

Does Korea Risk Reprising Japan's Lost Decades?

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Abstract

Korea has had a stellar growth record over the past half-century, but, like Japan before it, the miracle economy risks becoming a “fallen star.” Economic patterns and institutions that helped it do so well in the “catch-up era,” have now become obsolete. It suffers from a number of structural defects that parallel those that eroded growth in Japan: e.g., pushing labor productivity mainly through capital deepening rather than through Total Factor Productivity; a “dual economy” of super-efficient giant exporters combined with low-productivity, low-wage small- and medium-sized enterprises, particularly in services; and household income constituting too low of a share of GDP to fuel domestic consumer spending power. However, it enjoys some advantages that Japan lacked: first and foremost, the ability to learn from Japan’s sad experience and a recognition by its political leaders that reform is necessary. It is also far more globalized than Japan both in terms of its trade: GDP ratio and in regard to its inward FDI: GDP ratio. In nations where reform has succeeded, globalization of both trade and inward FDI has been an indispensable part of the recipe.

Keywords: Korea, growth, Total Factor Productivity, capital stock, dual economy, chaebol, trade, Foreign Direct Investment, irregular workers

Introduction

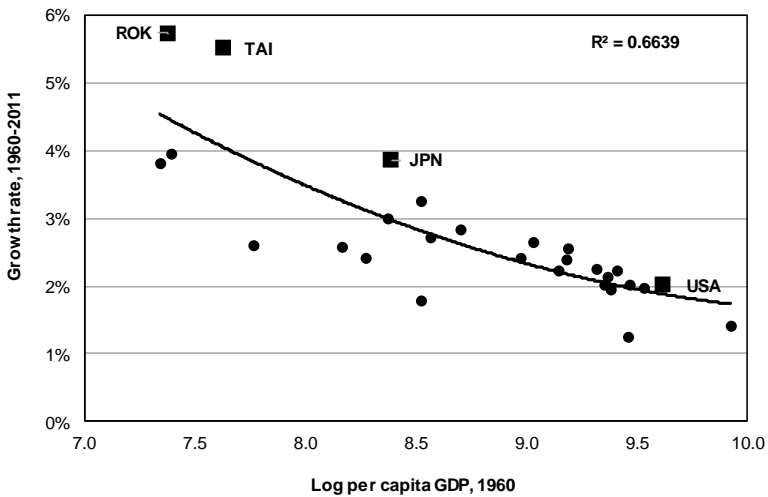
The world economy is about to mark a major milestone. Within about just four years, says the International Monetary Fund (IMF), Korea will match and then overtake Japan in terms of real per capita GDP, the first time a populous developing country has done so.²

For the last half-century, Korea’s growth has been nothing short of stellar. It realized the highest per capita growth among 28 now-rich

countries (see

Figure 1). Starting with a per capita GDP below that of Zimbabwe, it has become the 18th-richest country in the world,³ with a per capita GDP equal to 65% of that in the U.S. (Japan's is 73% and Germany's is 82%). What really makes Korea stand out is its unusual ability to maintain superlative growth for five decades, a rare exception among those able to produce above-par growth for just a few decades.

Figure 1: Korea Highest Growth among 28 Now-Rich Countries over Past Half-Century



Source: Penn World Tables 8.0, 2014, available at: <http://www.rug.nl/research/ggdc/data/penn-world-table>.

Note: Newly industrializing countries tend to grow faster than mature countries. R-squared = 66% means that 66% of the variation in growth rates among these countries can be explained just by their per capita GDP at the starting point in 1960 (see text for further explanation).

According to the Korean Development Institute, Korea's potential growth – i.e., the growth trend it can achieve at full employment and full use of physical capacity – is expected to slow somewhat after around 2017: from 4% now to between around 2.8% during 2021-2030. Nonetheless, its per capita GDP growth during the rest of this decade is still expected to be above-par for a nation at its stage of development

(typically, countries experience decelerating growth as they mature as seen in

Figure 1).

When we began taking a look at the reasons for all these achievements, we had expected to be writing about the “lessons from Korea” for Japan. However, the more we looked into the situation, the more we discovered that Korea could, like Japan, become a falling star. As in Japan, an economic model that made Korea an economic superstar contains the seeds of its own destruction. Korea, like Japan before it, is a maturing economy still plagued by the legacy of growth strategies that worked in the “catch-up” transition from poor agricultural country to rich industrialized country, but became increasingly obsolescent once Korea had caught up.

Among the parallel structural flaws are:

- 1) Korea suffers from a “dual economy.” The bright side is very high productivity among the giant international firms like Samsung Electronics and Hyundai Motors. The dark side is low productivity among a host of small domestic firms, where nearly 90% of South Koreans work, particularly in services;
- 2) Korea tries to push productivity growth by pouring on more and more capital equipment for each worker, but it takes Korea more capital to produce the same amount of GDP that others can produce with less capital; this, as Japan discovered, is not a sustainable growth path;
- 3) The larger the share of GDP a country has to devote to GDP the less it can devote to consumption; hence, Korea’s top-line GDP growth does not produce a commensurate improvement in living standards for the typical household;
- 4) Korea suffers growing income inequality and low wages compared to other countries at Korea’s level of development;
- 5) Income that is too low produces a shortfall of consumer spending power at home; this makes the country inordinately dependent on exports to supply demand, and could also lead it to rely on chronic budget deficits, as does Japan; and

- 6) Due to financial pressures coming from this too-low income, couples are having fewer children. As a result, Korea faces a future of rapid aging, with fewer and fewer workers for every retiree. Aging is hitting Korea harder and faster than in other countries. Better growth in productivity of capital and in income per worker would make the demographic problem both less severe and more manageable.

The good news is that Korea enjoys some advantages not enjoyed by Japan, including:

- 1) Korea can look at the experience of Japan and recognize pitfalls in time to remedy them. Korea's leaders, including President Park Geun-hye, are talking about how it needs reform. Whether that can be turned into effective action remains to be seen.
- 2) Korea still has plenty of time to make the needed changes. Korea showed its resilience in the way it came through the 2008-09 global slump. But time can also give politicians worried about the next election room to avoid making unpopular decisions.
- 3) Korea is far more globalized than is Japan – by which we mean in terms of trade and inward Foreign Direct Investment, not potentially destructive hot money flows. Countries with the right kind of globalization tend to not only grow faster but are better able to correct problems when they arise.
- 4) Finally, Korea has more experience than does Japan in the alternation of political parties in power. Healthy competition in politics is just as important as is competition in business for enabling a country to pursue a course correction. Unfortunately, no party has been able to reduce the power of the gigantic *chaebol* (conglomerates) that dominate the economy.

Growth is Slowing, But President Park Wants to Keep It at 4%

As happens with all maturing countries, Korea's per capita growth has already slowed: from 9% in the late 1980s, to than 4.5% in the late

1990s to early 2000s, to about 3% since 2005. A staff report from the IMF projects that growth will fall even more:

Absent reforms, [Korean growth] is projected to fall further to around 2% by 2025... [R]eforms could lift potential growth by around 1.25 percentage points over the next decade, maintaining potential growth at around 3.25%,... enabling Korea to continue to converge to income levels of the United States.⁴

But 3%, let alone 2%, is not good enough for President Park, who said that she aims to keep growth at 4% and raise per capita income to \$40,000, the level the U.S. hit in 2003. At 4% a year, Korea would hit that landmark around 2027-28. But keep in mind that even 4% is quite a comedown from the 7% goal set out by her immediate predecessor just five years ago.

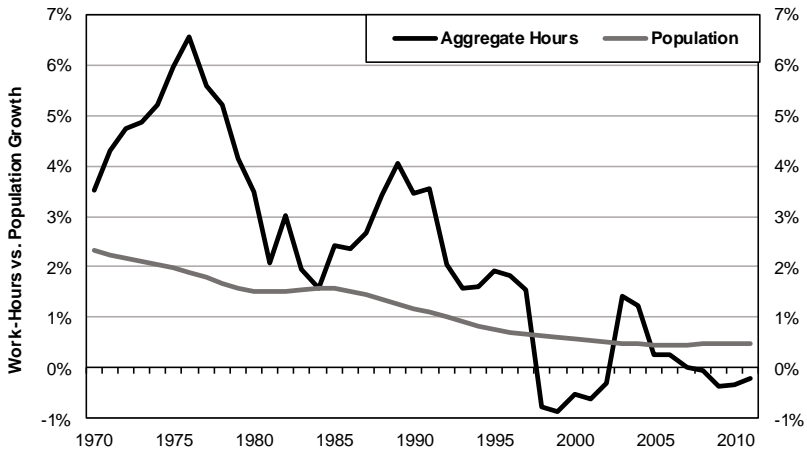
Lots of Workers Laboring Long Hours, Boosted Per Capita GDP Growth

Korea is on the verge of losing one of the secrets of its success: having an unusually large number of people working very long hours.

In any country, overall GDP growth is the sum of growth in the total number of hours that people work each year and growth in GDP per work-hour (i.e., productivity). So, if work-hours are growing at 2% and GDP per work-hour is growing at 3%, then overall GDP will grow at 5% a year. If the total population is growing by 1% a year, then per capita GDP will be 4%; i.e., 5% minus 1%.

Notice in our example that work-hours were growing faster than was the population. So, a 3% increase in labor productivity resulted in 4% GDP growth per capita. That is the demographic advantage that Korea has enjoyed over the past several decades, but one that is disappearing.

Figure 2: High Per Capita Growth Partly Due To Faster Growth in Hours Than People



Source: Penn World Tables (2014)

As we can see in *Figure 2*, up until the financial crisis of 1997-98, the aggregate work-hours (i.e. the total hours of all workers combined) grew much faster than did the population. So, even if GDP per *hour* had suffered zero growth, GDP per *capita* still would have risen.

Aging and Shorter Work-Hours Mean a Need for Even Better Productivity Growth

Korea’s demographic dividend is steadily eroding and will soon disappear. In fact, for the last decade, there has been, on net, no growth in aggregate work-hours. If work-hours fail to grow any further, or even decline as the labor force starts shrinking in a few years, then growth in GDP per work-hour will be the only source of GDP growth. This began occurring in Japan in the early 1990s.

Once we take Korea’s huge growth in work-hours into account, then its catch-up to the richest countries, while still extremely impressive, seems not quite as stellar. In 1980, Korea’s GDP per capita and GDP per work-hour both stood at about 30% of the level of Japan. By 2011, Korea’s per *capita* GDP had reached 94% of the level for Japan, but its per *hour* GDP had reached just 72% of Japan’s level. That’s still a remarkable achievement in just 30 years, but it does highlight the

importance of long work hours to Korea's per capita growth.

In 1963, the average Korean worker spent 2,375 hours per year on the job, compared to 2,195 hours for his Japanese counterpart and just 1,862 in the U.S. Moreover, while the hours of work declined in both the U.S. and Japan, the work-hours actually rose in Korea; to a 1983 peak of 2,800!

Finally, starting in the 1980s, as the labor movement became more active and increased its bargaining power, workers improved their living standards, not only by gaining higher wages but also by cutting their hours. As of 2011, the average laborer worked 2,193 hours per year – still very high by international standards but way down from 1983. Typically, as countries get richer, their people work fewer hours per year. So, the decline in work-hours per year is likely to continue.

Beyond that, according to the EIU, Korea's labor force is going to peak at 27.7 million people in 2018 and will then start declining by as much as 2% per year during the 2020s. As a share of the total population, the labor force will peak out in 2018 at 53.4% and then decline to 47.8% by 2030.

Suppose aggregate work-hours fall by 2% a year and the total population has zero growth – as the EIU says will be the case in the 2020s. In that case, even if GDP per *work-hour* remains the same, GDP per *capita* will fall by 2%. To put it another way, productivity has to rise at 2% per year just to keep per capita GDP from falling.

If all this were not trouble enough, the number of Koreans over 65 is expected to double by 2030. So there will be fewer workers to produce the GDP that retirees need to fund pensions, interest, etc. In the late 1970s, there were 9.7 workers for every Korean over age 65; as of 2012, this had fallen to just 4.1. A study by the Center for Strategic and International Studies (CSIS) projects that this will fall to just 2.5 by 2030.⁵

Productivity growth will soon become the sole source of GDP growth and it will have to accelerate just to keep up with aging.

From Investment-Led Productivity Growth to Efficiency-Led Productivity Growth

Korea has a good record on productivity growth. However, the method by which it did achieved this growth – by pouring on more and more capital for each worker – is reaching the point of diminishing returns. By international standards, the productivity of Korea's capital –

i.e., how much growth it gets for each percentage increase in its capital stock – is too low for a country at its stage of development.

When a poor country tries to become rich, investment is the name of the game. The primary difference between very poor countries and rich ones is how many tools investment gives it people to work with.

Not surprisingly then, one of the main reasons Korea's GDP growth has been so spectacular for more than a half-century is that it built up its capital stock much faster than did others. Among 75 countries during the nearly four decades from 1970 to 2007 (just before the global slump), Korea's annual growth in capital stock came in first, at 9.4% per year.

Sooner or later, however, economies run into diminishing returns – i.e., less GDP growth for each additional dollar of capital stock. Indeed, if we look at the 18 richest countries, the variation in capital per worker explains almost nothing about the variation in GDP per worker. Once a country matures, the most important thing is not spending more bucks, but getting more bang for the buck. If a country needs to spend \$4 to get the same GDP growth that another country can get with just \$3, then that first country has three problems:

- 1) As a country hits the wall of diminishing returns to its investment, it will have to invest larger and larger shares of its GDP just to get the same amount of growth. The more of its GDP that it has to spend on investment, the less it can devote to the consumption needs of its people.
- 2) Pension funds, stock investments, insurance, etc. require good returns on capital to finance the payments they need for annuities, dividends, insurance benefits, etc. In an aging society, this is critical.
- 3) This path to GDP growth is not sustainable. At some point, the country will no longer be able to *increase* the investment share of GDP. Then, even if it still invests the *same* high share of GDP, its growth rate will steadily decline. Ultimately, when the investment share drops, growth will decelerate even more. This happened to Japan. Korea is already starting to experience that problem.

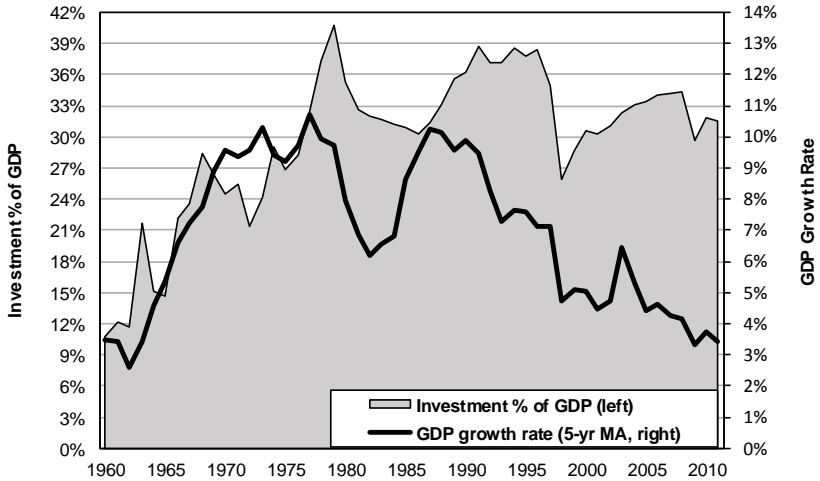
The only way for an industrialized country to sustain good growth in the long run is to increase the productivity of capital. This is Korea's challenge.

Increasing the efficiency of capital comes from better technology, better management, better education, and a host of other factors. Each \$1 million spent on creating a product like the iPad will add more to growth than the same \$1 million building a steel mill. Scanner codes save labor time at the checkout counter, but they don't provide the best returns if they are not used to improve inventory control to provide more sales for each foot of shelf space. Auto mechanics can't fix today's cars if they lack sufficient education.

This cuts to the heart of the syndrome suffered by Japan – and by Korea as well. The U.S. needs just \$3.14 in built-up capital stock to produce each dollar's worth of GDP. Taiwan needs just \$2.80. By contrast, Korea needs \$4.20 and Japan needs a whopping \$4.75, among the highest amounts for any rich country.

From 1960 to 1980, Korea increased the share of GDP devoted to investment from 12% to a stunning 41%, perhaps the highest rate in the world among upper-middle income and rich countries (see *Figure 3*). As it did so, the rate of growth of GDP rose from 3.5% per year to over 10%. But look at what happened after that. Korea kept the investment share of GDP in the 30-40% range through the mid-1990s, but growth slowly decelerated to 7% by the mid-1990s. Then, as the investment rate slowly fell to 30-33% over the past decade, growth decelerated still more to 3.5%-4.5% and is expected to slow even more in the next two decades. Among 32 upper-middle income and rich countries during 2000-2011, Korea had the highest investment rate: 32% of GDP. And yet its GDP growth rate was no higher than those of many countries that invested far less, including Taiwan.

Figure 3: Korea: Slowing Growth In GDP Despite High Investment Rate



Source: Penn World Tables (2014)

The Required New Goal: Growth in Total Factor Productivity

Efficiency-led growth simply means getting more output with less inputs. The best measure of this is what economists call “Total Factor Productivity (TFP).” TFP refers to the productivity of labor and capital combined. For every 1 percentage point increase in the inputs of capital and labor, how much of an increase does an economy get in terms of GDP?

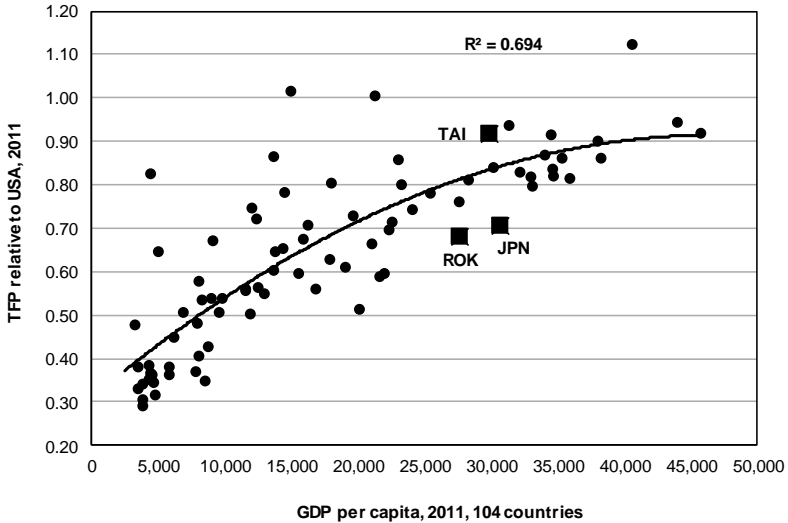
TFP growth, in turn, is produced by better technology, better forms of corporate organization, better education, better on-the-job training, more competition and trade, better management, more entrepreneurial activity, the continual replacement of inferior firms by better ones, etc. A Japanese Cabinet Office study found that Japanese firms got less benefit from IT investments than did their American counterparts because they didn’t use them to reorganize the firm.

Among rich countries, the U.S. has the highest level of TFP in the world.

Figure 4 shows how other countries stack up in terms of TFP relative to the U.S. Unsurprisingly, the higher a country’s per capita GDP, then the closer its TFP comes to the U.S. level. (The causality runs in both

directions: higher TFP creates higher per capita GDP, while higher per capita GDP enables countries to invest more in the activities that produce higher TFP, like education)

Figure 4: The Need For “Total Factor Productivity” Growth



Source: Penn World Tables (2014)

Note: For meaning of “total factor productivity,” see text; for meaning of R-squared, see the note for *Figure 1*.

Korea’s TFP is just 68% of the U.S. level, compared to the 80% predicted by the trendline of per capita GDP. Japan’s TFP is just 71% of the U.S. level, compared to 82% predicted by the trendline. The question is, what lies behind Korea’s (and Japan’s) low level of TFP? We turn to that now.

Korea’s Deformed “Dual Economy”

In a series of articles and articles written in the mid-1990s, we described Japan as “a deformed ‘dual economy’ unique in the industrial world – a dysfunctional hybrid of super-strong and super-weak sectors,” and contended, “This dual economy is at the heart of Japan’s economic travails.”⁶

Now, Korea has also become increasingly bifurcated, making it harder for the country to sustain the productivity growth that has driven its stellar growth in GDP and living standards over the past five decades.

Already, its growth in GDP per hour has fallen from a peak of nearly 7.5% a year in the 1980s to about 3.5% in recent years. The latter figure is still good for an economy at its stage of development, and much of the slowdown is the natural effect of maturation. However, unless Korea deals with its worsening dual economy, sooner or later it is likely to suffer an even greater slowdown.

The bright side of Korea's "dual economy" consists of a few export-oriented manufacturing sectors like automobiles and electronics dominated by gigantic *chaebol* (conglomerates) like Hyundai and Samsung. This are firms capable of challenging – and sometimes beating – the world's best firms. Today, Korea is number one in the world in DRAM memory chips, with a 66% global market share; number one in LCD displays, with a 51% global market share; number one in mobile phones; number one in shipbuilding, with 51% of global market share; number five in autos; and number six in steel. It was not so long ago that Japan's top firms exhibited numbers like that.⁷

The dark side consists of a host of small and medium enterprises (SMEs) – particularly (but not only) in services – that lag far behind global standards. The gap between the two Koreas is far bigger than in most other industrialized countries, and far bigger than it used to be in Korea itself. As McKinsey explained:

*The productivity level of South Korean services is only 40% of that of manufacturing industries, a larger gap than in other nations...Overall, service-sector productivity, measured as value added [i.e. GDP] per employee, is 30% to 57% below levels in the United States, the United Kingdom, and Germany...Small and medium-sized manufacturing companies are only 27% as productive as large ones.*⁸

Eighty-eight percent of the entire labor force now works in SMEs at productivity levels and wages far below those in the large, efficient firms and sectors. As McKinsey points out, the ratio of wages in services to those in manufacturing has fallen from nearly 100% in 1991 to only 54% in 2009, a larger gap than in the major OECD countries. The resulting income inequality not only produces social stress, but also poses the danger of anemic consumer demand.

The gap between the two Koreas has gotten so bad that Deputy Prime Minister and Minister of Strategy and Finance Hyun Oh-seok has proposed creating an indicator of what GDP would look like without the

output of Samsung Electronics and Hyundai Motor. If only a small slice of the Korean economy is showing world-class productivity levels and productivity growth, then how can the economy as a whole progress?

Korea's dualism was not always this bad. While manufacturing productivity rose by 8.2% a year from 1995 to through 2009 – and sector employment fell by 65,000 jobs each year – the service sector raised productivity by just 1.3% annually and added 333,000 jobs a year.⁹ As a result, Korea has one of the lowest productivity levels in services relative to national productivity within the OECD. Even within manufacturing there is a growing dualism. In 1990, productivity at the smaller manufacturing firms was 50% lower than productivity at those with at least 300 employees; by 2010, comparative productivity among the small manufacturers had fallen to 75% less.

The Dominance of the *Chaebol*

A key factor in the worsening dual economy is domination of the economy by a few dozen conglomerates called *chaebol*, who also exercise inordinate political clout. Indeed, the current President's immediate predecessor, Lee Myung-bak, was previously CEO of Hyundai Engineering and Construction, a member of the same chaebol as Hyundai Motors. And chaebol power was built up during the reign of the current President's father, military dictator Park Chung-hee, as part of a military-industrial complex.

During the most recent presidential election campaign, the opposition candidate, Moon Jae-in, talked of reducing the power of the chaebol. In response, the eventual winner, Park Geun-hye, declared, "It is not my aim to dismantle or bash the chaebol."

Today, about six-hundred different firms are organized into five dozen chaebol that make a wide range of products. They are far more devoted to capital-intensive manufacturing and exports than to services. The most internationally famous among them are Samsung, Hyundai, and LG (formerly known as Lucky Goldstar). A mere *thirty* of the very largest individual companies among these several hundred now own 40% of the country's total corporate assets and account for 36% of all corporate sales.¹⁰

According to the Korean website www.chaebol.com,¹¹ sales by the hundreds of firms within the ten largest chaebol equaled a stunning 76% of Korean GDP in 2012, up from 54% ten years earlier. (Their share of sales by Korean companies is smaller.)

Samsung Electronics alone accounts for about 17% of Korea's total exports. Add in car exports by Hyundai and we find that Korea now relies on just two companies to provide about a quarter of its entire exports. Given that exports account for about half of GDP, that's a lot of eggs in just two baskets.

Chaebol dominance stifles the internal competition and entrepreneurialism that is vital to economic growth. As with the Japanese *keiretsu*, the Korean chaebol tend to buy from fellow members of their group. As a percentage of total output, says McKinsey, trade between the companies in the Korean chaebol is twice as high as it is in Germany's counterpart, the *konzerns*. According to www.chaebol.com, the rate of intragroup transactions within each of the top ten chaebol has increased. In 2011, the Samsung Group's rate of intragroup transactions was 53%, Hyundai Motor Group's was 44%, and SK Group's was 39%. Lotte Fresh Delica, a foodstuffs firm of the Lotte Group, posted an intragroup transactions rate of 95%.¹²

As in Japan, this pattern makes it really tough for newcomers to challenge the incumbents. That, in turn, erodes the constant rejuvenation that is required for lasting nationwide vitality. Neither Japan nor Korea is hospitable to "gazelles," the small firms that, in America, regularly grow into giants like Intel, Google, Wal-Mart, and KinderCare. America's gazelles provide a very large share of its growth in both GDP and jobs. Only 0.07% of Korean SMEs grow up to become big companies.¹³

The Outsized Role of Manufacturing

Sometimes the hardest mistakes to correct are those borne of success. Industrialization was what brought Korea from poverty to affluence. Due to the past success, Korea still tries to keep manufacturing at an extraordinarily high share of GDP. However, that is futile. If Korea is to avoid a sharper-than-necessary deceleration of GDP growth as the manufacturing share of the economy inevitably shrinks, it must upgrade efficiency in its long-abused services sector.

Korea has the highest ratio of manufacturing to GDP of any developed country, and the fourth-highest in the world when we include newly-industrializing countries like Thailand and China.

However, what is possible during the *process of industrialization* is no longer possible once a country has become industrialized. As a country goes through the stages of development – from being poor, to becoming a newly-industrializing country, to becoming a mature rich

economy – the share of manufacturing in GDP typically rises a great deal, then peaks, and then finally begins to shrink.

As people become more affluent, they prefer to spend more of their money on services and less on goods. This tendency is even more prominent as a society ages. At some point, sales of manufactured goods do not rise as fast as does factory productivity. Suppose output per worker rises 15% but sales only rise 10%. In that case, the country can meet its manufacturing demand with 5% fewer workers. This is why, all over the developed world, manufacturing jobs are shrinking, as is manufacturing's share of nominal GDP.

From 1955 until recently, Japan was also able to keep manufacturing at a much higher share of GDP than in other countries. In fact, at its peak in 1970, Japan had an even higher share of manufacturing to GDP than Korea at its peak: 34% to 31%, respectively. But, now, Japan's share has steadily fallen to about 19%. In Germany, another export superpower, manufacturing has fallen from nearly 30% of GDP in 1980 to 20% today. It's only a matter of time before the same happens to Korea.

How did Japan and Korea manage to defy gravity for so long? Their answer was exporting the excess output. Korea's trade surplus in manufactured goods rose to a gigantic 18% by 2012. Without that huge surplus, there is simply no way that manufacturing output could still amount to 31% of Korean GDP. In many of Korea's most important industries, as much as half of all output is exported. It should be noted that, while the *manufacturing* surplus is high, Korea's customarily ran a deficit in its balance of trade in *all goods* until the 1997-98 financial crisis, and its goods surplus in 2012 was a moderate 2.5% of GDP.

Eventually, however, a country becomes so big that exports simply cannot grow fast enough to counter other trends. Germany's share of world manufactured exports peaked out at 17% in the early 1970s and has now been halved to 8%. Japan's share peaked out at 15% in 1986 and is now down to less than 6%. Korea's share rose from virtually nothing in 1962 to about 4% today. Sooner or later, its share will level off and then fall. The EIU predicts that, within two years or so, Korean goods exports will stop growing faster than the total goods imports in its top 20 markets and will no longer grow at double-digit rates.¹⁴ Whenever Korea's share of export share falls, so will the manufacturing share of Korean GDP.

Unless Korea learns to make services much more productive, the eventual fall in manufacturing's share cannot fail to cause a deceleration

in the overall growth of per capita GDP.

Feeding Manufacturing, Starving Services

Productivity in services was only 53% of the level in Korea's manufacturing sector in 2008, far below the OECD average of 87%. Worse yet, the gap is getting bigger. With 88% of the labor force working in services and low-productivity small-scale manufacturing, no wonder Korean GDP per work-hour is only half that of the U.S. level.

This immense productivity gap is the result of decades of government policy that fed large manufacturing while starving services and small-scale manufacturing. This was premised on a belief that services are inherently less productive. But that need not be the case. In the U.S., upwards of 30% of service jobs are in the highest-skill categories – professional, technical, managerial, and administrative occupations – compared with just 12% of manufacturing jobs.¹⁵ Moreover, Germany's service exports today nearly matches its manufactured exports.

In pursuit of the myth that industry is inherently more productive than services, Seoul, like Tokyo, aided manufacturing at the expense of services. But these very actions kept SMEs at the low productivity level that policymakers had feared. In a series of studies, McKinsey described some of these mechanisms, some of which (like discriminatory taxes) still exist:

In the past, for example, South Korean banks were prohibited from lending to consumer-service subsectors such as leisure and real estate....Manufacturing firms benefit from a range of policies, including tax benefits and lower electricity charges...In 2006, these business-development incentives were extended to [some] service businesses such as large retailers, hotels, and golf courses. However, other services do not receive these benefits...

Currently, service sector investments account for 7% of total R&D spending by South Korean firms, compared with 25% in the G-7 economies. The South Korean government spends only 3% of its total R&D budget on services....

Barriers to foreign competition continue to shelter inefficient service providers, while limits on foreign direct investment inhibit the transfer of world-class capabilities. In the mobile-

*phone industry, for example, the government's requirement that all mobile phones conform to its standard wireless platform for interoperability effectively prevented foreign phones, such as the iPhone, from entering the South Korean market. Lacking iPhone customers at home, South Korea's otherwise formidable online-gaming companies missed the potential market for iPhone-gaming applications and now lag behind global competitors just as global demand for such services is taking off...*¹⁶

Other regulations discourage the Darwinian evolution of business through the exit of inferior firms and the entry of newer, better ones. For example, says McKinsey:

*The existence of 'joint personal guarantees' on business owners make entering corporate bankruptcy often the same as personal bankruptcy...But if weak companies survive, they constrain the growth of the successful organizations that would otherwise consolidate resources, weed out the low-productivity performers, and build enterprises of larger scale.*¹⁷

“Economic Anorexia”

One of Japan's worst afflictions is chronic “economic anorexia,” i.e., an inability of private domestic demand to consume what Japan is able to produce. As a result, Japan has had to rely for the past few decades on big budget deficits and/or big trade surpluses in order to avoid recession. The ultimate cause of this is household income that is too low relative to GDP and corporate hoarding of savings for which they have insufficient profitable outlets at home. Korea's faces the same danger.

During Korea's heyday of industrialization, investment provided nearly half (44%) of total growth of aggregate demand. However, as growth inevitably slows down with maturity, the economy needs less investment. And, as investment decelerates, it provides less of a “multiplier” to overall demand growth. Eventually, investment-led demand has to be replaced with consumption-led demand, and the latter requires a rebound in the household share of national income. If a country fails that transition, economic anorexia sets in. Korea's rising income inequality, rising poverty rates, rising use of irregular workers, and the hoarding of savings by big companies, are troubling omens.

If both investment and consumption are contributing less to demand growth, something else must make up the difference, i.e., government

budget deficits and/or trade surpluses. In Japan's case, it was both. The EIU predicts that, for Korea, it will be the trade surplus, which, it says, will provide more than a quarter (28%) of GDP growth during 2014-20, up from 9% in 2000-13.

But, what if the trade surplus picture does not work out as well as the EIU forecasts? In that case, either the government budget deficits will have to rise, or growth will slow quite sharply, or, as in Japan, there will be some combination of the two.

Excess Savings by Firms and Insufficient Income of Households

The ultimate cause of economic anorexia is that households have too low a share of national income. In healthy economic development, as the investment share of GDP declines, corporations return more of their profits to households in the form of higher wages and more interest and dividend income. But that was not the case in Japan and is not the case in Korea. In recent years, retained corporate cash flow in Korea has been far higher than what these corporations can invest profitably at home – a surplus to the tune of around 6% of GDP.

To be sure: Korean living standards have risen at a rate that would seem miraculous in most countries; real wages per worker are 5.5 times as much as they were in 1970. However, they have still failed to keep up with the growth in GDP per worker, which is almost seven-times higher than in 1970. As a result, labor compensation in Korea in 2011 amounted to just 55% of GDP, compared to an expectation of 59% for a country at its stage of development.

The net result of all this is that personal consumer spending levels in Korea are far lower than we should expect for a country at its stage of development. And to finance that consumption, Koreans have had to spend more of their income – just as in Japan. The personal savings rate has plunged from 19% in 1988 to 4% in 2011.

As in Japan, behind this shortfall in income growth is an increasingly bifurcated labor force, with some workers in full-time, well-paid, and secure jobs, but more and more in low-paid, irregular (temporary or part-time) jobs. The low-paid workers are particularly predominant in services as well as smaller firms across all sectors.

Back in 1980, workers at small and medium enterprises earned virtually the same wages as their counterparts at the big firms. Not anymore. Today, workers at firms with 100-299 workers earn only 70% as much as those at the big firms; those in firms with just 5-9 employees,

many of which employ those who have retired from their main jobs at around age 57, earn less than half. As recently as 1990, workers in the service sector – which now employs almost 70% of all workers – earned almost as much as did workers in manufacturing. Today, they earn only half as much. This is the worst gap among rich OECD countries.

Even worse off are those who have “non-regular,” i.e., part-time or temporary, jobs. As in Japan, Korea applies measures intended to protect workers’ jobs, such as well-meaning anti-layoff measures that apply only to full-time workers. However, these measures have led employers to rely increasingly on irregular workers who do not enjoy such protections and whom they can pay less.

In 2011, hourly wages of temporary workers were 65% of what regular employees earned. Altogether, “non-regular” staffers make up one-third of the labor force, about twice the OECD average. Only about 40% of these are covered by national pension, unemployment, or health insurance programs. The longer a worker has been in a non-regular job, the harder it to get regular employment.

Twenty-five years ago, 8% of Koreans lived in poverty; today, that rate has doubled to 15.

Korea is also wasting precious “human capital”: those whose families may have spent as much as \$100,000 on them for private school and college (about half of all Korean families send their children to private school). So, more than 70% of Korean teens graduating from high school go on to a four-year college, more than in any other OECD country. And yet, according to McKinsey, many of these graduates have trouble finding good jobs, ones with salaries that pay back the investment in education.

What a tragedy, not only for those who come out on the losing side of the job lottery, but also for Korea as whole, because it fails to gain the benefit from its investment in “human capital,” i.e., the education of its population.

Like Japan, Korea underutilizes its female talent.

Globalization: Korea’s Saving Grace

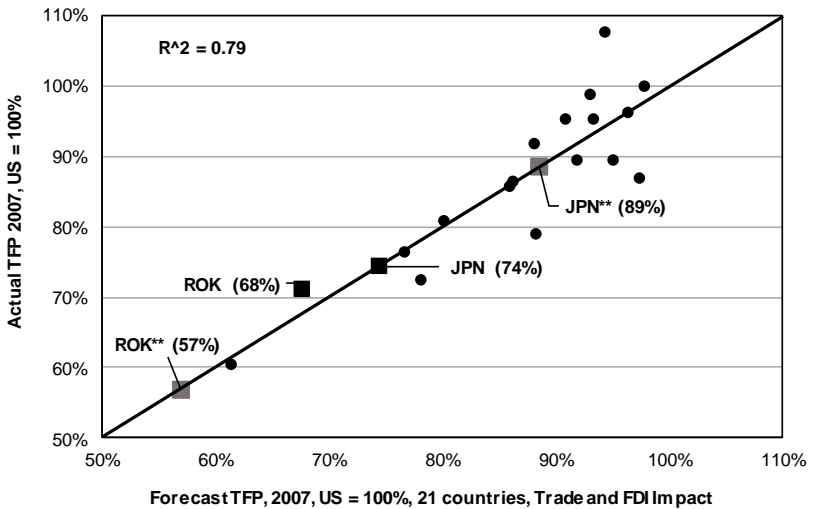
Korea has one big advantage that Japan lacks: a much higher rate of globalization. By that we mean trade and Foreign Direct Investment (FDI), not hot money flows. Korea has both a far higher trade to GDP ratio than Japan and a far higher ratio of inward FDI.

Countries that are more globalized tend to grow faster. Moreover, when such countries get into trouble, they tend to get out of it more quickly, as in the case of the Scandinavian countries in the early 1990s¹⁸ and the Asian countries in the late 1990s. In virtually every case of successful economic reform, globalization has been part of the recipe. That is because, among other things, globalization tends to break down the power of local vested interests that would otherwise be able to block reform.

Globalization is one of the most powerful tools a country can use to raise its TFP level. In

Figure 5, we forecast a country's TFP level in 2007 (relative to the U.S.) and compare that forecast to its actual TFP level.¹⁹

Figure 5: Expanded Trade *Plus* FDI Raises TFP



Source: Author forecast based on data from Penn World Tables (2014)

Note: ROK** = forecast for *ROK* with *Japan's* trade to GDP ratio as well as inward FDI to GDP ratio;

JPN** = forecast for *Japan* with *Korea's* trade to GDP ratio as well as inward FDI to GDP ratio; for meaning of R-squared, see note to

Figure 1.

The higher a country's average trade to GDP ratio during 1985-2007 and the higher its stock of accumulated inward FDI, the higher the TFP it was able to attain during the 22 years between 1985 and 2007. Korea averaged a much higher trade to GDP ratio than Japan during 1985-2007 (51% vs. 28%, respectively), and higher inward FDI as well (5% of GDP vs. 1% for Japan).

Figure 5 enables us to examine the combined impact of trade and FDI on TFP, and the impact is truly sizeable. If Korea only had Japan's lower level of trade and inward FDI, its predicted TFP in 2007 would have been 11 percentage points *lower* than the actual prediction: 57% of the U.S. level instead of 68%. And if Japan had Korea's higher trade openness and inward FDI, its predicted TFP level would have been a full 15 percentage points *higher*: 89% of the U.S. level instead of 74%. Imagine how much better off Japan would be today if only it would open up its economy as Korea has.

Given that Korea's trade openness and inward FDI are so much higher today than in 1985-2007, its gains in efficiency and potential living standards today are even greater, especially relative to Japan

Why Trade and Inward FDI Boost Growth

Trade boosts efficiency for a number of reasons. Most famously, it allows countries to specialize in what they do best and to import what they cannot make efficiently at home. Beyond that, higher exports allow a country's most capital-intensive and knowledge-intensive modern industries to achieve economies of scale that would be impossible by just relying on the smaller domestic market. These days, Korea's most modern industries export a third to a half of all that they produce. Most importantly but not as often noticed is the fact that exports and imports expose industries to global competition. To survive in the global market, industries and firms must raise their efficiency and quality to global standards. The first Toyotas and Hyundais that Japan and Korea tried to export couldn't pass muster; the need to export forced a choice: improve or die. They improved.

As an economic minister in the reformist Kim Dae-jung administration put it at a 1999 conference in Seoul, "There can be no competitiveness without competition." Hence, in connection with its Free Trade Agreements (FTAs) with other countries, Korea is using import

liberalization to create a smaller, but more efficient, farm sector.

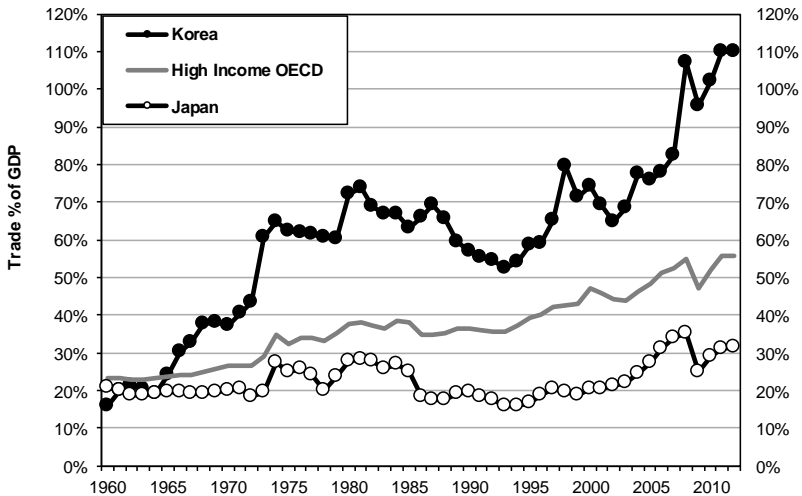
True, globalization causes social dislocation. But the same is true of domestic technologies; e.g., PCs ended work for millions of secretaries. So, successful globalization needs to be accompanied by a solid safety net, including adequate budgets and agencies to help people transition from job to job as jobs and firms die or shrink (“active labor measures”). Unfortunately, Korea’s safety net, like Japan’s, is thin.

Contrasting Korea with Japan on Trade Openness

Korea and Japan are like night and day on the globalization front. Back in 1960, both Japan and Korea more or less matched the rest of the OECD countries in having a trade to GDP ratio of around 20%. In the succeeding decades, Japan improved only a little, and most of that improvement has occurred over the last decade. Today, Japan’s trade to GDP ratio is around 30%. By contrast, Korea’s trade to GDP ratio has soared to 110% of GDP (see

Figure 6).²⁰

Figure 6: Japan’s Trade to GDP Ratio Rises A Bit; Korea’s Soars



Source: World Bank (2014)

To judge the impact on TFP, it is important to look at not just how much a country trades, but how much competition that trade provides. If,

for example, a country is largely importing goods from its own affiliates overseas – as is the case with much of Japan’s manufactured imports – then it is not really exposing its firms to international competition. Similarly, if a country fails to import in the same product areas in which it exports – something called intra-industry trade (IIT) – that, too, is a sign that trade is not providing as much competition as it should. Korea does much better on the IIT front than does Japan. During 1997-2008, Japan’s IIT index within manufacturing averaged only 51 (on a scale from 0 to 100), the third-lowest among 20 OECD countries. By contrast, Korea’s IIT index stood much higher, at 70.

Korea is well aware that it must not only “export or die”; it must also “import or die.” Nearly half (40-50%) of imports serve as inputs for Korea’s own exports – not just fuel and raw materials but also machinery and parts. For example, Korea’s Pohang Steel (POSCO) famously uses Nippon Steel machinery and the two firms entered a strategic alliance in 2000. The cars made by Hyundai use not only Japanese machinery but also Japanese auto parts, including some made by Denso, a first-tier Toyota supplier.²¹ This is a pattern of interdependence much more akin to similarly-sized European nations, rather than Japan’s effort to be self-sufficient even in products, like petroleum refining, where it lacks comparative advantage.

Not Quite as Good as it Looks

While Korea’s trade looks great compared to Japan’s, its exposure to international competition is not quite as fierce as it appears from aggregate numbers like IIT. For example, only 10% of all Korean imports are consumer goods. These goods, if made by foreign firms, would truly add to the forces of competition within Korea because it would also provide indirect competition for all the inputs that go into those consumer goods.

Even on this front, there are some positive signs. The market share of imported cars, for example, is way, way up: from a mere 1.3% in 2002, to 7% in 2010, to 14% in the first few months of 2014. A large share of these Japanese-branded imports were made in the U.S., not in Japan, as Japanese transplants in the U.S. took advantage of the Korea-U.S. FTA. In 2012, the second-best selling import was the Toyota Camry – made in Kentucky.

Korea Takes a Big Leap in Inward FDI, Then Stalls Out

President Kim Dae-jung argued in the late 1990s that inward FDI would kill two birds with one stone; it would 1) aid Korea's economic modernization; and 2) support Korea's democratization by taking the chaebol down a peg.

Since then, inward has FDI soared: from just 2% of GDP in 1990 to 11% by 2002. Since then, improvement has been slower, and inward FDI in 2013 stood at 13.4%. By contrast, improvement in Japan has been far, far slower. Back in 1990, inward FDI was a barely visible 0.3% of Japan's GDP. Today, it has grown but is still tiny at 4.7%, the lowest ratio among 26 OECD countries.

Despite all of the improvement in Korea, Korea still stands second to Japan in having the lowest ratio of inward FDI to GDP in the OECD. Worse yet, the improvement looks to be slowing down and perhaps even stalling. The highest ratio, 14.5%, was attained in 2009. If the EIU is right, it will come down even further to just 12.6%.

While Korea is clearly on an FTA binge, it will be just as important to see whether the Park government will be equally serious about boosting inward FDI.

From Lee's 7% Growth Goal to Park's 4%

The chickens are already beginning to come home to roost on Korea's structural flaws. As we noted at the outset, the country has greatly lowered its expectations from Lee Myung-bak's 7% goal five years ago to Park Geun-hye's 4% target today.

With the proper reforms, Park's 4% goal, or perhaps 3.5%, might be achievable. It's good news that Park herself acknowledges that her goal requires reforms – unlike so many leaders in Japan who stayed in denial for much of the past 25 years. What remains to be seen is whether Korea understands the reforms it needs and can summon the political ability to achieve them.

Bibliography:

International Monetary Fund, *World Economic Outlook Database*, 2014a, available at:
<http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/index.aspx>.

International Monetary Fund. *How Can Korea Boost Potential Output To Ensure Continued Income Convergence?* IMF Working Article

WP/15/54. Washington, DC, 2014b.

Notes:

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² IMF 2014a. This is measured using Purchasing Power Parity (PPP), which adjusts for changes in prices and currency rates.

³ Not counting tiny entities like Luxemburg or oil exporters

⁴ IMF 2014b, Abstract

⁵ *The Aging of Korea*. (Washington, DC: Center for Strategic and International Studies, 2007)

⁶ Richard Katz. *Mainframe Economics in a PC World*, M.A. thesis for New York University, 1996; and Richard Katz, "Japan's Self-Defeating Trade Policy: Mainframe Economics in a PC World," *Washington Quarterly*, Vol. 20, no. 2. (1997).

⁷ McKinsey Global Institute, *Beyond Korean Style: Shaping A New Growth Formula*, 2013, p. 16. Much of the data in this section comes from the McKinsey report.

⁸ *Ibid.* passim

⁹ The relationship between productivity growth and job growth is important and often misunderstood. If factory workers can hike their output 10% per year, but demand for manufactured goods rises only 7%, then factory jobs will drop 3%. If demand for services rises 7% a year, but output per worker rises only 4%, then jobs will rise 3%. Trying to preserve jobs at the expense of productivity is both misguided and futile, but is often pursued by policymakers.

¹⁰ McKinsey (2013), pg. 16

¹¹ Cited in "Top Ten Chaebol Now Almost 80% of Korean Economy," *The Hankyoreh*, August 28, 2012, available at: http://www.hani.co.kr/arti/english_edition/e_business/549028.html.

¹² Cited in *The Hankyoreh*. 2012.

¹³ McKinsey (2013), p. 36

¹⁴ Economist Intelligence Unit, 2014. *EIU Macro Indicators*.

¹⁵ McKinsey Global Institute, "South Korea: Finding its Place on the World Stage," 2012, available at:

http://www.mckinsey.com/insights/winning_in_emerging_markets/south_korea_finding_its_place_on_the_world_stage.

¹⁶ The Korean government approved iPhone sales toward the end of 2009. McKinsey (2010) and (2013).

¹⁷ *Ibid.* (2010)

¹⁸ Richard Katz, “A Nordic Mirror: Why Structural Reform Has Proceeded Faster in Scandinavia Than in Japan.” Working Article Series, no. 265, (October 2008), Center on Japanese Economy and Business, available at: <http://academiccommons.columbia.edu:8080/ac/handle/10022/AC:P:15774>.

¹⁹ The equation explains 72% of the variation in TFP levels, a fairly high level of explanatory power. The single most important explanatory variable is a country’s starting point, i.e., its level of TFP in 1985. That’s because countries with a lower level of TFP or GDP per worker tend to catch up to the leaders by absorbing their technology, etc. The other variables include the trade-to-GDP ratio, the ratio of inward FDI to GDP, and the size of GDP. Countries with larger populations and therefore GDP are able to capture economies of scale. Engaging in more trade is another way for countries to capture those economies of scale. We were also able to input human capital in a different equation with 26 countries that looked at trade but not FDI. With our limited FDI data, we were unable to achieve a precise result for FDI if we included human capital as well.

²⁰ The reason trade can add up to more than 100% of GDP is the following: If domestic production = 100 and imports = 60, then total supply = 160. If exports also = 60, then trade/GDP = 120/100 or 120%. But exports are just 60/160, i.e. 40%, of total supply, and the trade balance = 0.

²¹ (This can affect the IIT index, depending on how fine a grain is used: when Korea both exports and imports auto parts, we are often talking about very different products.)