

Getting Better Value Out of Global Value Chains

“Where do you think that your iPhone was made?” This is my favorite question to my economics students at Tokyo’s Sophia University.

They all respond “China!” But the situation is much more complex than that, as Chinese professor Yuqing Xing has demonstrated.¹ The iPhone is assembled in China by Taiwanese companies Foxconn and Pegatron. But this assembly process accounts for less than 5% of the iPhone’s manufacturing value added.

In reality, the iPhone is produced through a “global value chain” (GVC) which starts with its conception and design in California. High-tech components come from Japan, Korea, Germany, the US and elsewhere, with Japanese-made components contributing the biggest share. The iPhone is then assembled in China, while California manages the marketing and branding. One consequence of this supply “fragmentation” is that Apple directly employs only 63,000 of the more than 750,000 people globally involved in designing, selling, manufacturing and assembling its products.²

Many of us still harbor a nationalistic perception of how products are manufactured. But this does not make any sense in today’s world of GVCs. Very few products are still made in one country. Most products are thus made “in the world”, with different parts and components coming from different countries, and different production processes located in different countries. Overall, GVCs would account for some 80% of global trade, and they are much more developed in Asia than in other regions.³

A similar GVC story can be told for clothing, much of which today is manufactured in China, Bangladesh, Vietnam and Cambodia. For example, a jacket which is designed and sold in the US for \$425, but manufactured in China, might have manufacturing costs representing only 9% of the total sales value.⁴ US companies would account for much of the other 91%, through their intellectual property; services like retail, logistics and banking; and profits. In other words, products like jackets, which seem to be manufactured goods, are substantially packages of intangible, knowledge-based services. In fact, all manufactured goods embody large shares of services.

There are many other surprising examples of GVCs, some of which highlight the role of Japan in the engine room of today's GVCs. Japanese high-tech parts and components account for some 35% of the value of Boeing's 787 Dreamliner and 21% of the 777 widebody jets.⁵ And as China is now celebrating the production of its first big passenger plane, the C919, which is in the testing stage, the reality is that many technologies, systems and parts are supplied by foreign companies, like the engines which come from a joint venture between America's General Electric and France's Safran.

While many Japanese manufacturers may have slipped off the global radar screen, they are indispensable linchpins in Asia's GVCs, as Japan accounts for 20–60% of the world's production of semiconductors, optical components, image sensors, microcontrollers, display drivers and silicon wafers.⁶ And many of these parts and components are made by a new wave of small and medium Japanese companies ("hidden champions"), rather than big conglomerates.⁷

Even the explosives used by the Islamic State (IS) would be produced through a complex GVC. Conflict Armament Research (CAR) examined more than 700 components used by IS forces to manufacture improvised explosive devices (IEDs), identified their provenance and traced their chains of custody.⁸ CAR identified 50 commercial entities and 20 countries involved in the GVC for components used by IS forces to construct IEDs. Turkey was the most important supplier, with 13 companies involved in the GVC supplying chemical precursors, containers, detonating cord, cables and wires.

India was the second most important supplier of components as seven Indian companies manufactured most of the detonators, detonating cord and safety fuses. Companies headquartered in Japan, Switzerland and the US manufactured the microcontrollers, signal relays and transistors used

in the devices. The CAR report did not find any evidence that there were direct sales companies from these countries to the IS. Rather, there were sales to other companies, with the parts and components finding their way to the IS through subsequent transactions.

In sum, international trade and production of manufactured goods (even explosives) mainly take place through GVCs. Production is fragmented into different phases, which are located in different countries according to their comparative advantages. GVCs are usually driven by multinational enterprises (MNEs) through their business decisions, and a large share of international trade and investment now takes place within MNEs' networks of affiliates.

GVCs have been a major factor driving Asia's economic development. But to continue its rapid development, Asia must get better value out of the region's GVCs, and better manage their many risks and challenges, as we will discuss throughout this chapter.

GVCs are however a relatively new phenomenon, which took off during the 1980s and 1990s. When Japan was developing rapidly from the 1950s to the 1970s, the manufacturing landscape was fundamentally different. Most manufacturing activity took place under one factory roof, and in one country. So how did GVCs come about?

BIRTH OF GVCs

Politics played an initial role in the development of Asia's GVCs. In 1978, Chinese Vice Premier Deng Xiaoping visited Japan, the first-ever visit of a Chinese state leader.⁹ Deng took Japan's bullet train ("shinkansen") from Tokyo to Osaka, and was stunned by Japan's technological development and modernity.

Deng visited a Panasonic TV factory in Osaka and queried the company founder Konosuke Matsushita, "Mr Matsushita, you are called the god of management in Japan. Would you be willing to help us advance the modernization of China?" The founder immediately responded, "We will do whatever we can to contribute to the modernization of China".¹⁰

Throughout the 1980s Matsushita transferred technology, trained Chinese workers and otherwise helped China modernize its industry through 150 separate projects. China learned how Matsushita made everything from electric irons to transformers and semiconductors. In return, Matsushita earned the Chinese government's goodwill and gained unparalleled expertise in manufacturing and selling in the Chinese market.

Panasonic's investment in China was just the beginning of the wave of Japanese investment in emerging Asia that was crucial to the establishment of the region's GVCs. Another impulse to the creation of GVCs occurred in 1985 when Western leaders pushed Japan to allow the yen to rise via the "Plaza Accord". As the higher yen adversely affected the competitiveness of exports, Japanese companies began relocating labor-intensive parts of their manufacturing industry elsewhere in Asia, especially to East and Southeast Asia.

Japanese companies now have some \$360 billion worth of investments in Asia, with \$110 billion in China and \$50 billion in each of Singapore and Thailand. And as Hong Kong, Korea, Singapore and Taiwan climbed the development ladder, they also offshored large slabs of their labor-intensive manufacturing industry to Southeast Asia and China. Indeed, Japan's investments in China are now well exceeded by those of Taiwan and Hong Kong, with Hong Kong being by far the largest single source since China opened to foreign investment in the late 1970s. Today China might seem like an economic giant. But just a few decades ago, it was very much an economic pygmy compared with Hong Kong, Japan and Taiwan.

There were many other factors that combined to facilitate the development of GVCs. Seeing the success of export-oriented policies in Japan, Hong Kong, Korea, Singapore and Taiwan, Southeast Asian countries and China opened their markets to attract investment and stimulate trade. Governments offered great incentives like tariff free imports, and tax concessions, especially through special economic zones and export processing zones where loose policies with regard to labor rights and environmental standards were usually the norm. And China's membership in 2001 led to an acceleration of GVCs in the 2000s.

Declining transport costs also played a role, as it became less costly to ship components from one location to another. The falling cost of passenger aviation made it easier for managers and engineers to travel between locations. Chinese investors can easily afford a day-trip to visit their factories in Cambodia. Indeed, the close location of a large number of Asia economies of diverse levels of development and comparative advantages provided an opportunity to tie these economies together through GVCs.

Rapid progress in information technology has provided an essential tool for the coordination of what have become very complex GVCs. The challenge of managing Asia's GVCs is evident from the Apple's China

GVC which in 2015 included 198 companies and 759 subsidiaries, 336 (44.2%) of which were located in China.¹¹ It is no surprise that GVC management should be one of the most challenging and enriching jobs in Asia today.

So today, East and Southeast Asia is criss-crossed by a dense network of GVCs for a wide range of manufacturing products, notably electronics, automobiles, machinery and clothing. Each country specializes in tasks according to their comparative advantages. Hong Kong and Singapore tend to specialize in logistics and finance, and be home to corporate regional headquarters. Japan and Korea focus on branded product designs and high-tech components, and Malaysia and Thailand specialize in mid-range manufacturing. Thailand has become a regional manufacturing hub for the automobile industry in particular, being used by companies like Toyota, Mazda and Ford. China specializes in product assembly and lower-skilled manufacturing, although it is now graduating to higher value-added activities. Bangladesh and Cambodia are very active in clothing manufacture, while Indonesia and Mongolia are rich in natural resources.

This phenomenon has come to be known as “Factory Asia”, and China is often referred to as the “Factory of the World”. But since foreign investment in China’s GVCs is still such an important motor of China’s development, trade by MNEs still accounts for some 45% of China’s total trade.¹² This may be down from the peak of 59% in 2005, as Chinese companies are becoming more active in international trade. However, MNEs remain a very important feature of China’s GVCs and economy more generally. In a similar vein, the foreign value-added share in exports is above 30% in Singapore, Malaysia and Vietnam.¹³

East and Southeast Asian countries participating in GVCs have experienced very rapid economic growth, poverty reduction and rising incomes. GVCs have also been empowering for women, who dominate workforces in factories for garments and textiles, electronics and commercial horticulture. But not all Asian countries have managed to integrate into GVCs. Much of South Asia is missing the GVC boat, and being left behind, although India has been very active in the development of GVCs for IT-based business services, something we will discuss later.

All things considered, how useful are GVCs for countries wishing to get on a fast track to economic development?

GVCs, A FAST TRACK TO DEVELOPMENT

The advent of GVCs can indeed offer a fast track to development. It is no longer necessary for one country to be capable of every phase in the production of, for example, an automobile or a television, as was the case when Japan and Korea were in the midst of their fast growth periods. Today, it is only necessary to perform one stage or task in the GVC to be able to hook onto new development opportunities. And small and medium enterprises have greater opportunities to participate in GVCs, by exporting just one part or component.

For example, the Chinese town of Qiaotou, once a mere farming village, has made its mark on Asia's GVCs by becoming the "button capital of the world". According to one estimate, Qiaotou's 700 family-run factories would produce over 60% of the world's clothing buttons, and 80% of the world's zippers, as it manufactures 15 billion buttons and 200 million meters of zippers a year. But Qiaotou is not the only example. China's industrial heartland is dotted with towns that specialize in all manner of things like socks, toothbrushes and cigarette lighters!

In a similar vein, Cambodia has hooked onto Asia's GVC for garment manufacture and export, and has thus joined the "Olympians of growth", according to the World Bank.¹⁴ Following the UN-sponsored national elections in 1993, the Cambodian government opened up the economy to international trade and investment.¹⁵ This enabled the country to attract enormous flows of foreign direct investment (FDI), coming mainly from China, Malaysia, South Korea, Taiwan, Vietnam and Japan. Cambodia's stock of inward FDI in Cambodia increased from \$125m in 1993 to \$14.8bn in 2015, an increase from 5% to 82% of the country's GDP. External factors like rising labor costs in China, the 2011 floods and political instability in Thailand, and the desire of Japanese investors to diversify their investment destinations have also driven inflows of FDI.

Cambodia's economy has grown at an annual rate of 7.7% over the past two decades, making it the world's sixth fastest growing economy, with exports contributing more than 50% to Cambodia's growth over the past decade. The garment sector accounts for three-quarters of merchandise exports, and has benefited from preferential access to US and EU markets, and relocation of production from China as the latter's wage costs have risen.

Thanks to a strong economy, the share of Cambodia's population living in extreme poverty (less than \$1.90 a day) fell from 30% in 1994 to 2% in

2012 (those living in moderate poverty—less than \$3.10 a day—fell from 67% to 22% over the same period).¹⁶ And Cambodia's women, who account for 85% of the 600,000 employees in the garment sector, have benefited in particular from the sector's relatively higher wages. This is an astonishing achievement for a country that was torn apart by a horrifically genocidal war just a few decades ago that killed one-quarter of its population.

But Cambodia remains one of Asia's very poorest countries, with a GDP per capita of only \$3483, well below its neighbors of Laos and Vietnam, and the lowest in Southeast Asia. And despite the undeniable benefits of hooking onto the GVC for garments, Cambodia faces the risk of getting stuck producing low value-added garments forever, unless it can upgrade its economy.

Cambodia faces daunting challenges in attracting higher quality FDI and in climbing the GVC to higher value-added activities. For one, its very successful garment sector is basically an enclave, with a few linkages to the rest of the economy. Domestic value added in the garment sector is low, with local workers undertaking merely "cut, sew and trim" functions. Higher value-added activities, like design, branding and marketing, are undertaken by MNEs like H&M, Inditex, Gap, Banana Republic, Nike, Levi, C&A, Puma, Old Navy, Adidas and Calvin Klein.

Most importantly, the country is still suffering from the lingering impact of the massive loss of skilled Cambodians and severe disruption to the country's education system suffered during the 1975 to 1979 Khmer Rouge period, when the country's educated elite was decimated.

"Cambodia's labour force is still characterised by low education and low skills. The average educational attainment of the labour force is currently at primary education level or even lower," says Shandre Thangavelu, a professor at Australia's University of Adelaide. "To continue to reap the benefits of FDI, it will be necessary to make major investments in school education, and technical and vocational training, as well as infrastructure and public institutions."¹⁷

Improving human capital is a long-term endeavor. But as Mr. Thangavelu says: "Without strong interventions to develop human capital, there is a high possibility of the economy becoming caught in a 'low-skill, low-wage' trap in the near future."¹⁸

Very poor governance is also holding the country back from realizing its great potential, as Cambodia is one of the world's most corrupt countries. It is ranked 156 out of the 176 countries in Transparency

International's Corruption Perceptions Index,¹⁹ and 112 out of 113 countries in the World Justice Project's Rule of Law Index.²⁰ Cambodia's garment workers also suffer from widespread labor rights abuses like forced overtime, pregnancy discrimination, child labor and anti-union practices, as NGO Human Rights Watch has reported.²¹ The Cambodian government makes little effort to enforce labor laws, while big Western apparel brands, whose garments are produced in Cambodia, turn a blind eye. Chinese-owned garment factories are reportedly among the worst offenders when it comes to labor rights abuses. Cambodia is also a hotspot for human trafficking, according to the US State Department.

The case of Cambodia shows that when a country is at the rock-bottom of the global development ladder, as Cambodia was, getting just a few things right (like its liberal trade and investment regime) can enable a country to join GVCs and stimulate rapid growth, and poverty reduction. But the case of Cambodia also shows that to continue developing, and extracting greater value out of GVCs, it is necessary to improve human capital, the quality of governance and infrastructure. Cambodia's developmental journey has barely begun.

HOOKING ON TO GVCs

All Asian countries, including Cambodia, could do much more to exploit the possibilities of GVCs by attracting more and better-quality foreign investment.

Since GVC participation by low- and middle-income countries is mainly driven by investment from MNEs, it is critical to foster an investment-friendly ecosystem. This means good transport, logistics and other infrastructure, human capital, open trade and investment policies, intellectual property protection, minimal red tape especially for customs procedures and strong institutions.

But the narrative is all too often the same in Asia. A small group of countries are world leaders, while the rest trail off into the distance. For example, only Singapore, Hong Kong and Japan make it into the world top 20 in the World Bank's Logistics Performance Index,²² while only the same three countries and Taiwan score a top 20 ranking World Economic Forum's Global Competitiveness Index,²³ and the same three countries and Korea are classed in the top 20 of the World Justice Project's Rule of Law index.²⁴ Outside of North East Asia, other Asian countries score

poorly in the OECD's PISA study, which assesses the education performance of 15 year old students.²⁵

At the same time, China, India, Indonesia, Myanmar, the Philippines and, to a lesser extent, Malaysia have simply enormous barriers to foreign investment, which greatly restrict their capacity to participate in Asia's GVCs. While Japan may have low formal barriers to foreign investment, this unique country's business and social practices have proved a virtual insurmountable barrier to investors.

This means that Japan, which has done so much to create GVCs in other Asian countries, has virtually no GVC footprint at home. Japan's economy is losing so much through its inability to attract GVC investments at home. Indeed, it is a vast outlier compared with other advanced countries like the US, Germany, UK and France, which are enormous overseas investors, but which also receive large inward flows of investment. In Japan's case, the stock of inward foreign investment is less than 15% of its stock of outward investment.²⁶

Asia is in desperate need of a new boost to its GVC-driven development, and trade and investment liberalization offers one path forward. But the arrival of Donald Trump in the presidency of the US, and his withdrawal of America from the Trans-Pacific Partnership (TPP) will only undermine the prospects for trade and investment liberalization in Asia.

ASIAN TRADE AND INVESTMENT LIBERALIZATION

Opening economies to international trade and investment has played a key role in the development of Asia's GVCs. Some countries have unilaterally opened their economies. For example, Hong Kong and Singapore have the world's most open economies in contrast to most of their trading partners. This is one reason why they are Asia's most advanced economies. China and indeed most Asian economies have made partial openings of their economies through special economic zones. They can be an effective way of attracting international business and starting liberalization, but such zones also result in unbalanced, distorted economies.

Countries like China have liberalized their trade and investment as they joined the World Trade Organization (China joined in 2001), while longer-term members of the WTO/GATT have opened markets during multilateral trade deals like the Uruguay Round. And India, Indonesia, Korea and Thailand liberalized trade and investment in response to financial crises, often under pressure from the IMF.

Regional integration has also played a role. The Southeast Asian countries of ASEAN signed an ASEAN Free Trade Area agreement (AFTA) in 1992, and this is now being transformed into an “ASEAN Economic Community”. The AFTA was also enhanced through a series of separate FTAs between ASEAN and six other regional countries, namely China, Japan, Korea, Australia, India and New Zealand. For its part, Taiwan has been virtually shut out of most Asian FTAs because of pressure from China, although Taiwan does have an FTA with Singapore, New Zealand, and in 2010 it did sign the Economic Cooperation Framework Agreement with China. Taiwan is also pursuing a possible FTA with India.

Despite the apparent great success of Asia’s trade and investment policies, most Asian countries have relatively closed economies, according to the OECD’s FDI Regulatory Restrictiveness Index. Indeed, only Cambodia and Japan score better than the average for the advanced OECD countries. And the Philippines, Myanmar, China, Indonesia and India are highly closed to foreign investment, the key driver of GVCs.

In other words, there is much work that Asia needs to do to open its economies to trade and investment, and make the most of GVCs. In recent years, two separate sets of multilateral trade talks have offered the hope of a new wave of trade and liberalization in Asia, namely the TPP and the Regional Comprehensive Economic Partnership (RCEP).

TRANS-PACIFIC PARTNERSHIP

The TPP negotiations were successfully concluded on 6 October 2015, but the US Congress never ratified the deal. And then in January 2017, to the dismay of the US business community, US President Trump withdrew the US from the TPP. This was after all a trade agreement designed by the US business community, for the benefit of the US business community, pushed onto allies and partners, and then rejected by a business man president. Above all, the TPP was an important geopolitical initiative that would have enabled the US to set high standards for trade, investment and GVCs in twenty-first century Asia, something that no other country could do.

On the presidential campaign trail Trump declared the TPP “another disaster done and pushed by special interests who want to rape our country”. No trade and investment deal is perfect. They are the product of compromises between participating governments. But this is a great pity. The TPP was very much the right agreement for today’s world of GVCs

where companies from “headquarter economies” like the US, Japan and Korea create and design products, and then outsource the labor-intensive stages of manufacturing to “factory economies” like Southeast Asia or China.

The TPP went beyond mere trade liberalization and sought to establish a more seamless environment for trade and investment. It dealt with issues like services, electronic commerce, telecommunications, competition policy, state-owned enterprises (SOEs), intellectual property, government procurement, and transparency and anti-corruption. The concerns of US workers and environmental activists were also taken on board in labor and environment chapters. Vietnam, Malaysia and Brunei made important commitments regarding freedom of association for trade unions, forced labor and human trafficking.

The TPP was economically very important. Its signatories were Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore, the US and Vietnam, which account for 40% of the world economy and one-quarter of world trade. The absence of China is often alleged to be a deliberate geopolitical ploy by the US. In reality, China was invited to join the TPP trade talks, but declined. And China would have immense political difficulties signing up to the TPP’s chapters for labor rights and SOEs. While all countries including the US stood to gain substantially from the TPP, countries like Vietnam, Malaysia and Japan stood to gain the most through their promised market opening.

The great value of the TPP is evident in the efforts of governments from Japan, Australia, Singapore and others to try to convince the Trump administration to reconsider its objection to the TPP. The 11 remaining members of the TPP are now discussing the possibility of proceeding with the TPP without the US. It is far from clear that all 11 would be willing to proceed without the prospect of improved access to the large and lucrative US market. It is also far from clear that they will all be willing to sign up to the labor rights, SOE and environmental chapters without US pressure.

TRUMP TRADE POLICY

During the US presidential election campaign and before his inauguration, Donald Trump had much to say about US trade and investment with Asia. He accused China of raping the US. He threatened to label China a currency manipulator, to levy an import tariff of 45% on American imports

from China and to penalize companies that locate manufacturing investments in China rather than the US. But Trump's rhetoric on trade policy has been evolving and softening from these defiantly protectionist messages. He is now emphasizing his support for both free and fair trade.

According to the President's 2017 Trade Policy Agenda, America has not benefited from its trade deals over the past couple of decades due to the lack of reciprocity in trading relations. He complains that many countries have high trade barriers, while their companies can export freely to the US. Indeed, there is a widespread consensus that China has been flouting world trade rules, stealing US intellectual property, conducting state-sponsored industrial espionage, buying up US companies while keeping its own markets closed, and discriminating against American companies based in China. In a retreat from a practice from the Cold War, the Trade Policy Agenda indicates that US will no longer turn a blind eye to unfair trade practices that disadvantage Americans for "putative geopolitical advantage", something which make Japan and Korea shudder.

The US' trade deficit is the lightning rod for Donald Trump. Indeed, the US has had a trade deficit since 1975, and today has the world's largest trade deficit, some \$763 billion in 2016. The US' trade deficit with China of \$347 billion represents almost half, with Japan (\$69 billion) and Korea (\$28 billion) being among the other leading contributors.

Trump would now like US trade policy to focus on bilateral rather than multilateral deals. Through bilateral trade diplomacy an aggressive hegemon like the US can extract maximum benefits from its relatively weaker partners, and can also unilaterally sanction any partner that causes it displeasure, without having to bother with international dispute settlement mechanisms and the rule of law. Trump clearly has China, Japan and Korea in his sights. The new Trade Policy Agenda highlighted the tripling of the US' trade deficit with China since it joined the WTO, and the doubling of its trade deficit with Korea following their free trade agreement.

On the occasion of their summit meeting in February 2017, Trump and Japanese Prime Minister Shinzo Abe agreed to establish a new framework for economic dialogue, which is expected to lead to a bilateral free trade agreement. And when Trump met Chinese President Xi Jinping in April 2017, trade was also top of the agenda. Xi was very keen to avoid a trade war with its biggest trading partner as the two sides agreed to a rushed 100-day negotiation over some of their thorniest trade and investment disputes. But very little was achieved through this 100-day deal. And at their June 2017 summit, President Trump told

Korean President Moon Jae-in that the US intended to renegotiate their free trade agreement.

While the US Treasury has backed off from Trump's claims of Chinese currency manipulation, it did establish a "Monitoring List" of major trading partners that merit close attention to their currency practices, which includes four Asian economies, namely China, Japan, Korea and Taiwan.²⁷ Despite some softening in Trump's trade rhetoric, there remains a strongly protectionist undercurrent, as Trump's overriding trade policy goals are reducing the US' bilateral trade deficits (notably with China, Japan and Korea), and bringing back manufacturing jobs to America. And Trump's launching in August 2017 of an investigation into China's alleged theft of US intellectual property has deeply troubled the Chinese government, and raised the specter of a possible trade war between China and the US. Trump has also threatened to disregard World Trade Organization dispute settlement rulings. While Trump is promising to shake up trade relations with Asia, China is actively seeking to foster trade within Eurasia through its Belt and Road Initiative.

With America's retreat from the TPP, many commentators have argued that China will take over the lead of trade liberalization in Asia, notably through the RCEP. Nothing could be further from the truth!

REGIONAL COMPREHENSIVE ECONOMIC PARTNERSHIP

The RCEP is a negotiation which seeks to create one single FTA between the ten ASEAN member states (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam) and those six countries which already have FTAs with ASEAN—Australia, China, India, Japan, Korea and New Zealand—the "Plus-6 countries". The RCEP were launched in in November 2012, with the goal of completing the deal by end 2015.

On paper, the RCEP looks like a huge deal. It involves half the world's population. The participating countries account for 30% of global GDP and about a quarter of world exports and foreign investment. It could thus become the world's biggest trading bloc. The RCEP promises to create one agreement building on the complex "noodle bowl" of agreements between ASEAN and the Plus-6 countries, and result in "significant improvements" over the existing agreements. The RCEP will also require agreements between those Plus-6 countries that don't already have agreements.

But the RCEP is proving much more difficult than envisaged. Rationalizing into one agreement the complex “noodle bowl” of agreements between ASEAN and the Plus-6 countries is in fact very challenging, as many of these agreements are quite different from each other, having been negotiated at different points in time. Filling in the gaps between the Plus-6 agreements is also proving arduous, especially in light of the need for FTAs between China and India, China and Japan, and Korea and Japan, countries which have testy relations. And the RCEP is ultimately not very ambitious. Its main focus is on merchandise trade barriers, rather than issues like services, investment, intellectual property and competition policy which are key to GVCs.

The reality is that the RCEP negotiation may never be concluded. And if it is, it will not result in any significant market opening. In fact, apart from Singapore and Hong Kong, Asian economies have never been thrilled about open markets for trade and investment. They are mainly concerned with serving the interests of their entrenched business elites. This is a great pity as Asia desperately needs much more open markets to continue its development.

In the press the RCEP was often billed as a China-led negotiation, which excludes the US, and which seeks to rival the US-led TPP, even though officially it is an ASEAN-led deal. But from all reports, the RCEP negotiations are suffering from a lack of strong leadership. Some countries like India and Indonesia are not enthusiastic at all about RCEP, and China shows no visible signs of wishing to further open its markets. The negotiating deadline of end-2015 was initially extended to 2016, and now there is the mere hope that it will be finalized in 2017. Perhaps the best indicator of the value of the RCEP is that US business is not interested in it at all.

In sum, Asia is in desperate need of a new wave of trade and investment liberalization to dynamize its GVCs as a motor of development. But the US’ abandonment of the TPP and adoption of a bilateral rather than multilateral approach means a great loss of leadership in trade and investment liberalization, and we can expect trade relationships between the US and Asia’s leading countries to be fractious. While many assume that China will be able to step into the empty gap left by the US, there is no evidence whatsoever of Chinese leadership in trade and investment diplomacy. Like Japan and Korea before it, China practices mercantilism, as promotes exports and protects its domestic market from imports.

CLIMBING GVCs

A major development challenge for Asia's emerging economies is to increase their share of the value added in their GVC exports through functions such as high-tech componentry, product design and branding. As the examples of the iPhone and the jacket at the beginning of this chapter highlight, all too often Asia's emerging economies contribute only a minor share to their GVC exports, even if they have been increasing their value added since 2008.²⁸ And perhaps the ultimate challenge is to become corporate leaders of GVCs, rather than just following the lead of MNEs from advanced countries, which direct most of the GVCs in Asia today.

How can a country climb up the GVC and become a GVC leader? The bottom line is that Asia's emerging economies need to develop their economic, business and technological sophistication.

The very act of participating in GVCs facilitates knowledge and technology transfers. Local people who work in MNEs gain valuable experience and exposure to global best practices. Local companies who have supply contracts with multinationals also learn to comply with the global product standards. In other words, GVCs provide an opportunity for learning by doing, as knowledge can flow along GVCs and lay the foundation for them to make a high value-added contribution to GVCs.

But experience shows that such passive upgrading may not take you a long way up the GVC. As in the case of Cambodia, all too often GVC activities can be an enclave that has very few linkages to the local economy. And for its part, Apple has been reluctant to involve many Chinese companies in its GVC as suppliers of key components or as major assemblers of Apple products.²⁹ The majority of Apple's suppliers, even many of those located in China itself, are foreign companies, principally from US, Japan, Taiwan and Korea. Apple's choice of supplier companies reflects their ability to deliver the highest quality in good time and at the negotiated price. This may reflect questions of trust related to business culture, as protection of intellectual property is notoriously weak in China.

At the same time, it is also true that China is in the midst of an impressive process of technology catch-up. China has developed a strong niche in high-speed trains building on technology transfer from Japan. And e-commerce giant Alibaba has been an amazing success story. But many other successful Chinese companies, like Huawei, Xiaomi, Lenovo and ZTE, remain basically "copycat companies" which are now tackling the lower ends of markets occupied by advanced countries.

Today, there is no government making greater efforts to climb Asia's GVCs and get better value for its economy than China's. It is keenly aware that its position as a low-cost producer is now being challenged by countries like Cambodia, India, Indonesia and Vietnam, while there is a yawning gap between China's manufacturing capacities and those of Germany, Japan and the US, despite some isolated success stories.

It is also relevant that countries like Malaysia and Thailand, which have been successful participants in GVCs, have never managed to break out and become industrial and technological leaders themselves. Technology is also seen as a security issue by the Chinese government. It craves to have indigenous information technology and to not be dependent on American and other Western companies.

At this stage, China's manufacturing industry is facing four major challenges—insufficient innovation, weakness in core technologies, excess energy consumption and severe pollution. This is why the Chinese government launched a “Made in China 2025” initiative which seeks to upgrade China from a manufacturing giant into a manufacturing power, building on earlier such initiatives.

While delivering the 2015 Annual Government Work Report, Chinese Premier Li Keqiang said, “We will implement the ‘Made in China 2025’ strategy, seek innovation-driven development, apply smart technologies, strengthen foundations, pursue green development and redouble our efforts to upgrade China from a manufacturer of quantity to one of quality”.³⁰ The ultimate goal is to become the world's leading manufacturer by 2049, the hundredth anniversary of the foundation of the People's Republic of China.

CHINA'S EFFORTS TO CLIMB GVCs

China has thus been pursuing various activities to acquire knowledge and technology to improve the sophistication of its economy, such as investing in domestic R&D, investing in foreign companies to acquire their technology, promoting “innovation mercantilism”, practicing industrial espionage and fostering entrepreneurship—all of which can play an important role in China's GVC participation.

China's R&D

China has been ramping up its spending on R&D dramatically, with R&D averaging 20% annual growth between 2003 and 2013.³¹ China accounts now for about 20% of global spending on R&D, not too far behind the US' 27%. China will likely overtake the US in the coming years, and become the world's leading R&D nation. Indeed, China's new 5-year plan promises that by 2020, R&D investment will account for 2.5% of gross domestic product, compared with 2.05% in 2014 (US spending on R&D represents 2.7% of GDP).³²

Many questions are raised about the quality of China's R&D spending which tends to favor large companies and high-profile prestige projects, rather than dynamic small companies and projects that would have more of an impact on the lives of Chinese citizens. But China is unquestionably on the road to becoming a science and technology powerhouse. China and India now together produce almost half of the world's new undergraduate science and engineering (S&E) degrees, the EU 12% and the US 9%. The US, however, still produces more S&E doctoral degrees than China and India and remains the leader in S&E higher education, as well as the destination of choice for international students.

China "Innovation Mercantilism"

China has long practiced "innovation mercantilism", a strategy that embraces a new kind of protectionist trade policy, to improve domestic innovation capacity and technology—even though it regularly contravenes its commitments under its membership of the WTO.³³ This involves many things like subsidies and access to finance to keep production artificially cheap. This underpins its massive excess capacity across a wide range of industries. Although it is less of a problem today, for a long time China manipulated its exchange rate to enhance the competitiveness of its export and import-competing sectors.

China also uses the power of its market size to force MNEs to transfer technology to Chinese companies, to push them to go into joint ventures with Chinese companies, and to coerce require them into establishing research centers into China. For example, Apple has been coerced into establishing R&D centers in China. And in order to open motor vehicle factories in China, Ford had to enter into a joint venture with Chinese automobile producer Chang'an Motors. It was also required to open an

R&D laboratory employing at least 150 Chinese engineers. Forced technology transfer was also how China became a leader in the high-speed train sector.

China has many restrictions on market access, such as for its semiconductor market. The “Made in China 2025” initiative is targeting “40 per cent self-sufficiency in semiconductors by 2020, rising to 70 per cent by 2025”. This would reduce Chinese imports of US semiconductors by half in 10 years and ultimately eliminate them entirely within 20 years.

The Chinese government introduced “indigenous innovation” policies explicitly designed to discriminate against foreign-owned companies in its enormous government procurement market. It has introduced security and industry rules, especially requirements for “secure and controllable” equipment, which effectively exclude foreign technology products.³⁴

China’s Outward FDI

Over recent years, China has become a major outward investor, with flows averaging \$120 billion a year over the past three years.³⁵ A number of years ago, it was mainly investing in energy, natural resources and agricultural properties in Australia, Africa and Latin America. But now China’s investment is now increasingly targeting Western companies with technology, know-how and brands to enable it to climb further up the GVC.

Both the US and Europe have been receiving large inflows of Chinese investment. Some of the most important recent investments in the US have been Haier’s acquisition of GE’s appliances unit, Wanda’s purchase of Legendary Entertainment, the acquisition of Omnivision Technologies by a Chinese consortium and, in the automotive sector, Ningbo Joyson’s acquisition of Key Safety Systems.³⁶

In Europe, Tencent bought Finland’s Supercell, Beijing Enterprises bought Germany’s EEW Energy from Waste operation, and ChemChina acquired Switzerland’s Syngenta, Italy’s Pirelli and Germany’s KraussMaffei Group. Fosun bought Germany’s Hauck & Aufhäuser Privatbank, Dalian Wanda acquired Britain’s yacht maker Sunseeker and Haitong bought Spain’s Banco Espirito Santo’s investment banking business.³⁷

China has also reportedly been hiring German and Japanese industrial experts. And companies like Huawei, ZTE, Lenovo and Xiaomi have been buying patents through licensing deals and acquisitions.

But China’s accelerating purchases of Western companies is giving rise to many concerns by Western governments, and may not be a sustainable

strategy, even though the accumulated stock of Chinese investment remains modest for the moment. Among these many concerns are: the potential loss of core technologies and the impact that may have on the local economy; the lack of transparency of some Chinese investors; and the perceived political risks of accepting investments from state-owned companies with close links to the Chinese Communist Party. Other concerns are that China's own market remains relatively closed to foreign investors, and no foreign company would be allowed to buy critical infrastructure or core technologies in China.

More recently, the Chinese government has become concerned about the quality of some of its companies' investments, especially at a time when it is concerned about controlling capital outflows. So in 2017, it began clamping down on some overseas investments by Chinese companies.

China's Industrial Espionage

China did not invent industrial espionage, but it has certainly mastered the art. And intellectual property theft, especially from the US has been reportedly rampant, and has been called the "great brain robbery".³⁸ Keith Alexander, former director of the US National Security Agency, once said the loss of industrial information and intellectual property through cyber espionage constitutes the "greatest transfer of wealth in history".³⁹ The US Commission on the Theft of American Intellectual Property estimates that the annual cost to the US economy continues to exceed \$225 billion in counterfeit goods, pirated software and theft of trade secrets and could be as high as \$600 billion, and that China remains the world's principal IP infringer.⁴⁰ And Microsoft estimates that 95% of the copies of Microsoft's Office software in China are pirated, and at least 80% of China's government computers use versions of the Microsoft Windows operating systems that were illegally copied or otherwise not purchased.

In 2015, US President Obama and Chinese President Xi agreed that the US and Chinese governments would not conduct cyberattacks to steal intellectual property for economic gain from each other. Reports suggest that there may have been a subsequent fall in such espionage, although there is always a risk that implementation of this agreement could fall foul of future tensions in US/China relations. But even if there were a sudden stop to industrial espionage, China would already have stolen a big march in its development through its acquisition of technologies in the areas of

IT, renewable and nuclear energy, biotechnology, telecommunications, agriculture and so on.

Entrepreneurship in China

Chinese Premier, Li Keqiang is also promoting “mass entrepreneurship” (along with innovation) as a new engine of China’s economic development. This is a very good initiative. Since the Chinese government started removing the shackles of central planning and state ownership, entrepreneurship has been a key driver of the Chinese economy. Chinese entrepreneurs range from families that open up a small restaurant, shop or factory to people like Jack Ma of Alibaba, Ma Huateng (Pony Ma) of Tencent or Lei Jun of Xiaomi.

Jack Ma is the symbol of the swashbuckling Chinese entrepreneur. He admits with almost great pride that Harvard University rejected his application ten times, and that his job application at Kentucky Fried Chicken was also rejected. And yet as the founder of e-commerce behemoth Alibaba, he is now the world’s eighth richest man in tech with a net worth of \$29 billion.

Despite the great success of Jack Ma and others, budding entrepreneurs have faced many great challenges in China. Better education for entrepreneurship is needed. China’s typical rote learning education is not very useful for stimulating the animal spirits of budding entrepreneurs. Weak rule of law, rampant corruption and heavy state bureaucracy are further drags on entrepreneurial ambitions. And access to finance, a break on entrepreneurs everywhere, is even more of a challenge in China where so much finance from state-owned banks is channeled to SOEs, based on cozy connections.

Under the leadership of Premier Li Keqiang, the Chinese government is making radical changes to improve the climate for young entrepreneurs, and according to all the signs, entrepreneurship is booming in China, especially in the IT space. But needless to say, Rome wasn’t built in a day.

All things considered, China’s efforts to get better value out of Asia’s GVCs are very impressive, and will no doubt help climb further up the GVC. But China’s approach is basically a top-down, centrally-controlled brand of “techno-nationalism”. Japan and Korea have also implemented similar policies in earlier years. This enabled them to climb fair way up the GVC, but their progress became stunted.

The real lesson of the world's innovation leaders like Switzerland, Sweden, the UK and the US⁴¹ is that other ingredients are necessary. Open economies are necessary to boost competition as well as cooperation between different companies and countries. Open societies are required to allow academic freedom, freedom of speech and thought, and a dynamic competition of ideas. And open politics and the rule of law are necessary to keep governments clean and honest, and so that bad ones can be thrown out of office. China and much of Asia are a very long way short of these ideals, and will never maximize the value of their participation in GVCs until they embrace and practice them.

ASIA'S WEAK PARTICIPATION IN GVCs FOR SERVICES

Asia's GVC successes, such as they are, have been mainly in the manufacturing sector. In contrast, the services sector in most of Asia's emerging economies is bogged down in traditional services with low productivity. Heavy government regulations that protect incumbent players are the main factor holding back the development of high-value modern services like information and communication technology, finance, logistics, professional business services and transport.⁴² And together with barriers to trade in services, this is preventing most Asian countries from participating in GVCs for services. In China, India and Indonesia such barriers are often two to three times higher than in the advanced OECD countries. World-class service sectors cannot be developed if they are isolated from best international practice and world-class inputs.⁴³

Shortages of highly skilled workers (notably accountants, business managers, engineers, lawyers, medical doctors, scientists and software specialists) and inadequate infrastructure are also preventing Asia from developing modern services sectors and joining services GVCs. Even Japan⁴⁴ and Korea,⁴⁵ two of Asia's leading economies, have weak services sectors, with services productivity just half that of their manufacturing sectors. In Asia, only Singapore and Hong Kong have dynamic services sectors.

Asia will never fully climb the development ladder and GVCs until it takes its services sector more seriously. You cannot succeed with lop-sided development that sees fully one half or more of the economy limping along. In much of developing Asia, labor productivity in the services sector is less than 20% that of advanced economies, while it languishes at around 10% in China and India. This is also holding back manufacturing sectors where services provide critical inputs.

There is, however, one area where India and the Philippines are enjoying great success, and that is in GVCs for business process outsourcing (BPO). Advances and diffusion of information technology have facilitated the outsourcing of business services, especially those which are routine, and which are electronically deliverable and don't require face-to-face contact with customers. The BPO sector began with call centers, and then extended to telemarketing, accounting, paralegal, human resources, software development, medical transcription and so on.

India and the Philippines, more than any other Asian countries, have been able to seize the opportunities of the BPO sector thanks to several factors—good English language skills, low-wage costs and tech-savvy youth. For some time, India was the BPO front runner. But according to market reports, the Philippines has leapt ahead to become Asia's call center leader, with India losing a great chunk of its business to the Philippines. Citibank, Safeway, Chevron and Aetna are just a few of the international corporations to have BPO operations in the Philippines.

The Philippine government has also provided greater support to the BPO sector than the Indian government. Most BPO offices are designated as special economic zones, with benefits like tax holidays, duty-free import of capital equipment, simplified import and export procedures, and freedom to employ foreign nationals. The passage of the Data Privacy Act has also put in place international data privacy standards, which are beneficial especially for the multitude of sensitive information like banking and insurance details handled by the BPO sector.

Call centers and associated BPO services now employ more than one million Filipinos, an increase of ten times over the past decade. The BPO sector is now the country's fastest growing sector and brings in \$24 billion in revenues in 2015, not far behind the \$27 billion the country earned from migrants' remittances. However, the majority of these revenues come from voice call centers, as opposed to more technical IT outsourcing where India still retains an edge.

Overall, the BPO sector now makes up 6% of the Philippines' GDP. But it has tended to be an economic enclave, with very little interaction with the rest of the economy.⁴⁶ It is neither a large buyer nor provider of inputs to other sectors of the economy, and its main impacts have been through the retail and real estate sectors.

Could BPO activities become a key driver of economic development in India and the Philippines, as manufacturing has been in countries like Japan, Korea and China?

Most regrettably, the BPO sector seems unlikely to become a key driver of economic development, despite the sector's many benefits. It is no development panacea. The BPO sector only offers employment to the relatively well educated, and not to the vast swathe of lower-skilled people who need jobs. Only 2% of the Philippine workforce is employed in the BPO sector. Both India and the Philippines need a manufacturing renaissance to offer employment to the lower-skilled.

There is also much that both the Philippines and India could do to get better value out the GVC for BPO activities. This means stronger investments in human capital and infrastructure, and further opening of the economy to foster higher value-added activities like animation, software development, game development, engineering design and knowledge process outsourcing research activities.

RISKS AND CHALLENGES OF GVC-BASED DEVELOPMENT

While Asia needs to do much more to get better value out of GVCs, the region also needs to better manage some of the risks and challenges from staking their development strategies on GVCs.

Many East Asian countries, especially China, had placed their bets strongly on GVCs as a key and reliable driver of economic development. They had even biased their development strategies in favor of GVCs by creating special economic zones and export processing zones, which gave special treatment to MNEs which invested in them. Such special treatment can take the form of duty-free imports, tax holidays, soft regulations for labor and environment, access to cheap land and other resources, and exemption on limits on foreign ownership.

But while these special economic zones encouraged participation in GVCs, they were a form of unbalanced development that indirectly discriminated against the domestic economy. They also overly exposed these East Asian economies to the vagaries of international markets, most notably in the context of the 2008 Lehman shock, and ensuing the global financial crisis and "great trade collapse". The recession in the US and Europe saw international trade fall five times more than global GDP from 2008 to 2009. And ever since there has been protracted sluggish growth in advanced markets and growing protectionism.⁴⁷

The global financial crisis has thus highlighted the need for "rebalancing" growth and fostering new sources of growth in the domestic economy. Hence, the new mantra in China has become the need to rebalance

its economy away from export- and investment-led growth toward a model based on domestic consumption and the services sector.

This is easier said than done for many reasons. It is not easy to just close up export factories and switch investment and above all workers to the domestic economy. Then there are many vested interests—many of whom are high-ranking Communist Party officials—who oppose the difficult adjustments. And the holy grail of a consumption-led economy is becoming elusive as China's labor share of GDP has been declining, as China's has experienced the greatest increase in income inequality in Asia, and as citizens save in preparation for the country's rapid population aging.

China's rebalancing agenda has become even more acute as it colliding with the effect of rising labor costs, which undermine its competitiveness, and an associated trend of "reshoring" of previously offshored manufacturing activities back to the US and other advanced markets. Chinese wages have been increasing strongly, as its pool of "surplus labor" is becoming exhausted, thereby reducing its attractiveness as low-cost destination, an issue that we will explore in great depth in the next chapter.

"Reshoring" or "insourcing" of production back to high-cost destinations like the US, Europe and Japan is being driven by several factors. While Asia's wage costs have been rising, the US has also regained competitiveness thanks to post-crisis restructuring and lower US domestic energy prices. Rapid technological changes, like robotics, 3D printing, artificial intelligence and the Internet of things, are making advanced countries more attractive business destinations. Indeed, John Lee of the Hudson Institute has argued that robotics and 3D printing might even kill the Asian Century, and that Asia's newly emerging economies will need a changed model from the "export manufacturing" that drove development in Japan, Korea and Taiwan.⁴⁸

Some observers also argue that offshoring to Asia had become a fad, with many companies being seduced by low labor costs and not taking account all of the hidden costs. For example, outsourcing puts you at a time-disadvantage in getting products to market. Another lesson is that the co-location of manufacturing and R&D can exploit the obvious synergies. Insourcing also makes it easier to protect intellectual property, a big issue especially in China. And since President Xi Jinping came to office, many foreign companies have experienced increasing costs and frictions of doing business in China, as they are harassed over issues like monopoly pricing and corruption.

Maintaining adequate quality control is also critical for keeping GVCs competitive. China has been littered with many scandals regarding the quality of food and other products in recent years—to such a point that Chinese citizens often travel abroad, especially to Hong Kong, to buy safer internationally branded food products. The tales from Paul Midler’s “Poorly Made in China” highlight the difficulty of product quality in China.

Political and social instability can also present risks to the benefits of GVCs. Political tensions in recent years between China and Japan led to physical attacks on Japanese products and production facilities. They adversely affected demand for Japanese products by Chinese consumers. This is one reason why Japanese business has been turning away from China toward the Southeast Asian economies (ASEAN) and India. The economic costs of China’s foreign policy posture toward Japan have become evident to the Chinese leadership and have been one factor behind the calming down of tensions. With an increasingly wobbly economy at home, China cannot afford to scare away good Japanese investment.

And lastly, we cannot talk about politics and GVCs without mentioning Donald Trump’s posture toward outsourcing to China and his desire to bring manufacturing back to the US. Trump has been pressuring companies to bring manufacturing back to America, and he claims that “Since my election, Ford, Fiat-Chrysler, General Motors, Sprint, Softbank, Lockheed, Intel, Walmart, and many others, have announced that they will invest billions of dollars in the United States and will create tens of thousands of new American jobs.”⁴⁹ Whether these investment plans are due to pressure from Trump or not is difficult to assess. But Trump is certainly offering incentives which may encourage investors to change their plans.

THE QUEST FOR SOCIALLY RESPONSIBLE GVCs

Socially responsible GVCs, with socially responsible business practices, are essential for decent middle-class societies. But the widespread occurrence of labor rights and other human rights abuses in Asia’s GVCs highlights how far Asia is from this aspiration.

How can such abuses happen in countries that seem to have made much such economic and social progress? In some cases, there are no appropriate laws and regulations in place. And more often where laws and regulations do exist, they are not effectively enforced. All too often, these

abuses take place in special economic zones which are very light on laws and regulations, and where foreign investors are pretty free to do whatever they want.

In this section, we will review three illustrative cases—working conditions at Apple’s China-based subcontractors, forced labor in Malaysia’s electronics industry and the tragic collapse of Rana Plaza in Bangladesh.

Jobs at the factories of Apple’s China-based subcontractors, Foxconn and Pegatron, are very much sought after because they usually pay quite well by Chinese standards. But in recent years, there has been a series of horror stories about the sweatshop working conditions.

The horror stories include forced excessive working hours (over 60 hours a week); paltry wages; living in crowded dormitories; exorbitant obligatory payments for living expenses; exposure to toxic chemicals; coercion of students to work as interns; child labor; and substantial use of “dispatch workers”, who have employment contracts with an agency, but not directly with the factory, meaning that they are deprived of benefits and protections.

It is perhaps not totally surprising that in 2010 there was a spate of 14 suicides at Foxconn’s factories. Foxconn responded by increasing wages, installing suicide-prevention netting, conducting prayer sessions with Buddhist monks and asking employees to sign no-suicide pledges. For its part, Apple also responded swiftly by establishing a Code of Conduct for its suppliers, conducting factory audits, pressuring its assemblers to improve working conditions and preparing an annual Apple Supplier Responsibility Progress Report.

In Apple’s 2016 Report, Chief Operating Officer, Jeff Williams, said “At Apple, we are deeply committed to making sure everyone in our supply chain is treated with the dignity and respect they deserve”.⁵⁰ Apple’s report presents an impressive story of Apple’s efforts across its supply chain. But scratching through the details of the report, you will find that there was only a 66% compliance with Apple’s standards of excellence for “wages, benefits and contracts”. There were also relatively low compliance rates for health and safety permission (55%), emergency prevention, preparedness and response (63%) and occupational health safety and hazard prevention (66%).

In other words, despite Apple’s hype, all is not yet well across Apple’s GVC. Indeed, an investigator from China Labor Watch, an activist group, was hired at Pegatron as a production line worker. He reported that the awful working and living conditions that Pegatron workers faced in 2015

were generally no better than those witnessed in 2013.⁵¹ Young production workers toil six days a week in 12-hour shifts. But each day they are only paid for 10 and a half hours, not counting 15 minutes of unpaid meetings. The mandatory overtime shift runs from 5.30 pm until 8.00 pm. Seventy-one percent of the pay stubs collected in October 2015 showed average workweeks that exceeded Apple's self-imposed 60-hour limit.

After their long shifts, workers took a 30-minute shuttle bus back to their dormitories where up to 14 people were crammed into a room. Mold grew pervasively along the walls. Bed bugs had spread throughout the dormitory, and many workers were covered in red bug bites.

It is understandable that workers' wages should be low in a relatively poor country like China. But as Apple says itself, workers in its GVC deserve to be treated with the dignity and respect. Despite the protestations of Apple CEO Tim Cook and other Apple senior management, Apple still has a long way to go to achieve this objective.

Malaysia is one of Asia's very most successful countries. From 1990 to 2016, its GDP per capita quadrupled to \$28,000, and it has virtually eliminated poverty. Participation in Asia's GVCs, especially for electronics, has been one of the secrets of the Malaysian success story. The electronics sector, which accounts for one-third of Malaysia exports, is mainly driven by investment from MNEs from the US, Japan, Europe, Taiwan and Korea, which usually operate in special economic zones.

But Malaysia's success has ridden substantially on the back of large numbers of vulnerable migrants who are victims of "forced labor", as documented by the non-profit organization, Verite.⁵² Some 32% of foreign workers surveyed by Verite were assessed to be victims of forced labor, while another 46% of all workers were deemed to be on the threshold of forced labor.

One in five workers in the study were deceived about their wages, hours, overtime requirements or pay, provisions regarding termination of employment, or the nature or degree of difficulty or danger of their jobs. Virtually all foreign workers interviewed reported that their passports were held by their employer or their broker/agent, something which is against the law in Malaysia.

Many foreign workers are in a state of virtual bondage, as they are tied to their employers and jobs through their work permits, which require the sponsorship of a particular employer. Almost half reported experiencing harassment from immigration officials, police or volunteer citizen security

corps—oftentimes they were subject to financial extortion from these groups.

There was hope that Malaysia's participation in the TPP would help improve the situation. It had committed to significant legal and institutional reforms in the areas of forced labor and freedom of association. It had also committed to fully implement the recently passed amendments to the anti-trafficking law to allow trafficking victims to travel, work and reside outside government facilities, including while under protection orders. Even though the TPP discussions are still continuing, without the US in the TPP there will be much less pressure on Malaysia to work for socially responsible GVCs, even if the TPP talks succeed with the remaining 11 members.

The Malaysian government has the aspiration to climb Asia's GVCs, and move its semiconductor industry beyond basic operations such as assembly, testing and packaging to higher value-added activities. But Malaysia will never achieve its ambition of reaching high-income status, while ever it bases its development strategy on low-wage, low-skilled factory jobs performed by vulnerable and abused foreign workers.

Bangladesh is one of Asia's very poorest countries, with an annual GDP per capita of merely \$3600. Its population of 163 million is densely packed into this small country which is often afflicted by natural disasters. In many ways, Bangladesh seems a country with little hope. It is one of the world's most corrupt countries according to Transparency International, ranked 145th out of 176 on its Corruption Perceptions Index.⁵³ It suffers from chronically poor competitiveness according to the World Economic Forum, which places it 106 out of 138 on its Global Competitiveness Index.⁵⁴

And yet, seemingly against the odds, things have been improving in this country, born a little more than four decades ago following the Bangladesh Liberation War. Economic growth has averaged more than 5% since 1990. The share of the population living in extreme poverty has fallen sharply, from 44% in 1990 to 19% in 2010 (based on the \$3.10 poverty line, poverty fell from 82% to 57% over the same period). Since 1990, life expectancy has leapt by ten years to 70, while infant, child and maternal mortality rates have improved dramatically.

One key factor in Bangladesh's improved conditions, especially for women, has been its success in hooking onto GVCs as an exporter of "ready-made garments" (RMGs), thanks in large part to its free access to the EU market. RMGs account for over 80% of Bangladesh's total

exports, and more than 10% of GDP. The industry employs some 4.2 million people, of whom about 80% are women. It thus contributed greatly to the empowerment of women in this very traditional society. It also indirectly supports as many as 40 million Bangladeshis, about 25% of the population. Bangladesh's clothing industry is only second to China's in size.

But the dark side of Bangladesh's participation in garment GVCs was brought to the attention of the whole world in April 2013, when Rana Plaza, a building housing several RMG factories, collapsed killing 1138 workers, mainly young women, and left more than 2000 injured. It was one of the worst industrial accidents in history, and came close on the heels of the Bangladesh's Tazreen factory fire of November 2012, in which 112 people died.

Who was responsible for this tragic disaster? In the words of Philip Jennings, General Secretary, UNI Global Union, a trade union group, "Many were complicit: the international brands that turned a blind eye to glaring problems in the factories where their garments were made; the factory owners who knowingly put their workers at risk in order to keep costs low; and the Bangladeshi authorities who made no effort to enforce their own health and safety laws".⁵⁵

The many red faces were pressured into responding. A Sustainability Compact was thus forged, committing the Government of Bangladesh, in cooperation with the EU, the US, the International Labour Organization (ILO) and the private sector to bring about the necessary changes in the garment sector. But overall, responses and reactions have been "too little, too late".

It took more than three years for murder charges to be brought against those responsible for the building collapse. The Rana Plaza Donors Trust Fund was established by the ILO in January 2014 in order to collect voluntary contributions to finance the compensation awards. But it took until June 2015 for companies to make sufficient payments to meet the target of \$30 million.

On the third anniversary of this tragedy, the EU noted the "tangible progress on the ground", but insisted that "essential reforms—not least as regards the effective respect of trade union rights and promotion of genuine social dialogue—are still needed to ensure a better future for Bangladeshi garment industry workers ... The EU sees still an urgent need to swiftly investigate and prosecute all acts of anti-union discrimination, including in export zones."⁵⁶

On the same occasion, Human Rights Watch noted that “Garment workers face daunting challenges to unionisation, and remain at risk of interference and threats by factories three years after the Rana Plaza building collapse”.⁵⁷ As Phil Robertson of Human Rights Watch said, “Let’s remember that none of the factories operating in Rana Plaza had trade unions ... If their workers had more of a voice, they might have been able to resist managers who ordered them to work in the doomed building a day after large cracks appeared in it.”

These issues have given rise to a lively debate on the extent and nature of corporate social responsibility of the brands that sourced their products from Bangladesh, notably Benetton, Bonmarche, the Children’s Place, El Corte Ingles, Gap, H&M, Joe Fresh, Monsoon Accessorize, Mango, Matalan, Primark and Walmart. OECD Secretary-General, Angel Gurría, argues that “global businesses must look beyond the bottom line and “go responsible” ... they must act responsibly through their supply chains.”⁵⁸ But the reluctance of much of the business sector to play the game responsibly is evident in the comments of Winand Quaedvlieg, chair of the investment committee of the Business and Industry Advisory Committee to OECD, “an over-extensive interpretation of responsibilities along the supply chain would be counterproductive”.⁵⁹

* * *

Asia’s participation in GVCs has provided a fast track to development. GVCs have also been substantially staffed by workers who have migrated from the countryside to the city. But while urbanization also has great potential to drive Asia’s development, Asia is not making the most of urbanization’s potential, as we analyze in the next chapter.

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