SUCCESSFUL GROWTH IN MIDDLE INCOME COUNTRIES: WILL EAST ASIA SHOW THE WAY AGAIN?

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Abstract

Emerging East Asia has achieved remarkable growth rates since 1998, and successfully integrated both regionally and globally. This paper attempts to contribute to the debate on what this region—and other middle income countries— need to do to join the ranks of developed nations. Besides the importance of exploiting economies of scale, the paper points out that the harder task ahead for Emerging East Asia is to complement global and regional integration with domestic integration. This requires strengthening social cohesion so that societies stay as strong as economies; addressing issues of inequality and rapid urbanization; and providing clean governments which efficiently reinvest the economic returns that accompany fast growth. If developing East Asia's policymakers can succeed in making this third integration as successful as the first two, they can, within a generation, eliminate poverty and hence provide valuable lessons for middle income countries around the world.

ملخص

حققت منطقة شرق آسيا الصاعدة معدلات نمو اقتصادي مرتفعة للغاية منذ عام ١٩٩٨، وتمكنت بنجاح من الاندماج على المستويين الإقليمي والدولي. وتهدف هذه الورقة إلى المساهمة في الجدل الدائر حول ما تحتاجه هذه المنطقة— ومن ثم البلدان متوسطة الدخل الأخرى—حتى تتمكن من الارتقاء بدولها إلى مصاف البلدان المتقدمة. وإلى جانب أهمية استغلال وفورات الحجم، تشير هذه الورقة إلى أن المهمة الأصعب التي تواجه منطقة شرق آسيا الصاعدة هي استكمال اندماجها على الصعيدين الإقليمي والعالمي بتحقيق اندماج ثالث ولكن هذه المرة على المستوى المحلي. ويتطلب ذلك مواجهة تحديات كبيرة مثل تحقيق التماسك الاجتماعي، والتعامل مع قضايا توزيع الدخل والضغط السكاني الكبير على المدن، وإيجاد حكومات نزيهة تعمل بكفاءة على إعادة استثمار العائدات الاقتصادية المصاحبة للنمو السريع. وإذا نجحت منطقة شرق آسيا الصاعدة في تحقيق هذا الاندماج الثالث، فسوف تتمكن في غضون نحو ثلاثة عقود من القضاء على الفقر، وتقدم بذلك دروسا قيمة للبلدان متوسطة الدخل في كافة أنحاء العالم.

INTRODUCTION

Less than ten years ago, in 1997-98, a financial crisis brought four economies in East Asia to their knees.[1] Many predicted that the structural weaknesses that the crisis laid bare—corruption, cronyism and nepotism—would condemn the region to stagnation as had happened in Latin America after a debt crisis in the mid-1980s. Emerging East Asia was expected to lose years of growth, just as Latin America had lost a decade. Instead, the growth record of the emerging economies of the region since 1998 has been remarkable: gross domestic product has almost doubled, growing by over 9 percent per year to reach $4 trillion in current dollar terms by 2005.[2]

Other indicators of performance are equally impressive. Exports have grown to one-fifth of the world's total, or over $2 trillion per year, making emerging East Asia one of the most open trading regions in the world. The region is the largest destination for foreign direct investment and has $1.6 trillion worth of foreign exchange reserves. Its capital markets have grown and domestic financial sector assets amount to $9.6 trillion. There are 300 million fewer people living in poverty (measured as per capita expenditures of at least two dollars a day) today than there were in 1998. A middle class has emerged, with a lively voice in economic affairs. Business-friendly reforms are moving ahead throughout the region, and confidence in economic prospects is high.

An economic renaissance is unfolding in the region. Just as the renaissance in Europe was a period of intellectual discovery that produced new ideas and economic development, innovation is getting similar attention in East Asia. The pace of change in trade and finance, ideas and technology, cities and urban development, earnings and skills, and demands on the public sector is breathtaking. If current growth trends prevail, by 2030 East Asia will again have as large a share of the world economy—about 40 percent—as it did in 1820, when it began a long decline in global importance.

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[1] The crisis-hit countries were: Thailand, Indonesia, Malaysia, and South Korea.

[2] East Asia refers to the ASEAN countries, plus China and Hong Kong, China; Taiwan, China; and the Republic of Korea, plus Japan. Emerging East Asia refers to East Asia minus Japan. Developing East Asia refers to emerging East Asia minus Hong Kong, Korea and Singapore.

Table 1. East Asia Has Grown Rapidly Despite a Crisis
(Per Capita GDP Growth Rates, 1966-2004)

Region/country	Growth	Number of years in which the rate was:		
		Negative	Between 0-2%	Above 2%
East Asia & Pacific	5.77	2	3	34
China	7.00	3	3	33
Indonesia	4.03	4	3	32
Thailand	4.79	3	5	31
Philippines	1.28	6	21	12
Malaysia	3.95	5	3	31
Latin America & Caribbean	1.46	10	15	14
Middle East & North Africa*	1.23	8	13	9
South Asia	2.56	1	12	26
Sub-Saharan Africa	0.18	14	20	5
OECD	2.49	0	18	21

Source: World Bank WDI and GDF Central Databases.
**Note*: Data for the Middle East and North Africa are from 1975 to 2004.

In a world where development seems so ephemeral, how is it that a dozen countries in East Asia have all been successful? Common economic characteristics cannot be the explanation, since the diversity among countries in the region is enormous. Emerging East Asia includes China, with 1.3 billion people, and Mongolia with 2.5 million. Per capita incomes range from $24,000 in Singapore to $400 in Laos. Hong Kong, China is perhaps the most laissez-faire economy in the world, while Vietnam remains one of the few remaining socialist economies. Is there something special about being in East Asia that makes these economies grow?

There is a large literature that has attempted to answer this question. Perhaps the most widely-quoted study is by the World Bank, which published *The East Asia Miracle* in 1993. *Miracle* concluded that "in large measure the HPAEs (high-performing Asian economies) achieved high growth by getting the basics right." But it went on to say that fundamental policies were only part of the story and that "in one form or another, the government intervened—systematically and through multiple channels—to foster development." *Miracle* noted that a willingness to experiment and adapt policies to changing circumstances is a key element in economic success. This insight provided the rationale for a recently completed study of economic

growth in East Asia. How should governments in East Asia today adapt their policies to reflect the profound changes seen in the region and the world since 1990? This paper provides a summary of the study's findings.

MOTIVATION—ESCAPING THE MIDDLE INCOME SQUEEZE

One might ask why, given East Asia's record of resilience and growth (see table 1), should countries in the region do anything different now. The main reason is that with sustained growth, the region has become more middle-income. Once Vietnam reaches middle income status—which could happen as early as 2010—more than 95 percent of East Asians will inhabit a middle income country. And middle income countries have grown less rapidly than either rich or poor countries, which accounts for the lack of economic convergence in the world. Garrett (2004), for example, points out that while the per capita GDP of high income countries rose by about 50 percent between 1980 and 2000, that of low income countries increased more than 150 percent, and the income ratio between high and low income countries has been cut in half. But average real per capita incomes of *middle-income* countries grew by less than 20 percent in the 1980s and 1990s, so the distance between them and high income countries *increased* by about 20 percent. Middle income countries, it is argued, are squeezed between low-wage competitors in poor countries who dominate mature industries, and innovators in rich countries, who dominate industries undergoing rapid technological change.

This line of reasoning suggests that it is necessary for countries to change development strategies to grow successfully through middle income and join the ranks of developed nations. What gets countries to grow from per capita incomes of $1,000 to $10,000 is quite different and more difficult than what helped them grow from $100 to $1000 per capita.[3]

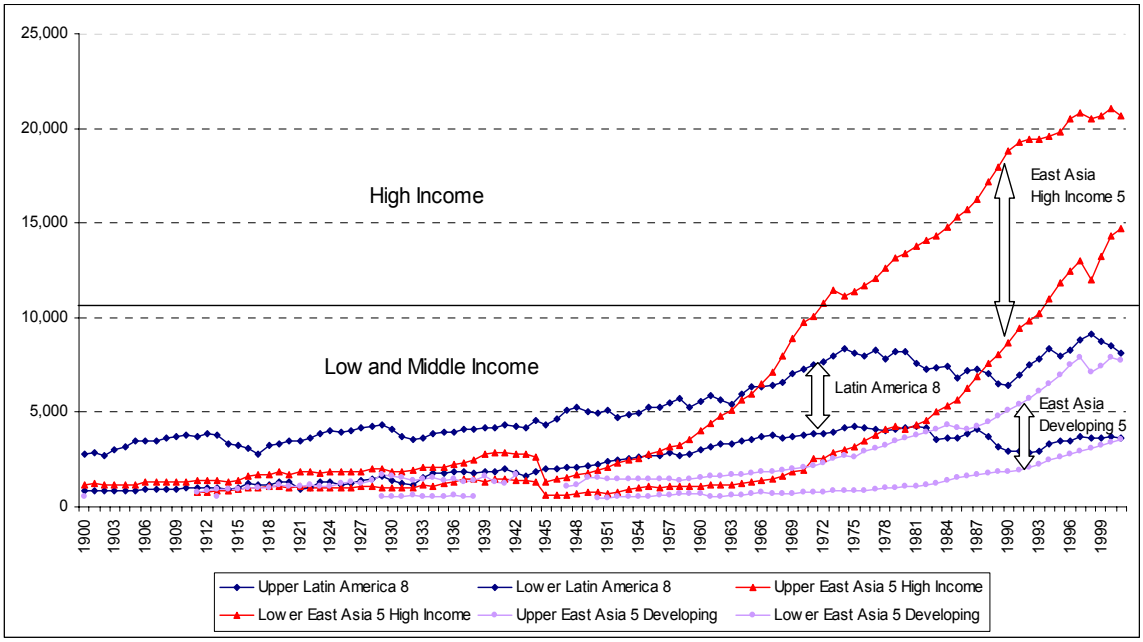
The growth record of middle-income countries in Latin America should be cause for caution. Figure 1 plots per capita income levels of three groups of countries between 1900 and 2000—the 8 largest Latin American countries that have reached middle-income levels (Brazil, Mexico, Argentina, Colombia, Peru, Uruguay, Venezuela and Chile), five East Asian countries

[3] The World Bank classifies economies according to 2005 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, $875 or less; lower middle income, $876 to $3,465; upper middle income, $3,466 to $10,725; and high income, $10,726 or more.

that have reached high-income levels (Japan, Singapore, Hong Kong-China, Taiwan-China and South Korea), and the five middle-income countries in East Asia (China, Indonesia, Thailand, Malaysia and the Philippines).

Figure 1 illustrates two noteworthy developments. The first is that the "Latin American Eight" had grown reasonably rapidly until the early to mid-1970s. Since then, these middle income countries have stagnated. Coincidentally, the "East Asia Middle-Income Country 5" now have the same income levels as Latin America. Does this imply they too will stagnate? Not necessarily. The second point shown in Figure 1 is that there was also a group of middle income countries in East Asia in the early 1970's, who had the same approximate range of incomes as Latin America who have gone on to grow successfully to high income status.

Figure 1. A Second Group of East Asian Economies Has Caught up with Latin America
(Per capita income growth in East Asia and Latin America, 1900-2000)



It is logical for policymakers in East Asia's middle income countries today to ask what the five Asian leaders did to successfully transit through middle-income stages of development to reach high income levels, what the Latin American Eight did wrong, and what they can do in

their own countries to ensure a future that is more similar to their successful neighbors than those across the Pacific.

The fact that East Asia is increasingly a middle-income region with more countries looking for strategies to move to rich country status is important because the pattern of growth appears to change as income level changes. Economic research suggests that two forces are at work. On the one hand, as countries get richer there is a demand for a greater variety of goods, many of which can be produced domestically, so there is a force towards sectoral diversification. On the other hand, countries only get richer if they specialize in what they do best. Which tendency dominates is an empirical question—researchers speculate that it depends critically on the extent of scale economies in production, but that diversification dominates at lower income levels, while specialization dominates at higher income levels. What this suggests is that middle income countries have to make big changes (see Box 1).

Box 1. Middle Income: A Time for Big Changes

While economic development requires constant learning and adjustment, recent findings point to the need for several major changes in strategy for countries when they reach per capita incomes between $1,000 and $10,000.

- ***From diversification to specialization***. Recent evidence indicates that countries generally appear to initially diversify as they grow, but that this trend is reversed after per capita incomes reach levels around $5,000-$8,000, after which they begin to specialize again. This tipping point can come sooner or later, depending on the country's size and export orientation. Thus, for example, Singapore started to specialize at a per capita income around $2,500. The reasons are likely related to economies of scale.
- ***From investment to innovation***. As firms in a country approach the technological frontier, regulatory policies that favored investment by incumbent firms should give way to regulations that encourage entry of new firms and exit by those whose products or technologies are made redundant by new firms. This switch has to be timed right, and it should be recognized that it will be difficult to implement because of vested interests.
- ***From basic education to basic research***. As countries become better informed about which goods in whose production they should specialize and, relatedly, the R&D activities they should subsidize, governments must switch from general subsidies for schooling to more specific incentives for the creation of new products and processes. If policymakers cannot reliably determine which R&D activities should be subsidized, second-best strategies include general subsidies for tertiary education.

Sources: Imbs and Wacziarg (2003), Aghion and Howitt (2005), and Helpman (2004).

APPROACH—EXPLOITING ECONOMIES OF SCALE

This is the task that faces East Asia's middle income countries today. Their success in confronting this challenge may provide others with the inspiration and ideas to escape the middle-income squeeze and catch up with high income countries. But does the economics profession have any useful advice for middle income countries?

We believe that policymakers in these countries can learn from recent advances in economic thinking aimed at better understanding the implications of scale economies for industrial organization, international trade, economic geography, and endogenous growth.[4]

Renewed interest in economic growth since the late 1980s was triggered by the observation that income levels across countries have not been converging as predicted by traditional or neoclassical economic theory. This theory predicted that efforts to accumulate physical and human capital, improve efficiency of production, and utilize the latest technologies were to pay off in a narrowing of income gaps between developed and developing countries and, eventually, to lead to roughly equal welfare levels across the globe. The fundamental implication of mainstream economic theory was that in seeking the highest possible returns, financial and human capital would move from places where it is abundant to where it is scarce, bringing with it the latest and best products, processes, and technologies.

But this has not happened. With few exceptions—primarily the East Asian high performers—income gaps between the west and the rest have grown. The same is true within countries: human and financial capital appears to move from places where it is scarce to where it is abundant rather than the other way around. This does not mean the market has not worked at all: most countries have grown and poverty has fallen. Adhering to classical and neoclassical advice seems to be necessary to grow, but is not sufficient to catch up to more advanced countries or regions.

[4] Krugman (1998) provides a succinct account of the insights provided by each of these four strands, and Warsh (2006) contains an entertaining and accurate narrative of the origins and possible implications of this work.

The force behind convergence between rich and poor countries and regions is the law of diminishing returns. With convergence being slow, recent explanations point to the presence of increasing returns to scale in some activities, or the absence of diminishing returns associated with a factor of production. Romer (1990) identifies knowledge as the factor exhibiting increasing returns, and stresses the non-rival nature of ideas. That is, ideas are different from goods and factors because an idea can be used again and again, and by many people at the same time. And an idea, once formed, can be used by others as a starting point for new ideas.

While ideas are non-rival, they are generally neither free nor non-excludable. Coming up with useful ideas usually requires effort. And it is possible to exclude people from using ideas to improve products or production processes through secrecy or enforcement of intellectual property rights, even if temporarily. This excludability results in knowledge conferring on its creators some monopoly power. Bringing knowledge explicitly into formulations of economic growth allows economists to recognize the centrality of ideas and the importance of increasing returns, but it also requires recognizing the proliferation of imperfect competition. By the late 1980s, scale economies were standard features of explanations of international trade. By the early 1990s, growth theorists had accepted the need to incorporate imperfect competition among firms into aggregate formulations of the economy, and to understand the rise of intra-industry trade. By the mid-1990s, theorists had shown how these ideas could also be used to understand the spatial distribution of economic activity, including the rise and economic importance of cities.

How do these advances in economic thought help in understanding what middle income countries need to do to reach high incomes? At the risk of oversimplification, the insights provided by this work for middle-income countries in East Asia can be classified into two groups: the role of economies of scale in growth, and the role of efficient distribution of economic rents.

The formal recognition of scale economies, externalities, and imperfect competition makes economic theory conform closer to the world of policymakers. For middle income countries there are three sets of implications from this work:

Intra-industry trade. A formal recognition of increasing returns to scale and product differentiation implies that trade can take place between economies that are similar in factor

endowments; both inter-industry and intra-industry trade can profitably take place. The principal implication is that countries can, theoretically, encourage some activities and ensure comparative advantage.

Ideas-driven economies. The non-rival nature of ideas makes them different from other factors of production such as capital, land, and labor, in that the market may under-invest in creation of new ideas. This innovation includes both the ability to absorb and use new ideas and technology, as well as generation of new ideas. The implication is that governments should, theoretically, subsidize certain strands of research and development, e.g., those that will ensure continuing comparative advantage that a country has acquired in some activities.

Cities-based growth. Activities that display increasing returns will tend to agglomerate until congestion costs counter external economies, while those displaying constant returns will remain widespread. The implication is that policies to keep cities business-friendly and livable become increasingly important as economies develop.

While aggregate models have recognized scale economies, externalities, product differentiation, and imperfect competition among firms, recent trends have been towards more disaggregated models of the economy that recognize the differential impacts. To simplify, these models focus on the differences between skilled and the unskilled workers, between firms that are large and those that are not, and between activities and people located in cities that have high economic rents and those who live elsewhere. The recognition of distributional implications of economic growth driven by increasing returns and leading to large economic rents allows us to better inform the tradeoffs and choices confronting policymakers. For middle-income countries that are growing rapidly and seek to maintain this momentum, the aspects of distribution that have policy implications are:

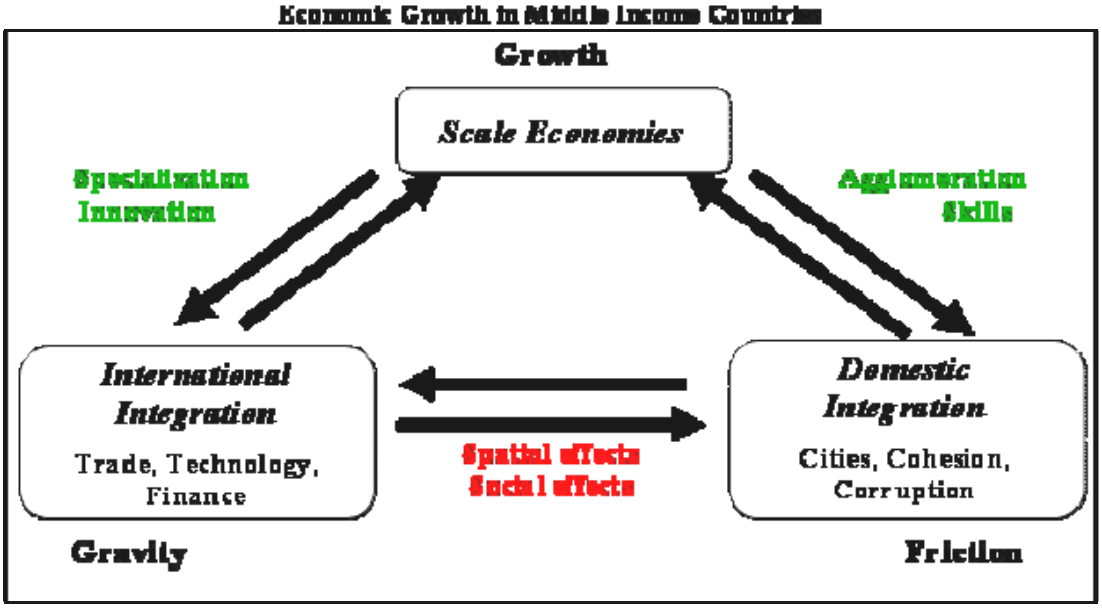
Spatial dispersion. The economics of geography imply that there will be large and persisting differences between rural and urban areas. The implication for middle income countries is that urbanization should be seen as a close correlate of development, and rural-urban factor and product market linkages should be strengthened. Since cities are central for growth, this implies aggressive efforts on the part of governments to ensure the continued vibrancy of cities.

Socio-economic disparities. The new trade theory implies that while trade is essential for exploiting economies of scale, it will likely result in a widening skill premium in both developed and middle-income developing countries. Greater trade and investment flows imply a greater potential for outsourcing, which raises skill premiums in both developed and developing countries. Countries that aggressively exploit economies of scale will likely experience rising inequality (both within urban areas and between urban and rural incomes) even if they follow egalitarian human capital policies. Agglomeration economies and spillovers can result in individuals under-investing in skills. The implication is that middle-income countries need especially aggressive efforts to ensure universal access to progressively higher levels of education.

Reallocation of rents. Endogenous growth theory predicts that there will be economic rents, and how this is distributed is vital for growth. If economic rents are reinvested in public infrastructure and social services, the foundations of economic growth are strengthened. If rents are dissipated in ineffective cities, social strife or corruption, they are wasted and may even slow down growth. Sound urban and social investments require governments that are well-informed and uncorrupt, both to tax economic rents in ways that least hurt private interests, and spend the proceeds in ways that best promote the public interest.

Figure 2 attempts a simple illustration of these ideas. Scale-centered growth requires both *specialization and innovation*, which are facilitated by international integration. While retaining their global trade, technology and financial linkages, countries in the region have been deepening their regional ties to exploit unexhausted scale economies. Developments in East Asia are consistent with the importance of new ideas, of imperfect competition, and of economic geography. These forces have led—through the growing importance of regional production networks and growth of cities—to widening *spatial and social disparities* within countries. If left unaddressed by governments, these differentials can slow down growth, as firms face growing grime, crime and time costs in congested cities, and social conflict grows as economic disparities widen. Clean, well-informed, and effective governments that act in the public interest to facilitate sustainable *agglomeration and investments in skills* can ensure that economies of scale continue to be fruitfully exploited. The next three sections take up these ideas in turn.

Figure 2. Scale Economies Play a Central Role in Middle Income Growth



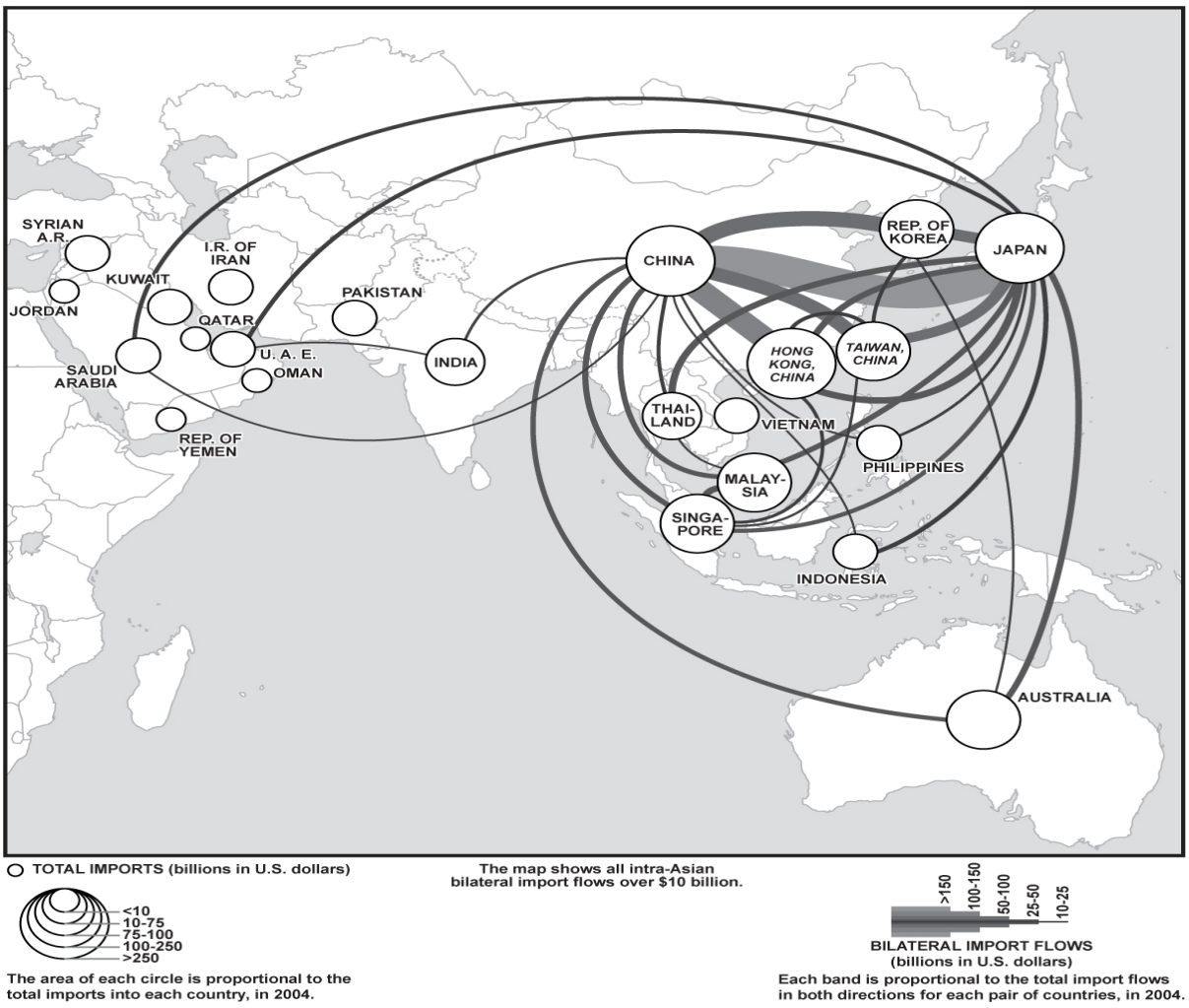
GRAVITY—INTERNATIONAL INTEGRATION, SPECIALIZATION, AND INNOVATION

East Asia's first integration was with global trade markets and is today very advanced. East Asian economies have been built on trade and their success with global integration continues to grow. Excluding Japan, other countries in the region—known collectively as emerging East Asia—have increased their export market share to 20 percent, double their GDP share. Emerging East Asia is now one of the most open regions in the world with total merchandise trade reaching the same size as total GDP. This has been achieved in large part because of open trade policies. Although tariffs for selected items like rice and other agricultural products are high, the weighted average import tariff rate in East Asia is just over 5 percent.

East Asia's second integration has been within the region. Regional integration has accelerated since China's accession to the World Trade Organization in 2001. Regional trade has been growing at about 10 percent over the last decade, despite the crisis of 1997-98. East Asian economies now source over half their imports from within the region, resulting in the busy regional production networks mapped in figure 3, which are only slowly extending westward to

include India.[5] But this trade has been complementary to, not a substitute for, global trade. Regional trade is dominated by intermediate imports of parts and components, moving between countries in complex production networks. Outside the region, trade is dominated by final goods. The two go hand in hand: intra-regional trade provides a low-cost high-quality supply chain; inter-regional trade provides a mass market in which economies of scale can be exploited.

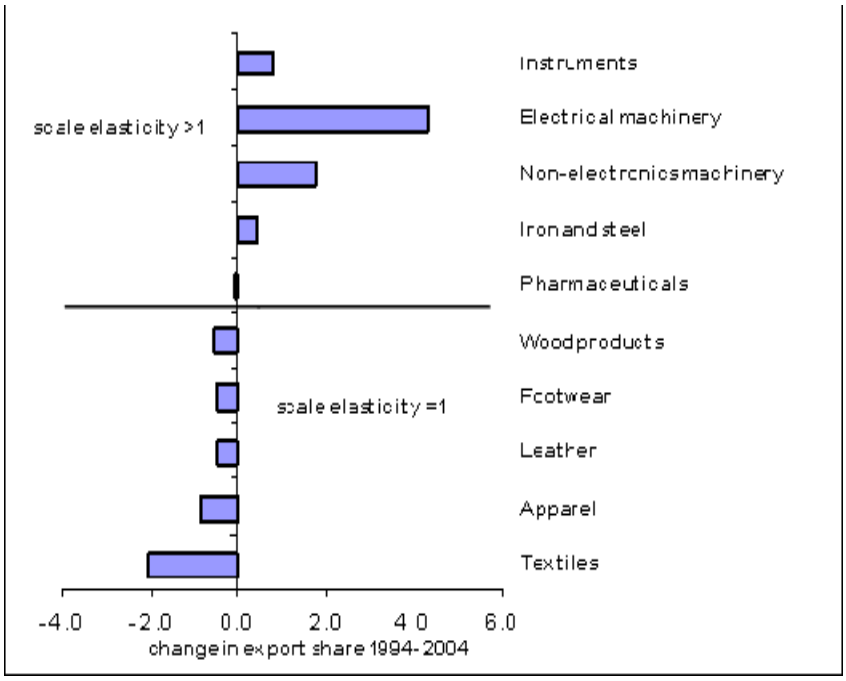
Figure 3: Trade Flows Within East Asia are Frenetic



[5] Gill, Huang, and Kharas (2006) contains a set of essays by prominent East Asian policymakers. The essays reflect both a 'sense of region' that encompasses East Asia, and a common desire to catch up to developed countries.

How important have scale economies been in fuelling economic growth in East Asia? While evidence is still scanty, it does appear that developing East Asia has been expanding exports in sectors that exhibit increasing returns to scale, such as electronics and electrical machinery. And the export shares of East Asia's middle income countries in sectors such as textiles and apparel that do not display increasing returns have been falling (Figure 4).

Figure 4. East Asia's Exports Grew in Sectors Exhibiting Scale Economies

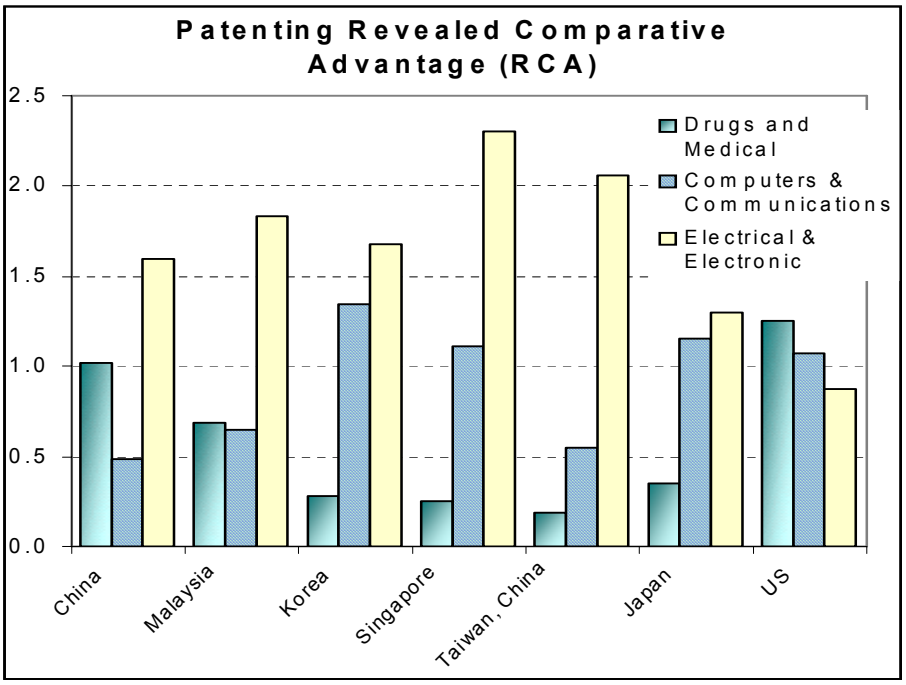


Regional technology flows are also becoming important. While the US and Japan are still the most important sources of know-how, Korea, Taiwan (China) and China have been increasing their R&D efforts. As a result, intra-regional creation of knowledge and associated technology flows have joined global flows in spurring innovation in East Asian enterprises.

East Asian technology efforts are concentrated in some of the sectors exhibiting increasing returns: computers and communications and electrical machinery and electronics. The share of East Asian patenting in these areas has generally risen since the early 1990s. In part the high concentration of East Asian patenting in these sectors just reflects the high technological opportunity and propensity to patent in these sectors worldwide. But East Asian patenting in

electrical and electronics (in particular) is also high relative to the world average share of patenting in this sector; revealed comparative advantage (RCA) indexes generally reflect world class levels of sophistication in specific areas of specialization.[6]

Figure 5. East Asian Innovation Efforts in Increasing Returns to Scale Sectors



Finance has followed trade and technology. The major global multinationals which have long made direct investments in East Asia have now been joined by emerging multinationals from within the region. Investors from Korea, Taiwan (China), Singapore and Hong Kong are active in developing East Asia. In fact, they now have larger equity and bond investments in the developing markets of the region than do Americans, Japanese or Europeans, a radical reversal from ten years ago. A more diversified supply of finance which includes knowledgeable investors from within the region will provide more stability to financial flows in East Asia.

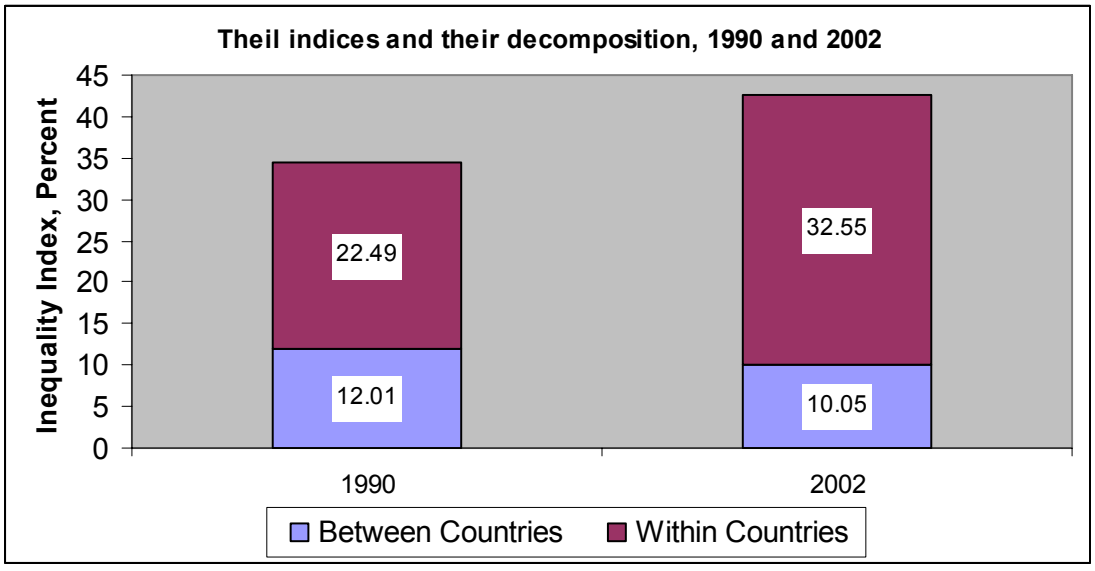
[6] The RCA index for country j compares the share of patents in sector i in total patents by country j, relative to the share of sector i patents in total patents worldwide.

FRICTION—SPATIAL EFFECTS, SOCIAL GAPS AND DOMESTIC INTEGRATION

The result of growth spurred by global and regional integration has been unprecedented progress. 250 million East Asians left the ranks of the poor in the last five years alone. A growing middle and upper class is changing the pattern of economic growth, with more demand for consumer durables, non-tradable services, and housing, fuelled by growing consumer credit. Besides reducing poverty, therefore, scale-centered growth powered by international integration and innovation will help middle-income countries reduce the gap in living standards relative to industrialized countries.

But this development strategy has distributional consequences at the country level which need to be managed. Inequality in much of developing East Asia has risen, not just in terms of income levels, but also in terms of schooling and access to basic services. Poorer regions and rural areas are falling further behind their urban counterparts. Ethnic minorities are not participating in growth. Despite the huge differences in income per head between East Asian countries, more than three-quarters of the inequality of living standards of East Asian citizens comes from within-country inequality.

Figure 6. Inequality Has Been Rising in East Asia Despite Regional Convergence



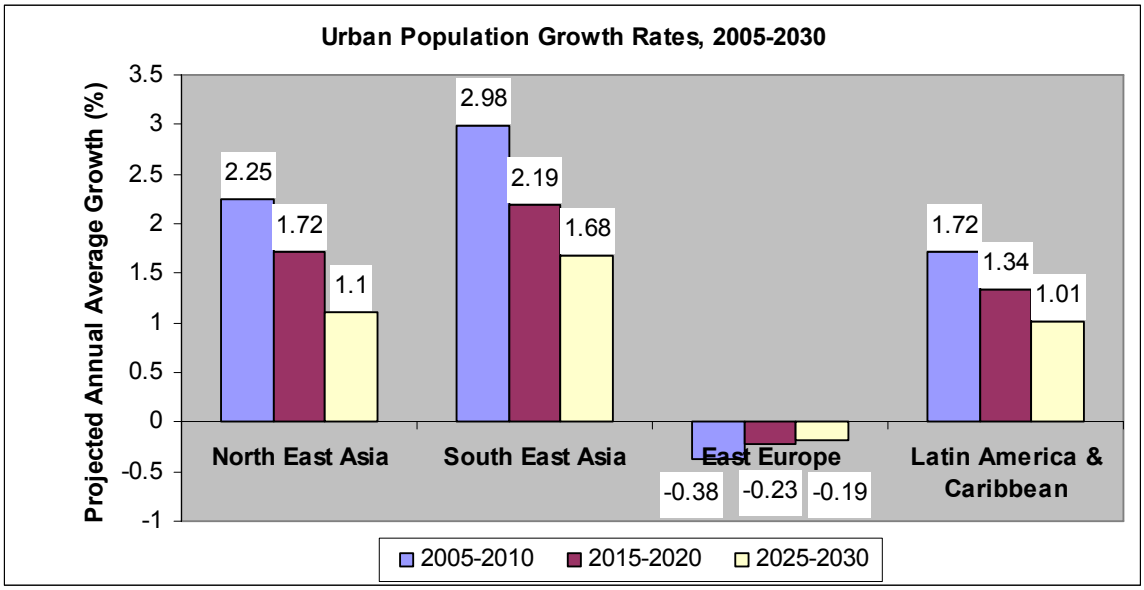
In short, despite successful global integration and increasing regional integration, many East Asian countries are falling behind in domestic integration.

Addressing the challenge of domestic integration must start with cities. Most economic activity happens in cities. In East Asia, cities are estimated to generate about three quarters of annual output, and between one-half and two-thirds of exports. Often, much of this is concentrated in a single primate city: Bangkok has 40 percent of Thailand's GDP and Manila has 30 percent; Ho Chi Minh City has 20 percent; and Shanghai 11 percent. Per capita incomes in cities are a multiple of the economy-wide average, and the average city-dweller consumes almost twice as much as the average rural inhabitant in many countries.

East Asian cities have been able to deliver the agglomeration economies that are required for rapid growth. A recent World Bank study of 120 cities in China that together account for three-quarters of economy-wide output shows that productivity of firms rises significantly when they are located in large cities. The function of providing a gateway for commerce is critical for a region dependent on exports to drive growth, and distance to a port is a powerful determinant of income levels in Chinese cities. On average, cities that are more than 400 miles away from the coast have half the per capita GDP of coastal port cities. They also attract much less foreign investment: 80 percent of China's FDI has gone into coastal provinces and 60 percent of Vietnam's FDI has gone to just 3 cities with good foreign trade links.

East Asia has now begun to witness one of the largest rural-to-urban shifts of population in history: two million new urbanites are expected every month for the next twenty years (see figure 7). This massive movement of people will put pressure on the mega-cities of the region, those with more than 10 million inhabitants, especially on their ability to provide clean air, sanitary water, green spaces, easy commutes and low crime. In other words, mega-city livability must improve dramatically. But the bulk of urban population growth will happen in small cities, those with fewer than 500,000 people. These cities are generally less well-managed. A poor business environment also translates into a smaller tax base and these cities spend less per capita on key social services and on environmental clean-up, making them even less attractive places for investment. A major challenge for growth is to improve the management of these smaller cities.

Figure 7. Rapid Urbanization is Still Ahead for East Asia



The gap between income levels in smaller interior cities and large coastal cities is also related to the poor level of domestic infrastructure connecting most cities to major ports. While East Asia has some of the world's most efficient seaports and air transport facilities, the internal logistics within countries fall far short of what is needed. Better road and rail links and improved multi-modal logistics are necessary to link interior cities to trading centers and so reduce the income gap between workers in different cities.

GROWTH—CLEAN GOVERNMENTS, AGGLOMERATION ECONOMIES, AND INVESTMENT IN SKILLS

Growing inequality is pressuring East Asia's social cohesion. Governments have to come up with solutions to the problems of national distribution and local economic management and service delivery. But governments in turn are being sharply questioned by civil society groups because of a perception of widespread corruption in some countries. Centralized corruption has been a target of organized civil society. Countries like Korea and Malaysia are trying to join Singapore, Japan and Hong Kong, China as places where corruption is severely sanctioned and opportunities for corruption are minimized by a rules-based government. Indonesia, China and Vietnam have also launched aggressive anti-corruption programs at the national level and moved to prosecute high ranking officials.

Much of the problem is now at the local level. East Asia has moved swiftly to decentralize public expenditures on social services and infrastructure. In the long run, this should lead to greater transparency and accountability of local public officials, helping promote a fair and just society. But in the interim, while institutional checks and balances are maturing, there is a risk that decentralization will make control of corruption harder to achieve, threatening economic efficiency, aggravating social tensions, and worsening gaps in sub-national economic performance. These changes may explain the deterioration in perception-based anti-corruption indicators, which suggest that East Asia is falling behind in its efforts to fight corruption. What they may be signaling is the greater emphasis needed to ensure clean governments as these economies grapple with the middle-income development challenge.

Box 2 summarizes the experience of Dongguan in China, which—in successfully tackling the challenges of scale-centered growth and reaping its rewards—provides a real-life illustration of how the forces of gravity and friction can be managed to achieve sustained growth, and perhaps also provides some inspiration for policymakers in East Asia and elsewhere.

East Asia has successfully integrated with global markets, and East Asian goods are found in every country of the world. It has also integrated regionally, developing a complex structure of production networks to provide a low cost, high quality manufacturing base. These trends are well in place, and although much additional work remains to reinforce these trends, the overall direction and shape of reforms is well-known to policymakers and programs are in place to address the most urgent issues.

The harder task ahead is to complement global and regional integration with domestic integration. This requires ensuring vibrant cities that are well-linked to the outside world but which remain linked domestically; strengthening social cohesion so that societies stay as strong as economies; and providing clean governments which efficiently reinvest the economic returns that accompany fast growth. The global trade and technology flows and regional networks that are powering East Asia's growth provide adequate resources for meeting the challenge of domestic integration. If developing East Asia's policymakers can succeed in making this third integration as successful as the first two, they can, within a generation, eliminate poverty and lead their countries

into the ranks of rich, developed nations of the world. In doing so, they will also provide valuable lessons for middle income countries around the world.

Box 2. Growth, Gravity and Friction in the Pearl River Delta: The Story of Dongguan, China

In 1978, what is today the city of Dongguan in China's Guangdong province was a collection of villages and small towns spread over 2,500 sq. km. on the Pearl river, midway between Guangzhou and Hong Kong. The area's population of 400,000 relied primarily on fishing and farming. Dongguan today has a population of nearly 7 million. More than 5 million are migrants who work in the thousands of factories that dot the city, churning out a dizzying range of products in such huge volumes that media accounts have labeled Dongguan the world's factory. Dongguan's economy has grown at an average annual rate of over 20 percent in the last two decades. exemplifying the economic forces that have been shaping East Asia's middle-income economies.

Location and favorable factor prices undoubtedly played a role in the early growth of Dongguan. But Dongguan's sustained and rapid growth through the 1990s can best be understood in terms of economies of scale. Internal scale economies are many. A single plant in Dongguan manufactures over 30 percent of the magnetic recording heads used in hard disk drives worldwide. Another produces 60 percent of the electronic learning devices sold in the US market. Yet another produces nearly 30 million mobile phones. Agglomeration or external scale effects are equally visible. The benefits in the form of knowledge spillovers, lower logistics costs that result from locating close to input providers, as well as export traders have resulted in the development of knitted woolens, footwear, furniture, and toys. But the cluster that has dominated the industrial landscape of Dongguan since the mid-1990s is the telecommunications, electronics and computer components cluster. 95 percent of the parts and components needed for the manufacture and processing of personal computers can be sourced within Dongguan. For some products, its factories account for over 40 percent of global production.

Electronics and furniture clusters developed with the involvement of Taiwanese firms. Firms from Hong Kong were instrumental in the growth of apparel and toys. More important than the financial investment made by foreign firms—a total of over US$15 billion in the last two decades—was the technical know-how, knowledge of the market, and relations with customers that these firms provided. The result is that in 2004, Dongguan's exports totaled over US$35 billion. Imports, mostly parts and components from other countries in East Asia were nearly US$30 billion.

Growth and structural transformation of the magnitude and at the pace that Dongguan has experienced generate frictions that have to be managed. Dongguan's annual consumption of electricity and water in 2004, 35.2 billion kwh and 1.5 billion cubic meters respectively, exceeded that of many countries. The conversion of land to industrial use puts stresses on the environment. Land is no longer cheap and shortages of skilled labor are being reported with increasing frequency. Growth can also fundamentally alter the social fabric and institutional bases of governance. Dongguan, in the 1990s, was often described as having the atmosphere of a "frontier" gold-rush city. Case-based research suggests that corruption was rife. Crime rates were higher than in other parts of China. And the uneven distribution of the economic surplus generated by the growth—attributable in part to market-based incentives that reward individual effort but also in part to uneven influence—has meant large disparities in income.

What makes the Dongguan story especially compelling, however, is the extent to which the city has been addressing these challenges. In 2004, 90 percent of the industrial waste water in Dongguan met discharge standards, as did 86 percent of the solid wastes. 93 percent of sulphur dioxide emissions met emissions standards. The city is investing its sizeable revenues from land rents and local taxes in relieving congestion and improving infrastructure such as roads, port facilities, and industrial parks. A 2005 World Bank investment-climate survey of over 12,000 firms in 120 Chinese cities ranked Dongguan seventh in terms of a broad measure of the investment climate. Even more telling is that Dongguan ranked second in terms of a narrower measure of government efficiency based on the tax burden, the costs of corruption, and bureaucratic delays faced by firms.

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