Macroeconomics

for Emerging East Asia

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2. Taking the Measure of Emerging East Asia

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2. Taking the Measure of Emerging East Asia

The economies of Emerging East Asia differ greatly with respect to size, stage of development, and degree of international integration. These differences bear on vulnerability to external shock and tendency toward volatility. Nevertheless, the same principles of macroeconomics apply, and we can subsume the whole lot within a common analytical framework.

The world's second biggest economy, China, accounts for more than 70 percent of Emerging East Asian GDP while Cambodia and Laos weigh in at just a fraction of a percent. Adjusted for purchasing power, Singapore's per capita GDP outranks that of the US while elsewhere in the region per capita incomes of a few dollars a day mean that life is a constant struggle to survive. A child born in Hong Kong can expect to live nearly two decades longer than one born in Myanmar or Laos. The entrepots of Hong Kong and Singapore sustain trade-to-GDP ratios of more than 300 percent whereas the ratio is less than 40 percent for China. Similarly for foreign assets and liabilities, the ratios to GDP are larger by an order of magnitude for Hong Kong and Singapore than for most other economies in the region.

In this chapter we compare economies along three dimensions: size and growth; stage of development; and degree of global integration. In every aspect, the Emerging East Asia region extends to extremes.

A. Size and Growth

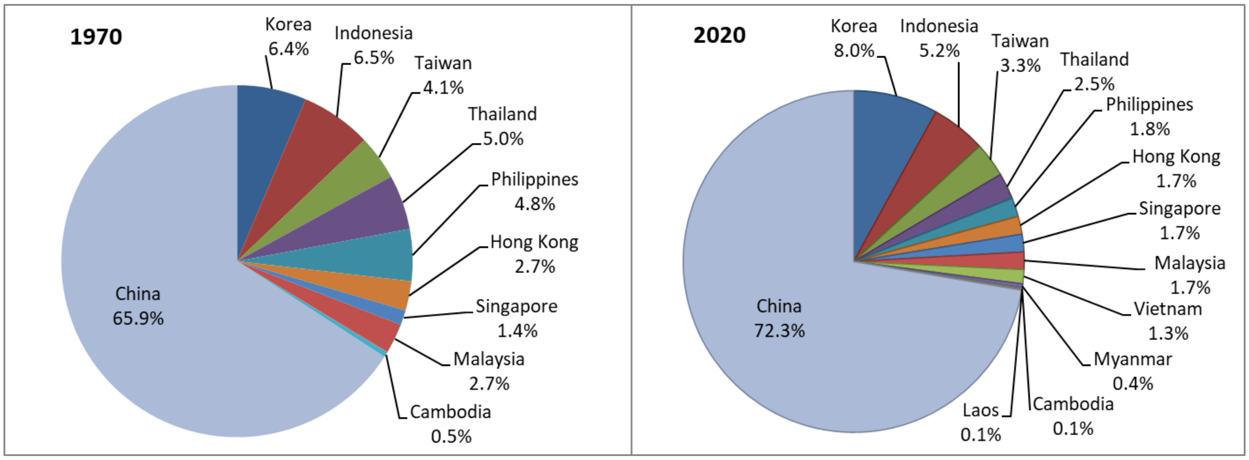
China is the behemoth of Emerging East Asia, and its dominance has only increased over recent decades. Against China's strong growth performance, most other economies in the region have lost output share, although two have managed to gain. We look first at size, then at growth, in terms relative to the region for both indicators.

Size

Chart 2.1 shows regional shares in GDP for the economies of Emerging East Asia for the years 1970 and 2020. In 2020, China accounted for 72.3 percent of the total. Korea took the second spot with 8.0 percent, followed by Indonesia at 5.2 percent, and Taiwan at 3.3 percent. Clustered in the 1.0 to 2.5 percent range were Thailand, the Philippines, Hong Kong, Singapore, Malaysia, and Vietnam. That leaves Myanmar, Cambodia, and Laos with less that half a percent each.

Within a region that has become increasingly integrated through the supply chain and more generally tied into global networks of trade and finance, disruptions in one economy can reverberate throughout the region. China's mass creates obvious potential to stimulate growth or to send shock waves. Yet far smaller economies have managed to trigger regional upheaval as well. Of note, Thailand was the epicenter of the Asian Financial Crisis.

Chart 2.1: Shares in Regional GDP, Select Economies, 1970 & 2020



Growth

The Emerging East Asia region as a whole has achieved impressive growth over the last five decades. Against this oversized benchmark some economies have outperformed to gain share while others have lagged to lose it between 1970 and 2020. The addition by 2020 of Vietnam, Myanmar, and Laos, for which 1970 data are not available, encroaches very slightly on the shares of all others. Growth over the period was most outstanding for Korea and Singapore which saw share gains despite China's major encroachment. The greatest laggards were Thailand and the Philippines with share declines of half or more.

To be sure, were a later base year chosen, relative growth performances would stack up differently as some economies began their take-offs earlier and others later, while some that enjoyed early success hit setbacks later on from which they were slow to regain momentum.

High long-term growth is often accompanied by significant volatility. In part, this is because the inevitable slowdown when it comes registers as a sharper break from a history of strong growth than from a history of weak growth. But in part also the forces that help to generate a boom can sow the seeds of a bust. Credit growth is an important driver of expansions, with a rapidly growing economy in turn facilitating repayment of debt in a self-reinforcing cycle. Creditors respond by taking on more risk, and overall debt loads rise. However, as asset prices soar, lending becomes ever more speculative. Eventually, the process runs out of steam. Loans begin to go bad and asset prices go into reversal. Credit tightens and the economy can go into a downward spiral. As unsettling as such boom and bust cycles may seem, they are commonly embedded within very successful long-term performance records.

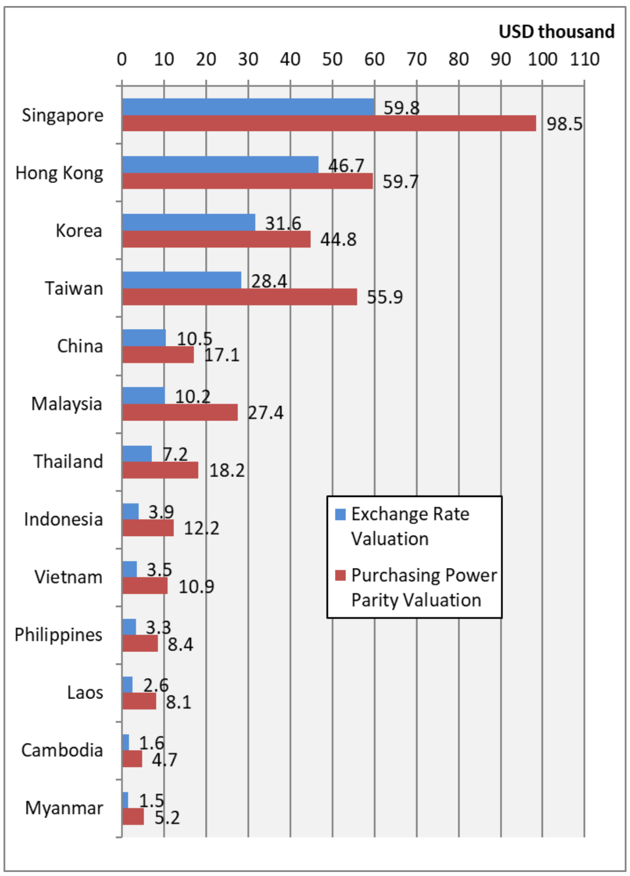
B. Stage of Development

Some of the world's richest societies exist alongside some of the poorest within the Emerging East Asia region. In this section we compare levels of economic development, first with respect to GDP per capita, then on the basis of broader indicators of the human condition.

GDP per Capita

Comparing GDP across economies is complicated by the need to convert economic activity recorded in different currencies to a common unit of measurement. The simplest way to accomplish this is to apply market exchange rates, typically standardizing on US dollars. The appeal of this approach lies in its reliance on readily available data and a transparent methodology. There are a number of drawbacks, however. One is that exchange rates can fluctuate a great deal creating the appearance that relative incomes are highly unstable across economies. The fluctuations tend to be driven largely by currency trading to support financial transactions, however, as opposed to shifts in the real value of goods and services an economy produces. Another problem is that government intervention in foreign exchange markets can distort exchange rates relative to market valuations. Finally, even apart from the influence of financial transactions and government intervention, market exchange rates derive only from traded goods and services whereas much of what is produced in an economy is non-tradable. Traded goods and services tend to be expensive in less developed economies relative to domestically produced and consumed products, such as haircuts or restaurant meals, prices for which reflect relatively low local wages. In other words, a US dollar will buy more in the way of non-traded items in an emerging market setting than in an advanced economy even as the purchasing power of a dollar for traded products is close to parity when converted at exchange rates.

Chart 2.2: GDP per Capita at Exchange Rate and Purchasing Power Parity Valuations, Select Economies, 2020



An alternative to the exchange rate approach involves imputing currency conversion rates based on broad purchasing power parity. Under this approach a basket of goods and services that spans the gamut of traded and non-traded goods and services – from food and utilities to housing and education – is priced in local currency for each of the economies to be compared. The ratio of this basket price in an economy to that of the same basket in the US is then used to convert GDP expressed in local currencies to a common US dollar measure. This is known as the purchasing power parity (PPP) approach.

Chart 2.2 presents GDP per capita at both exchange rate and PPP valuations for the economies of Emerging East Asia. For the US, with its benchmark currency, exchange rate and PPP valuations are equivalent at about $63,000 a year. For all Emerging East Asia economies, GDP expressed in PPP terms exceeds that expressed in exchange rate terms. This indicates that a dollar converted at the market exchange rate can buy more in the Asian economy using local currency than it can buy in the US. Output for the Asian economies is thus higher in purchasing power terms than an exchange rate based conversion suggests.

The disparity across the region is striking. In exchange rate terms, GDP per capita ranges from $1500 a year to nearly the US level. In PPP terms, Singapore's GDP substantially exceeds that of the US while Hong Kong's is close to the US mark. Korea and Taiwan are roughly on par at the next tier. From there, the gradient is sharp down to China and Malaysia, then to Thailand, then Indonesia, Vietnam, and the Philippines, and finally Laos, Cambodia, and Mynmar. The region still holds much potential for growth if lagging economies can make strides in catching up to frontrunners.

Human Development Indicators

GDP per capita, even in purchasing power parity terms, is a very limited measure of economic development. The Human Development Index devised by Nobel laureate Amartya Sen offers a broader indicator of progress. Sen premised his index on a notion of development that involves the advance of human capabilities. This notion of capabilities is conceived as enabling people to live lives they have reason to value. In this spirit, Sen incorporated measures of health and education into his index in combination with the more standard per capita income in PPP terms.

Table 2.1: Human Development Indicators, Select Economies, 2019

	Human Development Index	Life expectancy at birth	Expected years of schooling	Mean years of schooling of adults
Hong Kong	0.95	84.9	16.9	12.3
Singapore	0.94	83.6	16.4	11.6
Korea	0.92	83.0	16.5	12.2
Malaysia	0.81	76.2	13.7	10.4
Thailand	0.78	77.2	15.0	7.9
China	0.76	76.9	14.0	8.1
Indonesia	0.72	71.7	13.6	8.2
Philippines	0.72	71.2	13.1	9.4
Vietnam	0.70	75.4	12.7	8.3
Laos	0.61	67.9	11.0	5.3
Cambodia	0.59	69.8	11.5	5.0
Myanmar	0.58	67.1	10.7	5.0

Table 2.1 presents values for the Human Development Index and three of its components: life expectancy at birth; expected years of schooling for children entering school age; and mean years of schooling of adults. Hong Kong and Singapore top the chart, with global rankings of fourth and eleventh, respectively. Korea follows close behind, making up for a lower per capita income with outstanding educational attainment, its adult population benefiting from an average

12.2 years of schooling with today's children projected to receive 16.5 years of schooling. Another economy that performs well on education relative to income is the Philippines with an average 9.4 years of schooling for adults. At the lower end of the spectrum, aligning roughly with lower incomes, a number of economies in the region show schooling for adults of less than six years. Life expectancy similarly follows a pattern broadly in accord with income rankings, although not without aberrations. Vietnam exhibits an exceptionally high life expectancy for a lower income economy which helps to offset a poorer performance on education. Disparity in life expectancy within the region is such that a child born in Hong Kong can look forward to nearly 18 years more on this earth than one born in Myanmar.

Economies that operate deep inside the global frontier for technology and social organization have the potential to grow rapidly. However, with rapid growth comes the prospect of greater volatility. Economies at or near the frontier inevitably grow more slowly but with less tendency toward instability. For lagging economies, development involves adopting and adapting existing technologies, relying on global frontrunners to do most of the innovating. It also involves building effective economic and political institutions. Forging a path relies on idiosyncratic trial and error, with the process prone to lurches and setbacks.

C. International Economic Integration

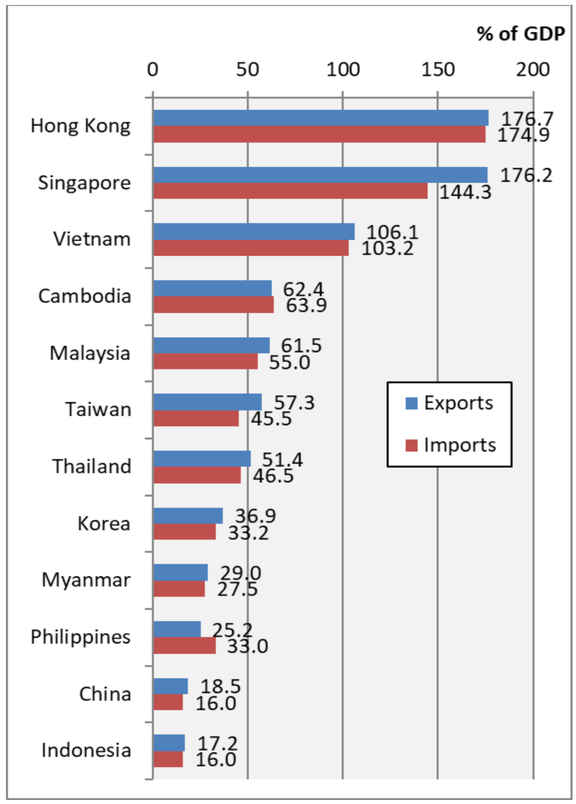
Opening up to international trade and investment can act as a springboard to economic development. But engaging internationally also brings exposure to external shock. Chart 1.2 in the preceding chapter captures vividly the synchronization of business cycles in Emerging East Asia that has followed from increased external engagement. In this section we examine trade and investment flows relative to GDP to get a sense of the variation in international integration within the region.

Foreign Trade

For the world as a whole, the combined value of exports and imports of goods and services is about 53 percent of GDP. The economies of Emerging East Asia exhibit ratios generally above this level, and in some cases far above it, although several countries fall short, as shown in Chart 2.3. The region is home to the world's two great entrepot economies – Singapore and Hong Kong. Much of what is imported by these entrepots is in turn exported with little value added locally. The resulting two-way trade ratios for these economies exceeded 300 percent of GDP in 2020. Trade ratios near or above 100 percent were registered by Vietnam, Cambodia, Malaysia, Taiwan, and Thailand. Generally speaking, larger economies tend to be less trade oriented than smaller ones because they can achieve economies of scale in production for a broader range of industries domestically. This explains the relatively low trade ratio for China, which at 34.5 percent was nevertheless significantly above the 23.4 percent registered by the US in 2020.

Most of the economies in the region ran trade surpluses in 2020, although deficits were recorded for Cambodia and the Philippines. A broader measure of transactions on the current account includes income payments for overseas labor and investment with the Philippines generating large inflows from its nationals working abroad. A current account deficit must be financed with an inflow of investment funds. Such investment inflows are attracted to capital-scarce developing economies by opportunities for high returns, although risks tend to be high as well given weak institutional infrastructure. From an initial position of trade deficit, then, rapid economic development is accompanied by rising saving rates that reduce reliance on foreign investment inflows and turn the trade balance toward surplus. A trade surplus implies a net outflow of investment funds and the accumulation of foreign assets or the pay down of foreign debt. The large trade surpluses common among the economies of Emerging East Asia reflect a concerted effort to build up reserve assets.

Chart 2.3: Trade Ratios to GDP, Select Economies, 2020



While offering gains from specialization and the pursuit of comparative advantage, trade carries with it increased exposure to the vicissitudes of the international marketplace. The ramifications were brought home forcefully by the global financial crisis of 2008. The economies of Emerging East Asia were little exposed to the financial debacle directly. Rather, the sharp slowdown that hit the region (visible in Chart 1.2) was due mainly to the trade shock that followed in the aftermath. Worldwide, trade volume fell by 19 percent in 2009 relative to the previous year. Emerging East Asia suffered the consequences.

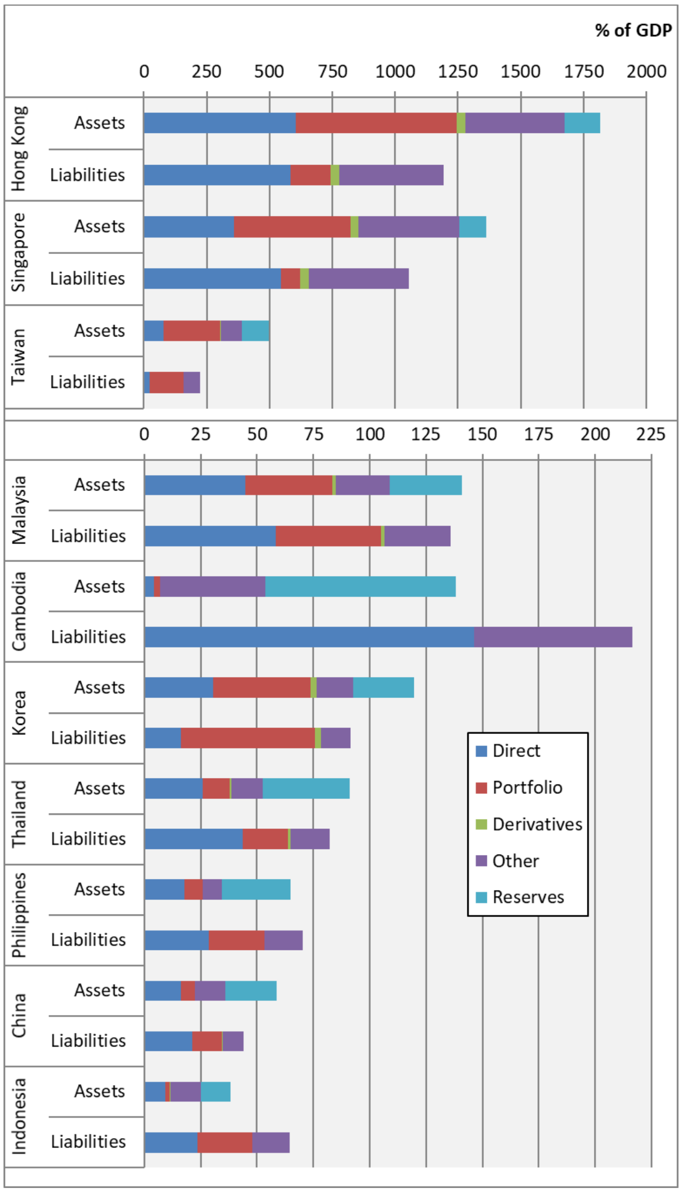
Foreign Investment

Trade flows involve real goods and services moving across borders in support of current consumption or capital formation. The activity is completed in a one-way transaction. Investment flows, by contrast, involve transfer across borders of title to assets. Positions are taken, and holdings may be accumulated over time, but flows are then open to reversal. Psychological factors weigh heavily on investment flows as opposed to the more practical concerns that motivate trade flows. This makes for far greater volatility and unpredictability in investment flows than in trade flows with sudden large movements of funds either in or out wreaking havoc on an economy.

An outflow of foreign investment results in an asset position on an economy's balance sheet, an inflow a liability position. The net international investment position for an economy may be positive (meaning the economy is a net creditor to the world), negative (meaning it is a net debtor), or zero.

Different forms of investment are characterized by differences in liquidity and the prospective reversal of flows. Direct investment involves a substantial equity stake in a business that is not easily liquidated. Portfolio investment pertains to the purchase of securities traded on markets, with funds thus more readily repatriated. Loans generate a commitment of interest and principle repayment according to a specified timetable. Derivatives represent contracts for payment to be made in the future under specific terms and conditions, for example, for the purchase of an asset at a predefined price at the option of either the buyer or the seller. A final form of investment tracked only on the asset side is official reserves involving foreign assets of any type held by a monetary authority.

Chart 2.4: International Investment Position, Select Economies, 2020



International investment positions relative to GDP for the economies of Emerging East Asia are presented in Chart 2.4. Hong Kong and Singapore are again outliers, so much so that we measure them against a different axis calibrated higher by a factor of almost five, and bring in Taiwan here too as it's caught in the middle. Hong Kong and Singapore serve as international financial hubs. For Hong Kong, foreign assets surpassed 1800 percent of GDP in 2020 while for Singapore they exceeded 1300 percent. Strong net creditor positions are evident for both. Taiwan is a net creditor to an even greater degree proportionally with assets more than double liabilities.

Net debtor positions show up substantially for Cambodia and Indonesia and to a minor degree for the Philippines. For Cambodia, the liabilities are mostly in the form of direct investment which is not vulnerable to ready reversal. China is a major contributor here. For Indonesia, although liabilities are large relative to assets, they are not large relative to GDP.

Erratic movement of funds across borders can be seriously destabilizing for emerging market economies. The need to convert currencies when money crosses borders exerts pressure on exchange rates. An inflow of foreign funds pushes the value of the local currency up putting a squeeze on exporters and producers for the domestic market that must compete with cheapened imports. On the other hand, an outflow of funds undermines the value of the local currency straining borrowers and others with payment obligations set in foreign currency terms. To limit vulnerability, many governments in the Emerging East Asia region impose controls on cross-border capital movements. They also prepare to meet any urgent demand for foreign currency in the event of a significant capital outflow by stockpiling official reserves.

As of 2020, Hong Kong held official reserves at the extraordinarily high level of 140 percent of GDP. Hong Kong conditions the issuance of local currency on receipt of US dollars by the monetary authority, and thus its monetary base is fully backed by US dollars. High levels of reserves to GDP are also held by Singapore and Taiwan at just over 100 percent. China's reserves in absolute terms were by far the world's largest at more than US$3.4 trillion as of 2020, although relative to GDP the country is not an outlier for reserve assets. At the low end, Indonesia held reserves of 12.8 percent of GDP with all others registering above 20 percent.

The Asian Financial Crisis was a major factor in motivating the accumulation of reserve assets. During the crisis, some economies found their currencies collapsing and their growth rates plummeting as foreign investment fled and credit to finance trade and other short-term working capital needs dried up. Governments in the region became intent on avoiding such vulnerability in the future. Amassing substantial reserve assets not only allows authorities to supply foreign currency into the foreign exchange markets if and when investors seek to withdraw en masse, healthy reserves can actually forestall the need for intervention by promoting confidence that foreign currency shortages are not a risk.

Capital controls are another mechanism for guarding against the disruptive movement of funds. On the inbound side, direct investment is typically cultivated as being more stable and supportive of development goals whereas, by contrast, portfolio investment is subjected to limitations via transaction caps, holding periods, and stringent approval procedures. Long-term borrowing is treated more favorably than short-term borrowing which may be in need of roll-over at potentially higher interest rates. Chart 2.4 shows differing profiles with respect to liabilities. China has historically relied more narrowly on direct investment, whereas the mature financial markets of Taiwan, Malaysia, and Korea offer greater accommodation to portfolio inflows. The category "Other" captures loans and deposits. The substantial role of this category in Hong Kong and Singapore on both asset and liability sides indicates the importance of these economies in regional financial intermediation, as does the small but growing presence of derivatives on their balance sheets.

D. Macroeconomic Ramifications

The boom and bust episodes common to all economies are driven by a complex web of factors, both domestic and external. For Emerging East Asia, the increasing importance of the external is clear from the synchronization of business cycles dating to the Asian Financial Crisis (see Chart 1.2). The Crisis first struck Thailand, then rippled across the region, pushing GDP growth into negative territory in 1998 for seven of our 13 economies and bringing it down sharply for most others. The economies hit hardest were those most dependent on short-term foreign financing which suddenly became difficult to rollover by taking out new loans. The next shock landed in 2001 with the bursting of the technology stock bubble in the US. The hardest hit economies in this case were those most integrated into the global supply chain for information and communication products, notably Taiwan, Singapore, Hong Kong, and Malaysia. Then came the global financial crisis of 2008. The financial fallout as such was not serious; rather it was the subsequent downturn in international trade in 2009 that took a heavy toll. Five economies in the region fell into contraction and others escaped with barely positive growth.

The openness of Emerging East Asia to international trade and investment exposes the region to external shock even as it fuels long-term growth. Smaller economies are particularly dependent on trade to achieve scale economies and make the most of their comparative advantage. Developing economies gain vital access to technology and managerial resources through foreign investment. And regardless of size or stage of development, all economies are prodded by global competition to become more efficient and innovative.

The challenge then is to find ways of coping with external shock while still reaping the benefits of openness. Given the vast differences in size and stage of development represented in Emerging East Asia, the mechanisms for buffering and managing shock naturally vary as well. Some economies (Hong Kong and Singapore) have found success in opening up to investment flows and cultivating a role in financial services while others continue to enforce extensive capital controls (China). All economies in the region rely on exchange rate management to a degree, but forms range from the hard peg of Hong Kong to the more strategic intervention of those classified by the International Monetary Fund as having floating – but not free floating – exchange rates (Indonesia, Korea, Malaysia, the Philippines, and Thailand, and similarly an unclassified Taiwan). Much variation exists, too, in institutions for managing domestic money and credit issuance. Nevertheless, a common body of macroeconomic principles applies. The chapters to come expound these commonalities, while at the same time documenting the particulars through case studies and empirical comparison across economies.

Data Note

The table and charts presented in this chapter draw on databases maintained by various multilateral organizations, supplemented by data from Taiwan government sources. Details are given below.

Chart 2.1: GDP data are from the World Bank's World Development Indicators database, which extends back to 1960. Data for Taiwan are from the Republic of China (Taiwan) Statistical Bureau.

Chart 2.2: GDP per capita data are from the International Monetary Fund's World Economic Outlook database, which includes Taiwan.

Table 2.1: Data on human development are from the United Nations Development Programme's Human Development Reports website.

Chart 2.3: Trade data are from the World Bank's World Development Indicators database. Data for Taiwan are from the Central Bank of the Republic of China (Taiwan) balance of payments data.

Chart 2.4: International investment data are from the IMF's Balance of Payments and International Investment Position Statistics database. Data for Taiwan are from the Central Bank of the Republic of China (Taiwan).

The purchasing power parity measures of GDP per capita presented in Chart 2.2 merit elaboration. The estimation exercise rests on collection of prices expressed in local currency for roughly 1000 meticulously specified products for each participating economy. The effort to price identical baskets of goods and services across economies dates back to a 1968 collaboration between the University of Pennsylvania and the United Nations Statistical Division. The International Comparison Program, as it is known, was later taken over by the World Bank for most of the world and by Eurostat and the Organization of Economic Cooperation and Development (OECD) for their member countries. The most recent round of data compilation by the World Bank took place in 2017 with rounds before that in 2011 and 2005.

Bibliographic Note

Regular status reports by economy, with supporting datasets, are prepared by a number of multilateral organizations. The World Bank's *World Development Report*, published annually since 1978, takes up a different theme each year and contains a wealth of data on all aspects of development. The International Monetary Fund's semi-annual *World Economic Outlook* offers macroeconomic analysis and medium-term forecasts. Finally, the Asian Development Bank's annual *Asian Development Outlook* focuses on macroeconomic and development issues for ADB developing member countries.

Human Development Index creator Amartya Sen laid out his views on human development in the book *Development As Freedom*. Sen maintains that the goal of development should be to increase the opportunities available to people by enhancing their capabilities. The notion of "capabilities" encompasses: (1) the capability to live a long and healthy life; (2) the capability to acquire education and skills and share in the benefits of social progress; (3) the capability to escape poverty and enjoy a rising standard of living. Indicators of national achievement that reflect these capabilities are the basis for the Human Development Index. More broadly, Sen champions political liberty and civil rights as fundamental to the exercise of human capabilities.

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