Powering Up or Powering Down in Taiwan?

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Introduction

My remarks will focus on the long-term structural challenges for Taiwan's economy. They bear mainly on long-term social and economic trends as well as economic policy choices made largely at the administrative level. They matter to Taiwan's security directly because of both fiscal (budgetary) and social (manpower) reasons. They matter indirectly because a weakening economic position vis-à-vis China makes Taiwan more vulnerable to both military and non-military coercion.

Demographics

By far the gravest challenge facing Taiwan's long-term economic future is population decline. The birthrate is now just 1.1 children per woman, the labor force will begin to shrink in 2019, and the overall population will begin to shrink around 2025. By 2060, Taiwan's population will fall from today's 24 million to about 15 million.[1] By then, the median age will be 57 and the number of working aged people per older person will be just 1.3. Taipei, including Xinbei, will be smaller than 15 urban agglomerations in mainland China by 2030.

There is no evidence of a serious pro-natality policy coming from the DPP to address this. Taiwan maintained a population control policy as late as 1990 and did not launch a pro-natality policy until 2006. This has so far had no effect on reversing the birthrate. There are initiatives to maintain the labor force by boosting participation rates among the elderly and among women with children but these too have limited potential.

While Taiwan is not alone in Asia in facing a rapidly ageing population, the details of its demographic change make it far more vulnerable than China: it is more than a decade ahead of China in experiencing labor force decline; as a democracy, that decline is causing a surge in demands for social spending which will not be true in China; and its decline has not been accompanied by as sharp an imbalance in sex ratios as China's (i.e. is it more male-deficient than China), a pressing issue for a country where females are not required to undertake military training for reserve duty.

The obvious solution is to allow migration from China, which of course is what made Hong Kong a success. But this remains a non-starter in Taiwan, and since the DPP constituency is both blue collar and especially wary of China, this is unlikely to change. Limits on guest workers from other places, however, could be relaxed. The number of guest workers reached 700,000 in 2018, compared to 350,000 in 2009, mostly from Vietnam, the Philippines, and Thailand. They work in low wage sectors like nursing care, construction, and agriculture. As for skilled workers, overseas recruitment efforts center on ethnic Chinese in the West and in Southeast Asia, as well as high skilled workers from places like India.

KMT officials have urged an opening of Taiwan to high-skilled workers in Asia, following the Singapore and Hong Kong models. But the DPP is resistant to attempts to open such visas to highly skilled workers in manufacturing and technology. The only point of consensus is the importance of attracting overseas Taiwanese back to the country.

Growth Decline

The second major long-term challenge to Taiwan is falling productivity growth and thus falling long-term economic growth. Growth in national income per capita (a proxy for overall productivity), was 7% per year in the 1970s and 80s, but fell to 5% in the 1990s, to 3% in the 2000s and will likely be about 1% in the 2010s. As a result, Taiwan's share of global GDP peaked at 1% in 2010 and has already fallen below 0.9%. The combined effects of growth in developing countries and Taiwan's falling population and productivity will push its share of global GDP to 0.8% by 2030, roughly where it was in 1993. Economic size matters to diplomatic and military influence and Taiwan's shrinking economic size is an important long-term issue of national security.

Soft Investment

Since productivity growth has been slow, there has been a knock-on effect in the form of weak domestic levels of investment, falling shares of export markets, and high levels of capital outflow to higher yielding investments abroad. The investment gap (the difference between gross national savings and gross national investment) has remained high at about 15% of GDP since 2015. Taiwan companies also face political pressures from both China and the U.S. to increase investments in those countries.

There are two cures for this weak domestic investment: fiscal policy to stimulate public investment and broader monetary and economic policies to stimulate private investment.[2]

The DPP has significant room to expand public spending despite running a historically high budget deficit because general government debt as a percentage of GDP remains a manageable 33% of GDP (unchanged from 2009), still well below the 60-90% Reinhart-Rogoff tipping point where government debt has a negative effect on growth. The government has announced a US$63 billion public infrastructure spending program in public housing and clean energy and new fiscal spending on long-term care for the elderly. There are also promises of new investments in urban efficiency and public services efficiency – rapid transit malls, government buildings, energy infrastructure, ports -- which Taiwan sorely needs. Between 2007 and 2018, Taiwan's rankings fell below those of China in the World Bank's infrastructure and logistics indices. Taiwan still ranks very well in terms of urban livability as well as business environment. It needs to translate this into productivity gains.

The Central Bank continues to run a de facto expansionary monetary policy by accumulating foreign exchange reserves, now sitting at US$460 billion or nearly 2 years of imports. But inflation remains low, which reflects the fact that this excess of NT$ in the economy is being saved rather than spent.

The only potential benefit of foreign exchange reserves for productivity is that the Taiwan central bank has started to use them to stimulate Taiwan's financial sector by depositing some of them in the overseas branches of Taiwan banks and putting others on call for foreign exchange transactions in Taiwan. But the internationalization of Taiwan's financial services sector is heavily constrained by China's unwillingness to allow it to participate in the mainland market as an equal and by its general inability to compete with HSBC and other Asian banks with better global capacities.

Innovation and Productivity

Taiwan needs to think about how planning and regulatory policy can encourage innovation and thus domestic private investment. To understand the challenges for government policy to stimulate innovation and productivity improvements, we need to step back and understand the existential quandary that Taiwan finds itself in. Taiwan's late 20th century economic boom in the 1970s through 1990s was mainly driven by large family-owned conglomerates (not multinationals and not SMEs) like Hon Hai, TSMC, and Shinkong getting into mature technologies and industries just as they were reaching their peak of global profitability. This "latecomer upgrading", as Dr. Chu Wan-wen (Qu Wanwen, 瞿宛文) of Academia Sinica in Taipei calls it, allowed Taiwan to reap the quick profits of mature technologies without ever having investment in the innovation capacities that brought those technologies to market in the first place.[3] Think mountain bikes and then hybrid bikes and how Giant entered those fields *after* they were developed elsewhere.

This was in contrast to South Korea, which developed an indigenous innovation capacity and a highly-efficient service sector alongside its industrial expansion. So as those products have matured and commodified and moved into developing countries for production, Taiwan has been left without the innovation capacity to continue to generate new industries. It finds itself constantly in danger of being stuck making products with no more value-added than caramel popcorn.

Taiwan today has very few own brand-names – HTC in smart phones is one of the few – compared to South Korea because it took this late mover approach. Countries like the US, Germany, and South Korea maintain the primary innovation capacity and networks that Taiwan lacks because it was essentially a bandwagon economy. The WTO, in a recent paper, warns that Taiwan "will come under increasing pressure to overhaul its traditional dependence on contract electronics production and move into higher value-added manufacturing and services sectors."

In addition, since Taiwan's growth was built on late-stage bandwagoning, its service sector remained undeveloped and thus labor shifts today out of manufacturing into services are shifts from high productivity to low productivity sectors, the opposite of the normal gains in productivity from such inter-sectoral labor shifts.[4]

At the same time, the whole relationship and nature of services and manufacturing is changing radically so it is not simply a matter of "building" innovation networks through geographic clustering of companies, universities, research institutes, and government agencies anymore. The South Korean model is not relevant now because times have changed. The so-called "servicization of manufacturing" is the process by which manufacturing companies are making most of their profits in the service side – design, brand ownership, marketing, logistics, sales, ancillary services, related services, after-sales service, etc. -- while the "technologization of services" is the process by which service companies traditionally outside of manufacturing or product delivery are increasingly the ones providing the technical advice and technology through which the product is made or delivered – the service companies may be more present on the shop floor than the manufacturer.

Taiwan could thrive in this transformation if it recognizes what is happening. For example, most of Nike's footwear production in Asia is done by the Feng Tay Group headquartered in Yunlin county. Feng Tay in Taiwan handles the technology, development, design, research, logistics, and supply chain management. Nike is mainly a service firm now while Feng Tay, originally a service provider, is really a manufacturer with a technology focus. That's a good story for Taiwan. The founder of Feng Tay tells me that a big advantage of Taiwan is its well-educated population and stable workforce. But he tells me that it is hard to remain in Taiwan because places like Singapore and South Korea have much more focused and committed government leadership to transform themselves into Asian logistics and business services hubs (despite being farther from both China and Vietnam than Taiwan).

The Tsai administration has adopted and expanded the KMT's list of industries[5] and service sectors[6] for support. But while it might make sense for government to help the private sector to identify emerging productivity sectors, it cannot pick winners and try to expand those industries through subsidies and investment. Asian economies have never thrived by trying to pick winners – this was Paul Krugman's famous claim in "The Myth of Asia's Miracle" in *Foreign Affairs* in 1994.

For instance, the plan to invest in defense industries, according to the EIU, will likely bring "vast expenditure with few results." The plan is mainly centered on naval systems, including frigates, submarines, minelayers and assorted weapons for special forces. But this attempt to copy South Korea's success with defense industry investments ignores the fact that Taiwan is not integrated into global defense industry supply chains like South Korea because of its diplomatic isolation from China. China impounded nine Singaporean infantry fighting vehicles in Hong Kong last November to indicate its displeasure with Singapore's continued use of Taiwan for training its military. While Singapore will not likely cease the training, it is also true that it is not likely to become a customer for Taiwan's military kit since Beijing has made it clear that it views Taiwan's defense industry as a sort of illicit economy. Whatever strategic rationale exists for an indigenous defense industry would be sorely tested by a benefit-cost analysis.

Instead of picking winners, Asian economies have thrived by creating the conditions for business success – fair and efficient regulation, excellent infrastructure, investment in education and research, access to finance, political predictability, and generally open markets. So Taiwan's challenge is not to pick winners but to upgrade its business environment by easing land zoning, reducing employment-related taxation, increasing competition, and upgrading public infrastructure. A good example is the industry-led Taiwan Institute for Plumbing Innovation in Lukang that works with the Bureau of Standards, Metrology & Inspection (BSMI) to position Taiwan's' plumbing and sanitation sector for global markets, a key aspect of the urbanization services and urban renewal goods that Taiwan could export to the rest of Asia. This is industry-led initiative with the government playing a facilitative role only.

The Economic Power-Up Plan (经济动能推开方案) rolled out by the KMT in 2012 was a comprehensive economic strategy that industrial and service innovation, higher value-added goods and services exports, human capital upgrading, public infrastructure, and government efficiency. It is actually a very well thought out strategy with specific targets and actions (see Slide 4). It was premised on the decline of long-term growth momentum in Taiwan's economy. The DPP has so far largely continued with most elements of this plan, rebranding it as the "Digital Nation and Innovative Economic Development Plan" and adding an "Asian Silicon

Valley" plan in Taoyuan focused on IT and the digital economy. The ROC constitutional structure gives administrative agencies significant autonomy, which is good for the policy continuity needed for Taiwan to continue to "power up" rather than "power down".

But the challenges up powering up are immense because as the Asian Silicon Valley diagram shows, Taiwan's strengths are not where the future lies. Taiwan may indeed be deeply integrated into the Asian value-chain, but it is highly dependent on a few industries (mainly chemicals, machinery, and IT) and vulnerable to shifts in comparative advantage, as mentioned. It has yet to show it can develop the innovation capacity to compete in the 3rd and 4th layers of IT, where late-comer bandwagoning will not be possible.

China and Southbound

Taiwan's long-term and even short-term economic challenges are for the most part not related to China – or put better the threat from China is not being integrated but being bypassed.

Absolute levels of economic integration with China appear to be holding pretty steady over the last five years – 40% or so of exports, 50% of outward investment. This holds some risks for Taiwan because of the threat of politically-motivated acts of disruption by China. The EIU's risk assessment of Taiwan done in December 2016 highlighted the likelihood that China will engage in acts of "disruption" against Taiwan's global supply chains that involve China: "[M]inor and intermittent disruption…remains a distinct possibility," they wrote, "and businesses dependent on cross-Strait trade or exchanges should reassess their business strategies for 2017-18 under the assumption that cross-Strait links could deteriorate further while the DPP remains in power."[7]

But does this matter to Taiwan as a whole?

Economically, a 2015 paper by Dr. C.Y. Sin (Xian Churao,冼芻蕘) of National Tsing Hua University finds that the business uncertainties, disruptions, and cycles of China have only a *short-term* effect on Taiwan's economic output and no long term effects, in contrast to Hong Kong which suffers from both short and long-term effects. This, he argues, is because Taiwan is a more resilient and globalized economy than Hong Kong.[8] Moreover, research by another group of Taiwan economists led by Dr. Tseng Hsi Peng (Ceng Xipeng, 曾喜鵬) at National Chi Nan University shows that tourists from China actually crowd out more lucrative tourists from other parts of Asia, especially Japan and South Korea.[9] So the disruption caused by China's so-called "revenge by tourist cuts" is not only widely welcomed by the Taiwanese but is probably on net good for Taiwan's economy.

Politically, stronger economic integration with China's economy boosts support for the DPP because it makes the economic costs and vulnerabilities to China more visible.[10] Ironically, then, when Beijing brandishes economic threats that weaken integration, it is good for KMT because KMT leaders win at the polls by promising untold riches from integration with China, as the new mayor of Kaohsiung, Han Kuo-yu, did in his 2018 election campaign.

Moreover, China is actually weakening integration at the bureaucratic level by ending cooperation on cross-straits economic and social issues as well as at the political level. As I wrote in an *Asia Policy* article in 2013 economic functional integration can take on a momentum of its own, as it did in the case of the European Union, leading to a de facto deeper political relationship between the two sides. Functional integration is in China's interest, and

Beijing is now seeing the administrative costs of having close integration without the bureaucratic means of managing it.

While Taiwan may be relatively immune to economic shocks and cycles in China, it is not immune to the long-term transformation of the Chinese economy into a peer competitor in almost every sector. In a 2016 paper examining China's rapid ascent up the global value chain and its shift into high value-added services, the IMF found that economies deeply integrated into the Asian value chain like Taiwan and South Korea would suffer "particularly adverse" consequences.[11] The IMF found that the consequences of a given increase in real income in China as a result of its rebalancing would cause a corresponding decline in real income in Taiwan equivalent to 75% of the gain in China. So China's rise is very much a win-lose dynamic for Taiwan. Again, this is not driven by Taiwan's integration with China but by China's own move up the global value added chain. China is already at Taiwan's 1994 level of development but its "domestic value-added ratio" (the proportion of final export value that is domestic value added) is already 60% versus Taiwan's 50%. In a separate recent paper on this transformation in China, the IMF concluded: "These developments suggest that China is increasingly competing with advanced economies like Japan, South Korea, and Taiwan."[12]

This is also why the New Southbound Policy of the Tsai administration is probably incorrect in its understanding of *why* regionalization matters to Taiwan but correct in its assumption *that* it does (what social scientists would call an epistemological error but an ontological truth). Taiwan's challenge is not how to reduce dependence and integration with China which, as I said, it is relatively immune to in terms of fluctuations. The challenge rather is to learn to compete in an Asia where China is essentially a peer competitor but without the advantages of diplomatic and military influence that China has in the region. So Taiwan will need to conduct an active economic diplomacy throughout Asia to keep markets for goods, services, and investment opportunities open to its companies. The New Southbound Policy, which will have an annual budget of $1.35 billion, is essentially a regionalization strategy for Taiwan. The emerging links with India and Indonesia are especially important and have a lot of potential diplomatic side benefits.

What will give Taiwan economic security vis-à-vis China is not reducing its dependence on China, which may wax and wane unpredictably, but on building a robust economy that has the capacities to thrive in a regional and global economy. So the economic partnerships signed with New Zealand and Singapore in 2013 and pursuing another with Australia and joining the ASEAN Economic Community make sense. Southeast Asian and South Asian governments will be more receptive to Taiwan's overtures the more that China continues to bully its way to regional hegemon status – as it did by impounding the Singapore military vehicles.

Ultimately, however, Taiwan's economic future will be made by Taiwan entrepreneurs and businesses, not by governments, which can only facilitate and make it possible. Whether or not Taiwan's economy thrives in Southeast and South Asia depends probably very little on the New Southbound, which is largely a political not an economic policy. What will be determinative is the organizational abilities of Taiwan firms to compete with the likes South Korea's Youngone Group, which runs manufacturing facilities throughout the region.

So far, Taiwan companies have a reputation as unreliable long-term partners in Southeast Asia – Formosa Plastic Group's delayed and polluting steel plant in Vietnam or the failure to take up the offer by Indonesia to develop Morotai Island, which has now been given to the Japanese.[13] The challenge for Taiwan's business sector is to develop a reputation for reliability, professionalism, and full services (including banking and logistics) for partners in Southeast and South Asia.

A troublesome development is that Taiwanese criminal networks are expanding their operations in Southeast Asia faster than Taiwanese businesses – former president Ma recently called phone fraud Taiwan's first major service export to Southeast Asia after 32 Taiwanese phone scam gang members were deported from Malaysia to China and another 28 from Cambodia last year (another 78 from Armenia to China and 45 from Kenya and recently 200 in Spain, while a further 23 are being held in Taiwan).

Long term, if Taiwan can overcome its reputational and organizational problems, it will be sitting in a very envious position with respect to a modernizing region. At the end of the day, it will always offer an alternative to China while its current set of experiences and skills – in agriculture, urban renewal, logistics, and finance, for example – put it ahead of China in most respects.

ENDS

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[1] "Baseline Forecasting for Taiwan's Population in the Face of Low Fertility Rate and Ageing Problems." Lin, Hsing-Chun; Lee, Huey-Lin; Hsu, Sheng Ming; Lin, Kuo-Jung; Lee, Duu-Hwa; Chang, Ching-Cheng, *Taiwan Economic Forecast and Policy*, October 2015, v. 46, iss. 1, pp. 113-56

[2] Lee, Kao-Chao; Feng, Chun-Chiang, "The Bottleneck of Economic Growth in Taiwan: From the R&D Point of View", Taiwan Economic Forecast and Policy, March 2016, v. 46, iss. 2, pp. 87-118

[3] Latecomer Upgrading in Taiwan, Chu, Wan-wen, Journal of the Asia Pacific Economy, August 2015, v. 20, iss. 3, pp. 369-84

[4] On the Puzzling Slowdown of Wage and Productivity Growth in Taiwan: Evidence from a Comparison with South Korea, Bickenbach, Frank; Liu, Wan-Hsin; Niehues-Jeuffroy, Hector, Asian-Pacific Economic Literature, May 2015, v. 29, iss. 1, pp. 82-101

[5] 1. green energy; 2. Biomedicine and biotechnology; 3. smart machinery and the Internet of things; 4. defense industry; 5. culture and creative industries; 6. electric vehicles; 7. cloud computing; and 8. Defense industries

[6] a. international medical care; b. international logistics; c. music and digital content; d. fundraising for high-tech and innovation-oriented industries; e. urban renewal; f.international promotion of its cuisine; g. meetings, incentives, conferencing, and exhibition; h. WiMAX technology; i.Chinese-language e-commerce; j. international education.

[7] Economist Intelligence Unit - Risk Briefing, "Taiwan risk: Foreign trade & payments risk", 12 December 2016

[8] Sin Chor-yiu, "The Economic Fundamental and Economic Policy Uncertainty of Mainland China and Their Impacts on Taiwan and Hong Kong", International Review of Economics and Finance, November 2015, v. 40, pp. 298-311

[9] Chou, Chin-Mei, Shu Fen Hsieh, and Hsi Peng Tseng. 2014. "The Crowding-Out Effects of Chinese Tourists on Inbound Tourism in Taiwan." Tourism Economics 20, no. 6: 1235-1251.

[10] Chiang, Chun-Fang; Liu, Jin-Tan; and Wen, Tsai-Wei, "National Identity Under Economic Integration," *Journal of Population Economics*. Apr2019, Vol. 32 Issue 2, p351-367.

[11] IMF Working Paper WP 16-219, "Quantifying the spillovers from China rebalancing using a multi-sector Ricardian trade model", by Rui C. Mano

[12] China's Changing Trade and the Implications for the CLMV Economies by Koshy Mathai, Geoff Gottlieb, Gee Hee Hong, Sung Eun Jung, Jochen Schmittmann, and Jiangyan Yu, 2016

[13] This is quite an achievement given the WWII resonances of the island. See John Boeman, *Morotai: A Memoir of War* (Garden City, N.Y.: Doubleday, 1981).

TAIWAN’S ECONOMIC CHALLENGES

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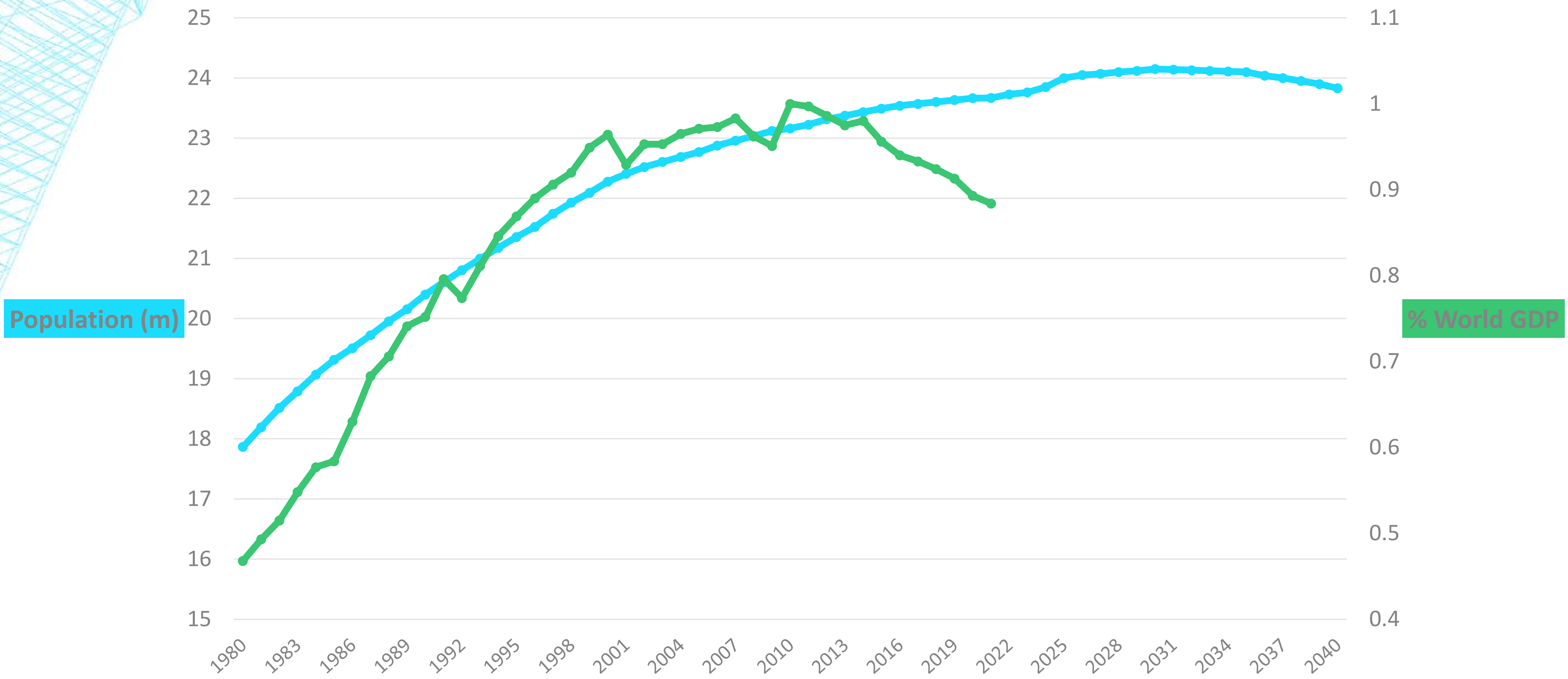
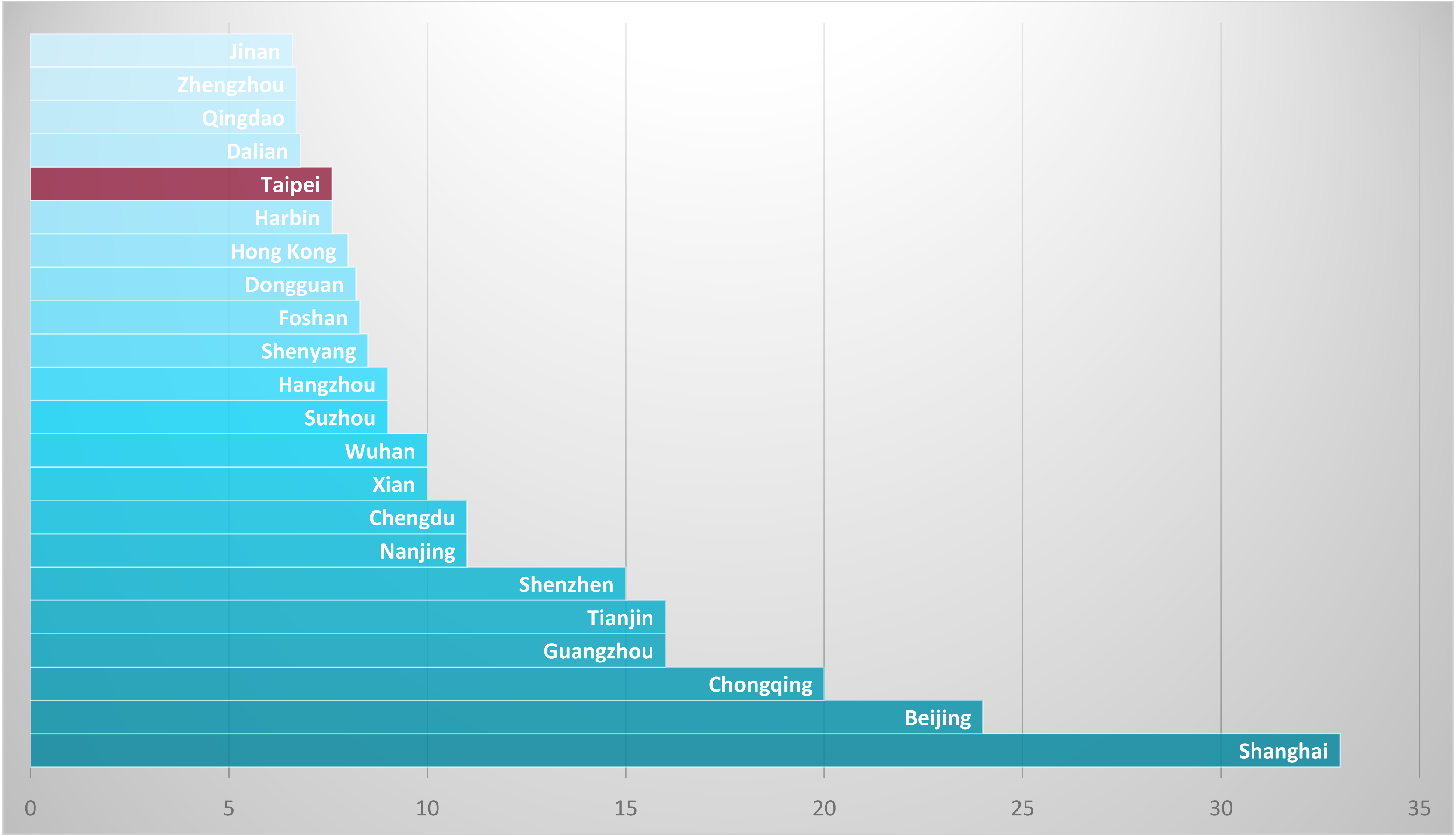
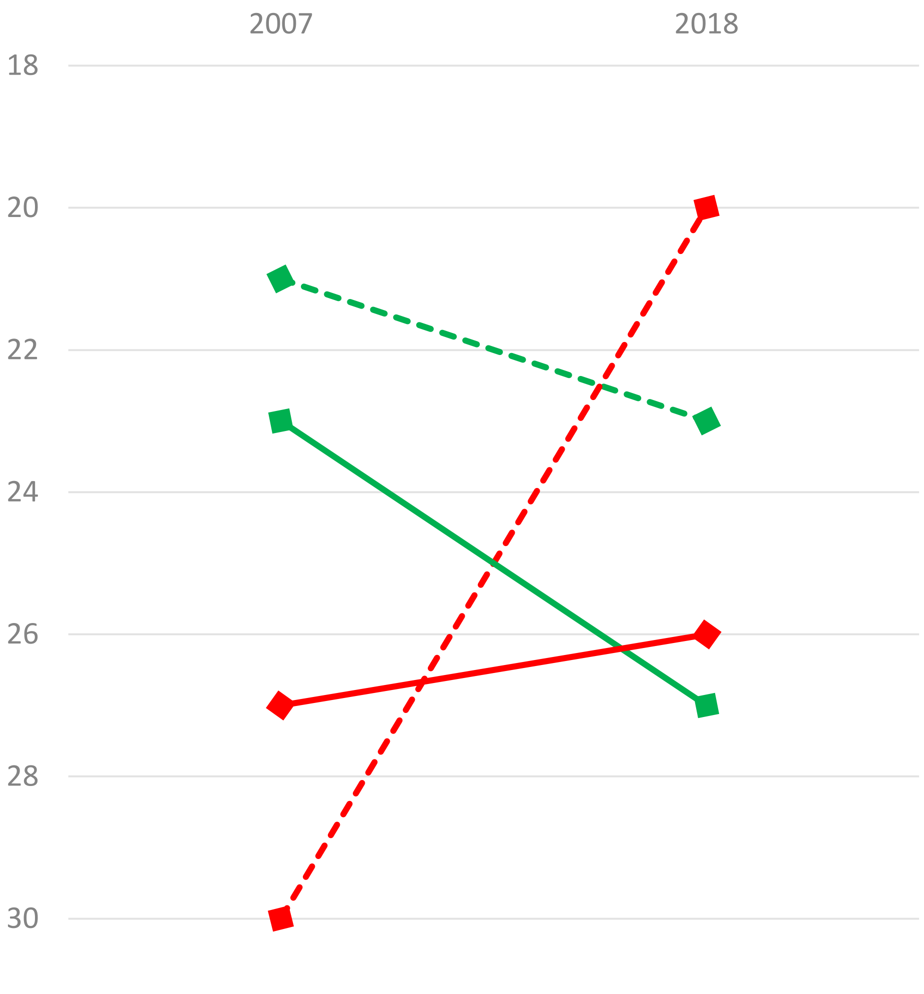
DEPOPULATION & POSITIONAL DECLINE



MAJOR URBAN AREAS BY 2030 (MILLIONS)

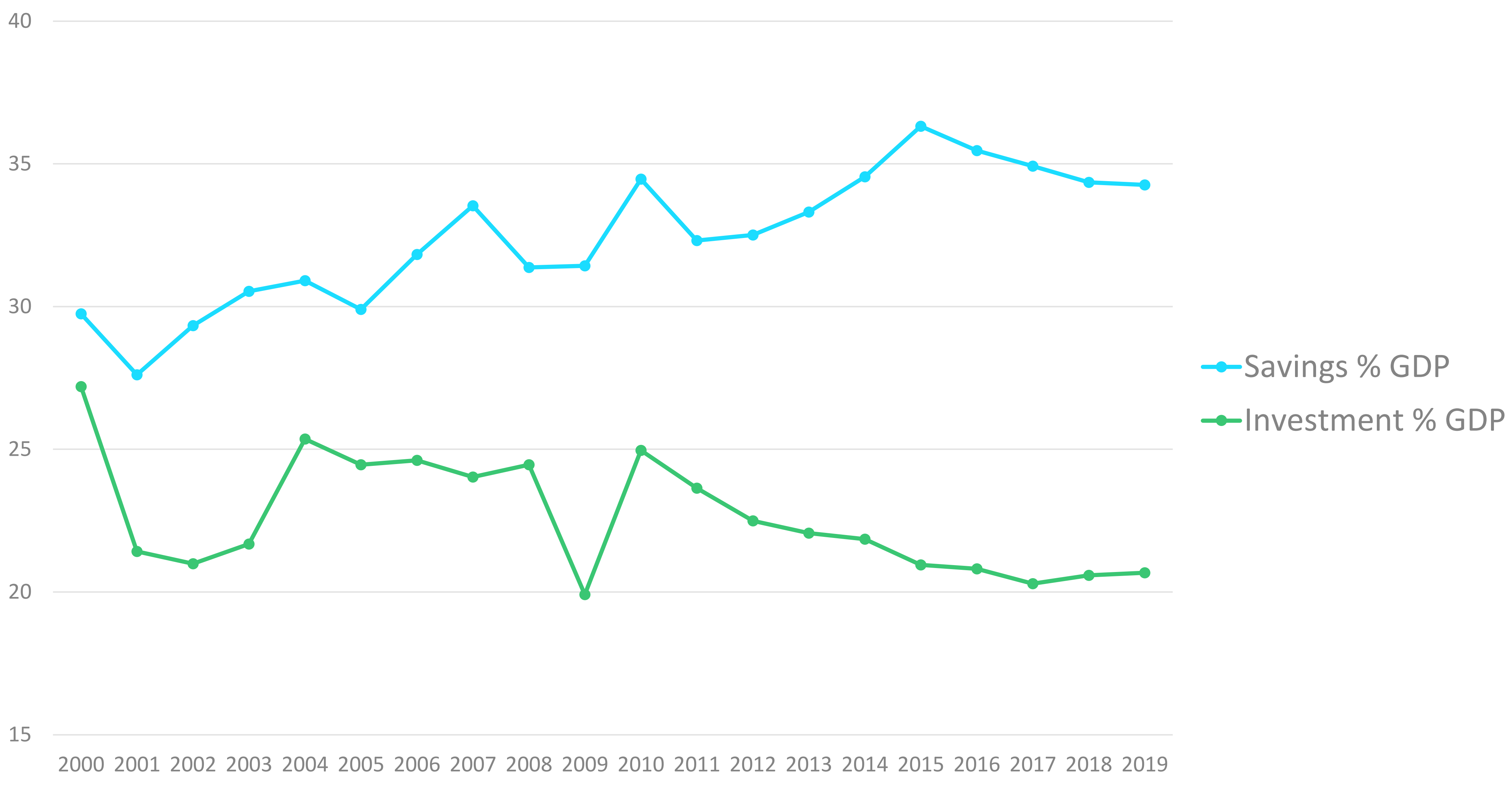


BUMPED BY CHINA



World Bank infrastructure (dashed line) and logistics (solid line) rankings

INVESTMENT SLOWDOWN



ECONOMIC CHALLENGES

- China is now a peer competitor in Asia
- De-integration with China is good for the economy (and the KMT)
- Indigenous innovation is weak outside ICT
- ICT manufacturing slowing, ICT services is the future
- Service sector productivity is low (outside of finance)
- Infrastructure is mediocre
- Defense investment will be a drag on the economy
- Business reputation is poor for regionalization

FENG TAY ENTERPRISES

豐泰企業
Feng Tay Group

PREMISES OF ASIAN SILICON VALLEY

4th Layer **Application services**	IoT service (transportation, energy, commerce, manufacturing, medicine); big data analysis; operational intelligence analysis; data mining service; big data security; business intelligence applications; data: income, operations	80% of IoT business opportunities to come from services
3rd Layer **Data collection**	data center; software as a service (SaaS); cloud service; quality control and service management; customer needs management	
2nd Layer **Internet infrastructure**	broadband (DSL, fiber optic); mobile broadband (3G, 4G, 5G); satellites, GPS; wireless personal area network (NFC, Zigbee); Wi-Fi	Taiwan's strengths
1st Layer **Object detection**	gateway; smart lighting; e-healthcare; sensing device; energy management; in-vehicle network; smart plugs; smart appliances; smart grids; IoT platform protocols	Taiwan's strengths