batteries for hybrid vehicles, it is not sustainable for countries to assemble them, embed them in products, and then export them to distant markets where they end up in landfills. Economic and institutional barriers that prevent them from being recovered and returned to where they can be used need to be reduced. A recycling society that truly makes the most of available resources needs to work across borders in ways that do not unduly disadvantage each locality within the broader region.

4. Policy Recommendations

Each country in the East Asian region can find an economically worthwhile role for recycling that is appropriate for their particular circumstances. They will have different emphases on environmental improvement, material recovery, and economic stimulation. However, there will be complementary roles between countries that should enable them to achieve more in aggregate through co-operation than through pursuit of individual approaches. Potential areas for co-operation include:

- supporting work that recognises the twin role of recycling in contributing to material inputs into industrial production and contributing to the improvement of environmental conditions;
- recognizing that solid waste data is often partial or unreliable and support work is needed to improve data, as well as a consistent approach to measurement across countries so that reliable information can support sound policy;
- recognizing that cross-border transfers of potentially hazardous waste and e-waste cannot be resolved by one nation alone. International co-operation needs to be developed to apply common standards and systems that enable trade in waste materials to be monitored more effectively;
- recognizing that decisions on discarding materials need to be made with an understanding of the full social costs of each option (disposal, incineration, etc.) and support work that enables municipal authorities and others in the industry to charge for waste collection and disposal; and
- developing common standards for the trade in recovered waste materials and removing barriers to valuable components being exported or imported so that they can be reused.

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