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Inequality challenge in pursued economies[1]

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Abstract
Inequality in a society depends on, among other things, which stage of economic development it is in. This paper identifies three stages, an urbanization phase when the labor supply curve is flat, a maturing phase when the labor supply curve is upward sloping, and a "pursued phase" when the labor demand curve is flat because the return on capital is higher in emerging economies than at home. While standard theories in economics are based on the assumption that the economy is in a maturing phase, most advanced countries today are already in a pursued phase. Because the bargaining position of labor changes as the economy goes through different stages, polices to address inequality must also change with the stage of economic development.

Keywords inequality, pursued economies, stages of economic development, labor market, return on capital

Income inequality has become one of the hottest and most controversial issues in economics not only in the developed world but also in China and elsewhere as well. Many are growing increasingly uncomfortable with the divide between the haves and the have-nots, especially after Thomas Piketty's *Capital in the 21st Century*[2] sparked a fresh debate on the optimal distribution of wealth, an issue that had been largely overlooked by the economics profession.

This paper argues that the determinants of income inequality changes depending on the stage of economic development. The three stages of industrialization identified for this purpose are: urbanizing era, when the economy has yet to reach the Lewis Turning Point (LTP), post-LTP maturing or golden era when the economy moves along an upward sloping labor supply curve, and pursued era, when the return on capital is higher abroad in emerging economies than at home. The LTP refers to the point at which urban factories have finally absorbed all the surplus rural labor. (In this essay, the term LTP is used only because it is a well-known expression for a specific point in a nation's economic development; the use of this term does not refer to the model of economic growth proposed by Sir Arthur Lewis.)

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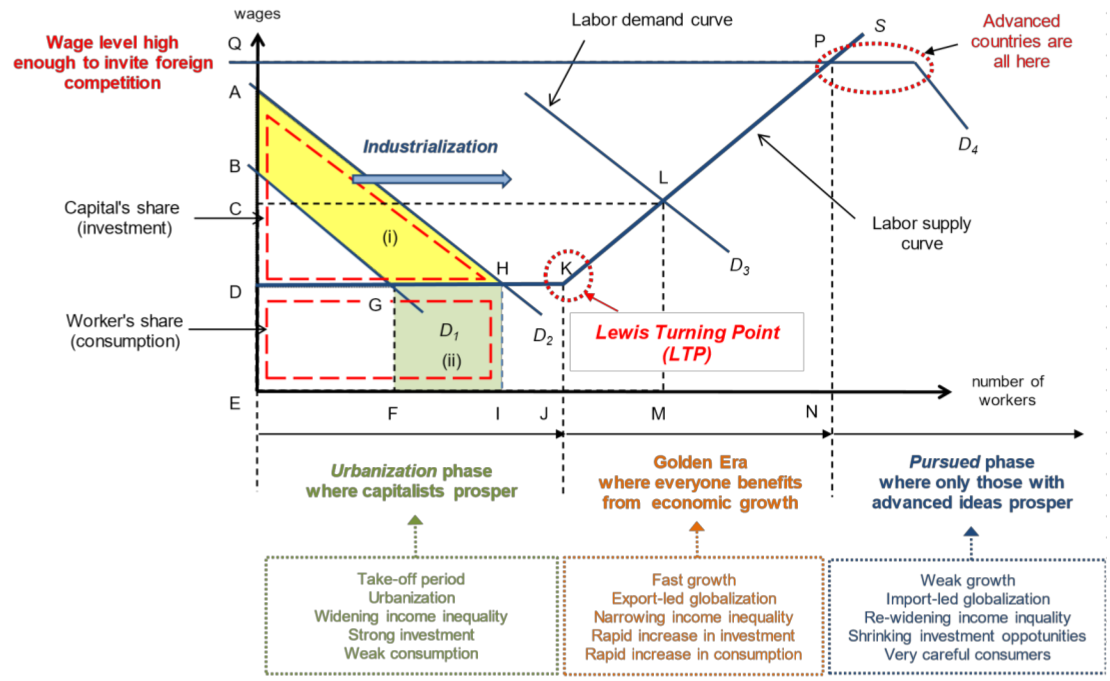
[1] This paper draws heavily from Chapters 3, 4 and 5 of the author's *The Other Half of Macroeconomics and the Fate of Globalization* published in 2018 by John Wiley but is reorganized with a focus on inequality.
[2] Piketty, Thomas. (2014) *Capital in the Twenty-First Century*. Belknap Press

At the advent of industrialization, most people are living in rural areas. Only the educated elite, who are very few in number, have the technical knowledge needed to produce and market goods. Families whose ancestors have lived on depressed farms for centuries have no such knowledge. Most of the gains during the initial stage of industrialization therefore go to the educated few, while the rest of the population simply provides labor for the industrialists. And with so many surplus workers in the countryside, worker wages remain depressed for decades until the LTP is reached.

Exhibit 1 illustrates this from the perspective of labor supply and demand. The labor supply curve is almost horizontal (DHK) until the Lewis turning point (K) is reached because there is an essentially unlimited supply of rural laborers seeking to work in the cities. A business owner can attract any number of such laborers simply by paying the going wage (DE).

Exhibit 1: Three Phases of Industrialization/Globalization



Source: Nomura Research Institute

In this graph, capital's share is represented by the area of the triangle formed by the vertical axis on the left, the labor demand curve, and the labor supply curve, while labour's share is represented by the rectangle below the labor supply curve. At labor demand curve D_1, capital's share is the triangle BDG and labour's share is the rectangle DEFG. During this phase of industrialization, the capital share BDG may be shared by only a few persons or families, whereas the labor share DEFG may be shared by millions of workers.

Successful businesses continue investing in an attempt to make even more money. That raises the demand for labor, causing the labor demand curve to shift steadily to the right (from D_1 to D_2) even as the labor supply curve remains flat. As the labor demand curve shifts to the right, total wages received by labor increase from the area of the rectangle DEFG at time D_1 to the area of the rectangle DEIH at time D_2 as the length of the rectangle below the labor supply curve grows. However, the growth is linear. The share of capital, meanwhile, is likely to increase at more than a linear rate as the labor demand curve shifts to the right, expanding from the area of the triangle BDG at D_1 to the area of the triangle ADH at D_2.

Growth exacerbates income inequality in pre-LTP stage

Accordingly, the portion of GDP that accrues to the capitalists is likely to increase with GDP growth until the LTP is reached, exacerbating income inequalities. A key reason why a handful of families and business groups in Europe a century ago and the zaibatsu in Japan prior to World War II were able to accumulate such massive wealth is that they faced an essentially flat labor supply curve (wealth accumulation in North America and Oceania was not quite as extreme because these economies were characterized by a shortage of labor). Some in post-1978 China became extremely rich for the same reason.

During this phase, income inequality, symbolized by the gap between rich and poor, widens sharply as capitalists' share of income (the triangle) often increases faster than labour's share (the rectangle). Because capitalists are profiting handsomely, they continue to re-invest profits in a bid to make even more money. Sustained high investment rates mean domestic capital accumulation and urbanization also proceed rapidly. This is the take-off period for a nation's economic growth.

Until the economy reaches the Lewis Turning Point, however, low wages mean most people still lead hard lives, even though the move from the countryside to the cities may improve their situations modestly. For typical workers this was no easy transition, with 14-hour factory workdays not at all uncommon until the end of the 19th century. According to the OECD, the annual working time in Western countries averaged around 2,950 hours in 1870 or double the current level of 1,450 hours[3]. Business owners, however, were able to accumulate tremendous wealth during this period.

Stage II of industrialization: the post-LTP maturing economy

As business owners continue to generate profits and expand investment, the economy eventually reaches the LTP. Once that happens, urbanization is largely finished and the total wages of labor – which had grown only linearly until then – start to increase much faster because any additional demand for labor pushes wages higher. In other words, the post-LTP labor supply curve takes on a significant positive slope.

Even if labor demand increases only modestly in Exhibit 1, from D_2 to D_3, total wages accruing to labor will rise dramatically, from the area of rectangle DEJK to the area of rectangle CEML. This means labour's share of output is likely to be expanding relative to capital's share. It is at this point that the income inequality problem begins to correct itself.

Once the LTP is reached, labor also gains the bargaining power to demand higher wages for the first time in history, which reduces the share of output accruing to business owners. But businesses will continue to invest as long as they are achieving good returns, leading to further tightness in the labor market.

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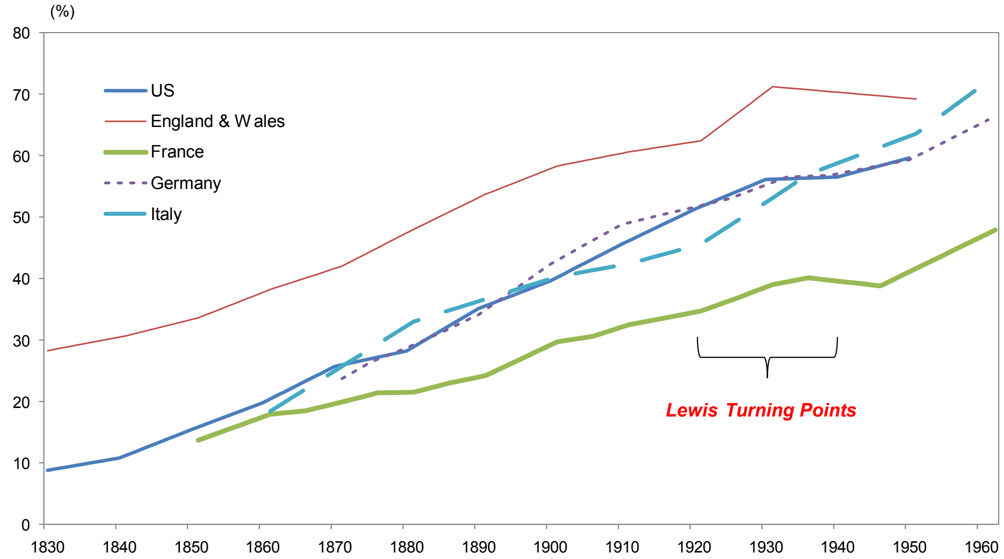
[3] Maddison, Angus, (2006), The World Economy: A Millennial Perspective (Vol. 1), Historical Statistics (Vol. 2). OECD, Paris, p. 347.

A significant portion of the US and European populations still lived in rural areas until World War I, as shown in Exhibit 2. Even in the US, where – unlike in Europe – workers were always in short supply, nearly half the population was living on farms as late as the 1930s. Continued industrialization as well as the mobilizations for two world wars then pushed these economies beyond the LTP, and the standard of living for the average worker began to improve dramatically.

Exhibit 2: Western Urbanization* Continued Until 1960s



* Percentage of population living in urban areas with 20,000 people or more in England & Wales, 10,000 or more in Italy and France, 5,000 or more in Germany and 2,500 or more in the US.
Sources: U.S. Census Bureau (2012), *2010 Census*, Peter Flora, Franz Kraus and Winfried Pfenning ed, (1987), *State, Economy and Society in Western Europe 1815-1975*

As labour's share increases, consumption's share of GDP will increase at the expense of investment. At the same time, the explosive increase in the purchasing power of ordinary citizens means most businesses can increase profits simply by expanding existing productive capacity. Consequently, both consumption and investment will increase rapidly.

From that point onward the economy begins to "normalize" in the sense in which the term is used today. Inequality also diminishes as workers' share of output increases relative to that of capital. In the US, that led to the so-called Golden Sixties where everyone benefitted from economic growth. With incomes rising and inequality falling, this post-LTP maturing phase may be called the *golden era* of economic growth.

Once the economy reaches the LTP and wages start growing rapidly, workers begin to utilize their newfound bargaining power. The numerous strikes experienced by many Western countries from the 1950s to the 1970s reflects this development.

Capitalists initially respond to labor movements with union busters and strike busters. But as workers grow increasingly scarce and expensive, the capitalists must back down and begin accepting some of labour's demands if they want to keep their factories running. After 20 years or so of such struggles, a new political order is established as both employers and employees begin to understand what can be reasonably expected from the other side. The political order in the West and Japan until recently, which was dominated by centre-left and centre-right political parties, reflected this learning process.

Higher wages force businesses to look harder for profitable investment opportunities. On the other hand, the explosive increase in the purchasing power of ordinary workers who are paid ever-higher wages creates major investment opportunities. This prompts businesses to invest for two reasons.

First, they seek to increase worker productivity so that they can pay ever-higher wages. Second, they want to expand capacity to address workers' increasing purchasing power. Both productivity- and capacity-enhancing investments increase demand for labor and capital that add to economic growth. In this phase, business investment increases workers' productivity even if their skill level remains unchanged.

With rapid improvements in the living standards of most workers, the post-LTP golden era is characterized by broadly distributed benefits from economic growth. Even those with limited skills are able to make a good living, especially if they belong to a strong union. Government tax receipts also increase rapidly during this period, allowing the government to offer an ever-expanding range of public services. That, in turn, further reduces the sense of inequality among the population. This golden era lasted into the 1970s in the West.

Stage III of industrialization: the pursued era

This golden era does not last forever. At some point, wages reach a level where foreign competition can gain a foothold. The first signs of a serious threat to Western economic growth appeared when businesses in the US and Europe encountered Japanese competition in the 1970s.

Many in the West were shocked to find that Japanese cars required so little maintenance and so few repairs. The Germans may have invented the automobile, and the Americans may have established the process by which it could be manufactured cheaply, but it was the Japanese who developed cars that did not break down. The arrival of Nikon F camera also came as a huge shock to the German camera industry in the 1960s because it was so much more rugged, adaptable, easy to use and serviceable than German Leicas and Exaktas, and professional photographers around the world quickly switched to the Japanese brand. For the first time since the industrial revolution, the West found itself being pursued by a formidable competitor from the East.

Once a country is being chased by a technologically savvy competitor, often with a younger and less expensive labor force, it has entered the third or "pursued" phase of economic development. In this phase, it becomes far more challenging for businesses to find attractive investment opportunities at home because it often makes more sense for them to buy directly from the "chaser" or to invest in that country themselves.

Businesses in the pursued country no longer have the same incentive to invest in productivity- or capacity-enhancing equipment at home because there is now a viable alternative – investing in or buying directly from lower-cost production facilities abroad. In this phase, capital invested abroad, especially in manufacturing, earns a higher return than capital invested at home. With constant pressure from shareholders to improve the return on capital, firms are forced to shift investments to locations with a higher return on capital.

Once this stage is reached, productivity gains at home from investment in productivity enhancing equipment slow significantly. According to US Bureau of Labor Statistics data compiled by Stanley Fischer at the Fed[4], productivity growth in the non-farm business sector averaged 3.0 percent from 1952 to 1973, before falling to 2.1 percent for the 1974 to 2007 period and 1.2 percent for 2008–2015. These numbers not only confirm the trend mentioned above, but also suggest that worker productivity in the future will depend increasingly on the efforts of individual workers to improve their skills instead of on corporate investment in productivity-enhancing equipment.

In a pursued economy, labor demand curve (D_4 in Exhibit 1) becomes largely horizontal at wage level EQ, where outsourcing to foreign production sites becomes a viable alternative. This means real wage growth will be minimal from this point onward, except for those workers with abilities that are not easily replicated abroad. It should be noted that the level of EQ depends not just on domestic wage inflation, but also on foreign productivity gains. For example, if the Japanese products in the 1970s were not so competitive, EQ for the West would have been much higher.

With domestic investment opportunities shrinking, economic growth also slows in the pursued countries. This is very much the reality facing most advanced countries today, while a steadily increasing number of emerging countries are joining the rank of chasers.

Some of the pain workers in advanced countries felt was naturally offset by the fact that, as consumers, they benefited from cheaper imports from emerging economies. Businesses with advanced technology continued to do well, but it was no longer the case that everyone in society was benefiting from economic growth. Those whose jobs could be transferred to lower-cost locations abroad saw their living standards stagnate or even fall.

Inequality worsens in pursued stage

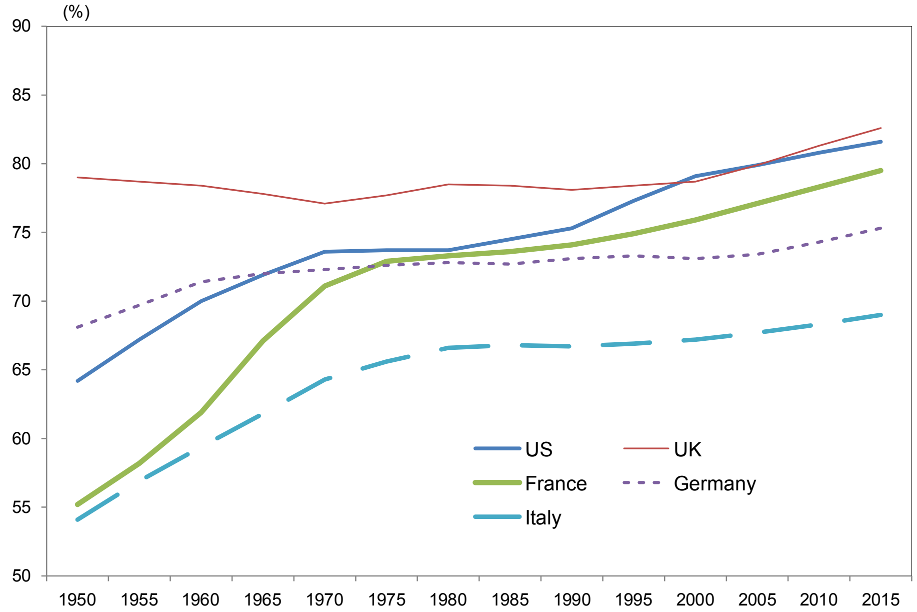
Exhibit 3-4 shows the real income of the lowest quintile of US families from 1947 to 2015.
Even in this group, incomes grew rapidly in the post-LTP golden era that lasted until around 1970. But income growth subsequently stagnated as the country entered the pursued phase. Exhibit 5, which illustrates the income growth of other quintiles relative to the lowest 20 percent, demonstrates that the ratios remain remarkably stable until 1970 but diverge thereafter.

Exhibit 3-6 shows annualized income growth by income quintile in the post-LTP golden era from 1947 to 1970 and the pursued phase from 1970 to 2015. It shows that the lowest 60 percent actually enjoyed slightly faster income growth than those at the top before 1970,

[4] Fischer, Stanley (2016) "Reflections on Macroeconomics Then and Now," remarks at "Policy and Challenges in an Interconnected World" 32 Annual National Association for Business Economics Economic Policy Conference, Washington D.C., March 7, 2016. https://www.federalreserve.gov/newsevents/speech/fischer20160307a.htm

indicating a reduction in income inequality. This was indeed a golden era for the US economy in which everyone was becoming richer and enjoying the fruits of economic growth.

Exhibit 3: Western Urbanization Slowed in 1970s

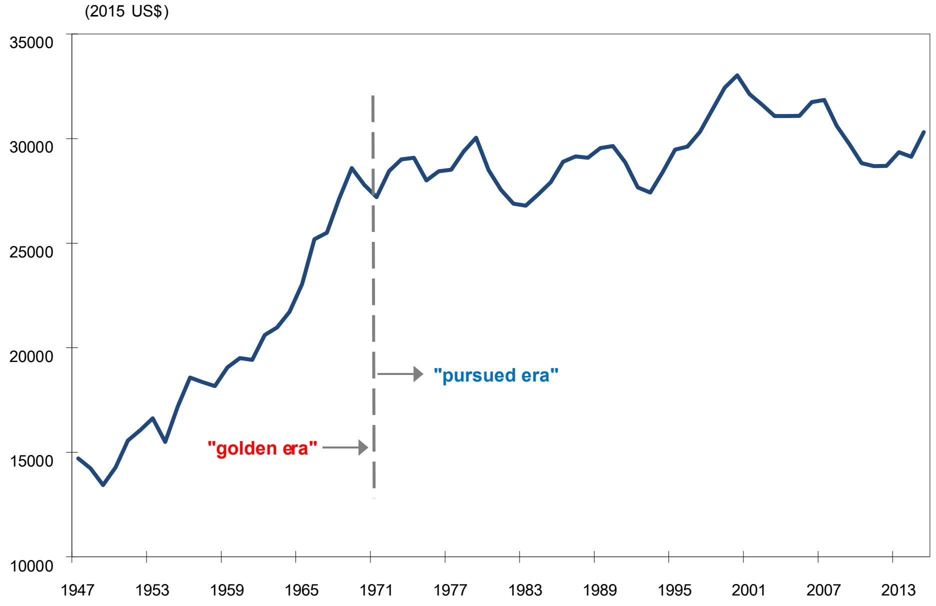


Source: United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, custom data acquired via website.

The situation changed drastically, however, once Japan started chasing the US. Exhibit 4 shows that income growth for the lowest quintile has been stagnant ever since. Exhibits 5 and 6 show that income growth for other groups was only slightly better – except for the top 5 percent, which continued to experience significant income gains even after 1970. This group probably includes those who were at the forefront of innovation along with those who were able to take advantage of Japan's emergence.

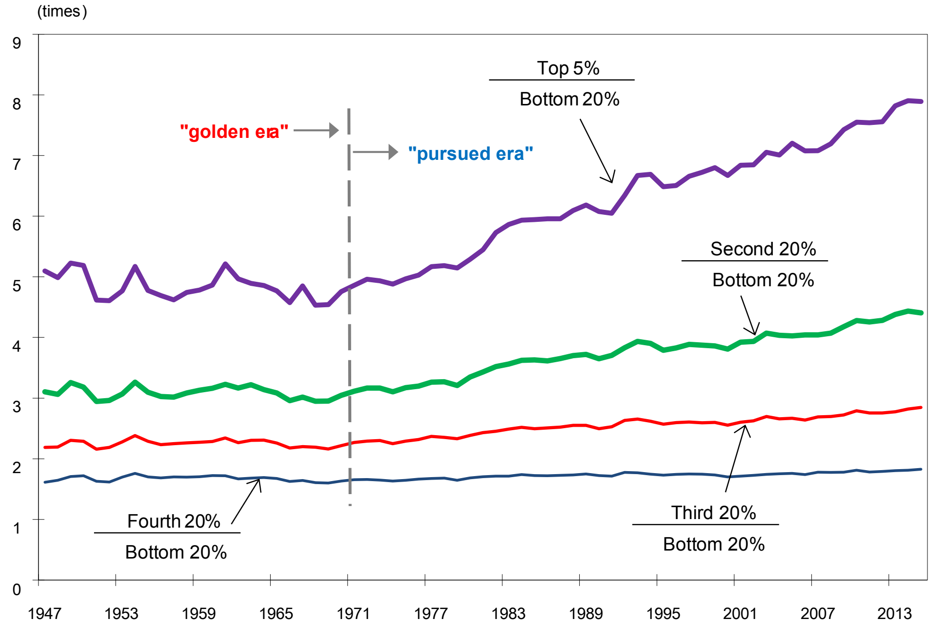
Exhibit 6 demonstrates that income growth for different income quintiles was quite similar during the golden era but began to diverge significantly once the US became a pursued economy. Income growth for the top five percent dropped from 2.50 percent per year during the golden age to just 1.30 percent during the pursued phase, but that is still seven times the rate for the lowest 20 percent.

Exhibit 4: Incomes of lowest 20% of US families shot up until 1970 but stagnated thereafter
Income Upper Limits for Lowest Fifth of Families: 2015 US dollars



Source: US Census Bureau, Current Population Survey, 2016 Annual Social and Economic (ASEC) Supplement

Exhibit 5: US income inequality began to worsen after 1970
Income of various groups as a multiple of the lowest 20%



Source: Nomura Research Institute, based on the data from US Census Bureau's Current Population Survey, 2016 Annual Social and Economic (ASEC) Supplement

Exhibit 6: Annualized growth rates of US family income by income quintile

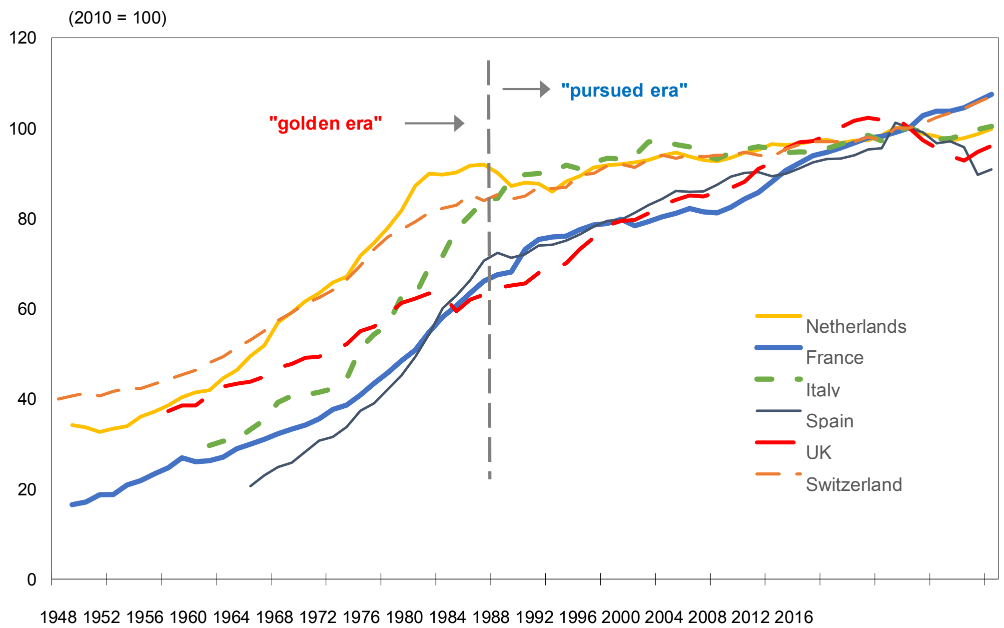
(annualized, %)

	lowest 20%	second 20%	third 20%	fourth 20%	top 5%
Post-LTP maturing phase 1947-1970	2.805	2.854	2.861	2.719	2.496
Post-LTP pursued phase 1970-2015	0.189	0.436	0.737	0.996	1.298

Source: Nomura Research Institute, based on the data from US Census Bureau's Current Population Survey, 2016 Annual Social and Economic (ASEC) Supplement

Similar developments were observed in Europe. Exhibit 7 shows real wages in six European countries. With the possible exception of the UK, all of these countries experienced rapid wage growth until the 1970s followed by significantly slower growth thereafter.

Exhibit 7: Real wages in six European countries after WWII
Real wage indices (national currency base)

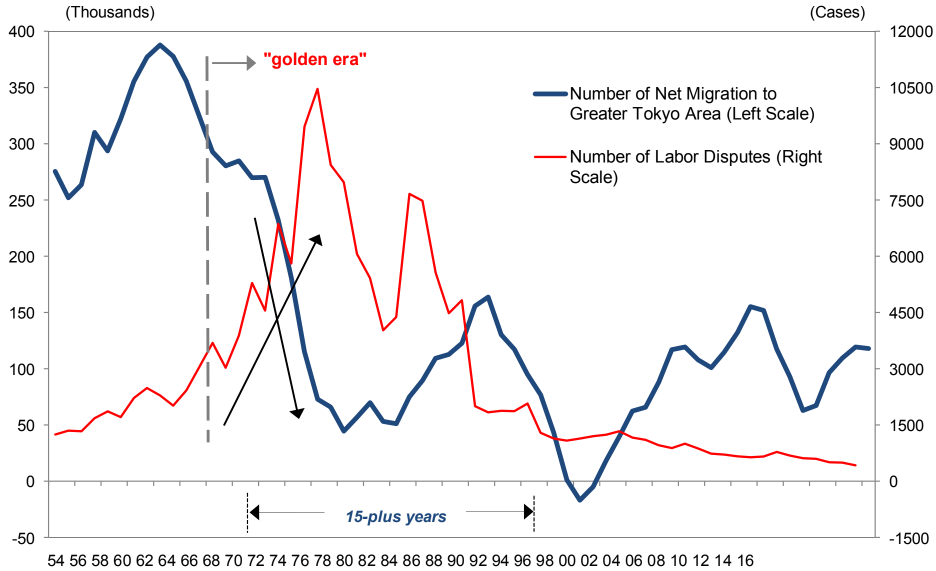


Source: Nomura Research Institute, based on the data from IMF, *International Financial Statistics* Office for National Statistics, UK, *Analysis of Real Earnings*, and Swiss Federal Statistical Office, *Swiss Wage Index*

The three stages of industrialization in pursued countries

Japan reached the LTP in the mid-1960s, when the mass migration of rural graduates to urban factories and offices, known in Japanese as *shudan shushoku,* finally came to an end. Once Japan reached that point, the number of labor disputes skyrocketed, as shown in Exhibit 8, and Japanese wages started to increase sharply as shown in Exhibit 9. In other words, Japan was entering the post-LTP golden era that the West had experienced 40 years earlier.

Exhibit 8: Demand from labor surges once Lewis Turning Point is passed (1): Japan

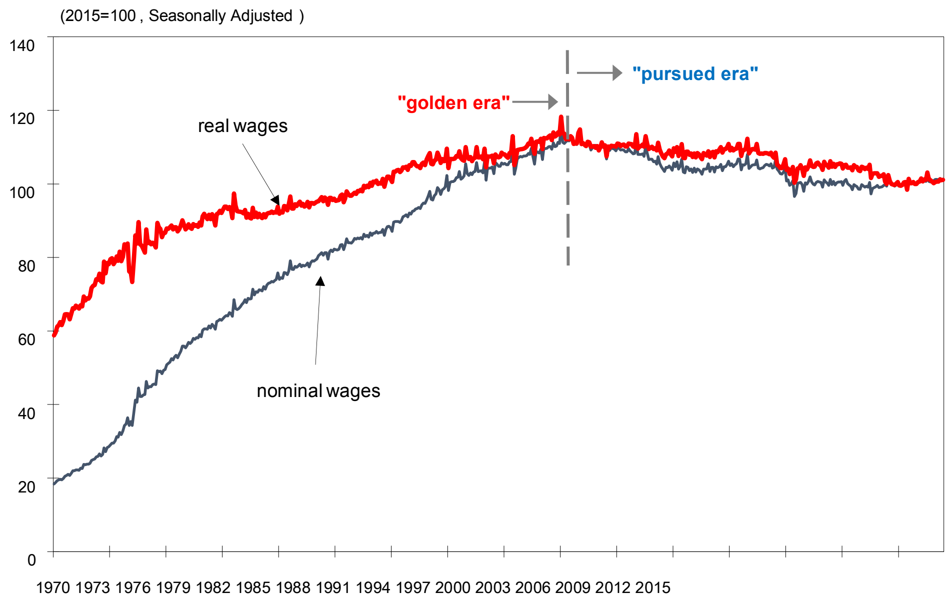


Note: Greater Tokyo Area consists of Tokyo Metropolis, Kanagawa prefecture, Saitama prefecture and Chiba prefecture. Sources: Ministry of Internal Affairs and Communications, *Report on Internal Migration in Japan*, and Ministry of Health, Labour and Welfare, *Survey on Labour Disputes*

Japan was fortunate in that it was not being pursued at the time, enabling it to focus on catching up with the West. Wages were rising rapidly, but Japanese companies invested heavily at home to boost workforce productivity. Japan's golden era of strong growth and prosperity could continue as long as productivity rose faster than wages.

Labour's share of profits rose along with wages, and Japan came to be known as the country of the middle class, with more than 90 percent of the population identifying itself as such. The Japanese were proud of the fact that their country had virtually no inequality. Some even quipped in those days that Japan was how Communism was *supposed* to work.

Exhibit 9 Japanese wages peaked in 1997 when country entered pursued phase



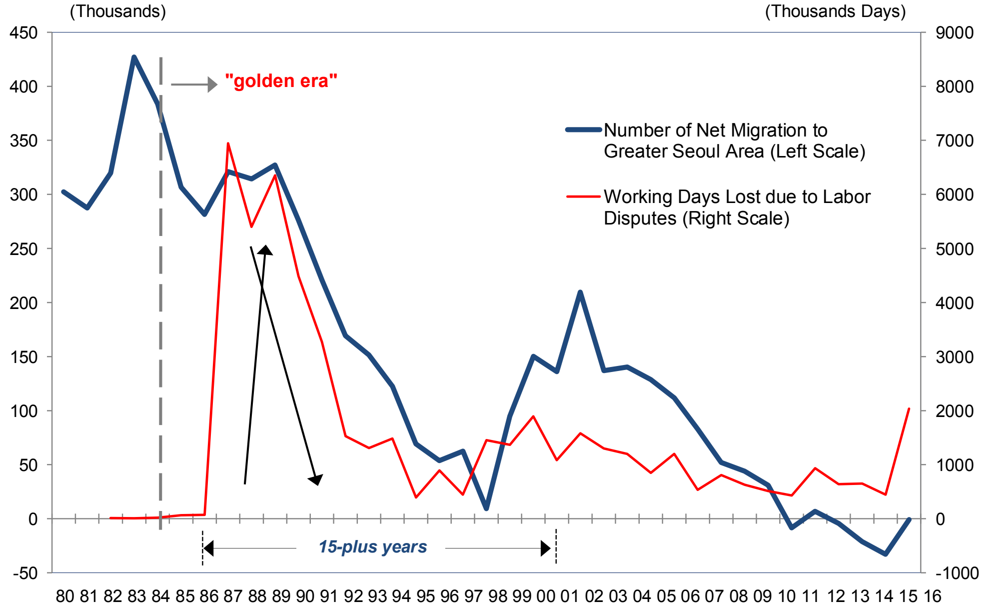
Source: Ministry of Health, Labour and Welfare, Japan, Monthly Labour Survey

The happy days for Japan lasted until the mid-1990s, when Taiwan, South Korea and China emerged as serious competitors. By then, Japanese wages were high enough to attract pursuers, and the country entered its pursued phase. As shown in Exhibit 9, Japanese wages stopped growing in 1997 and then stagnated or fell.

Today the Japanese are worried about income inequality as highly paid manufacturing jobs have migrated to lower-cost countries. They are also concerned about the emergence of the so-called working poor who were once employed in manufacturing but have now been forced to take low-end service jobs. Some estimate that as many as 20 million out of a total population of 130 million are now living in poverty[5]. Their suffering, however, has been eased somewhat by a flood of inexpensive imports that has substantially reduced the cost of living. This means Japan is reliving the West's experience when it was being chased by Japan.

[5] *Nikkei Business* (2015) Tokushu: Nisen Mannin-no Hinkon ("20 million Japanese in poverty"), in Japanese, Nikkei BP, Tokyo, March 23, 2015, pp. 24-43.

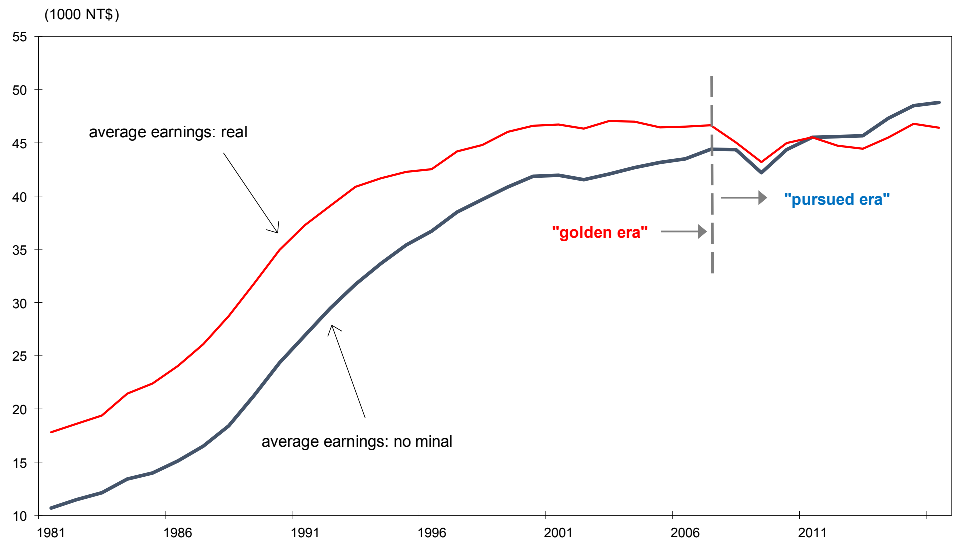
Exhibit 10: Demand from labor surges once Lewis Turning Point is passed (2): South Korea



Note: Greater Seoul Area consists of Seoul city, Incheon city and Gyeonggi-do. Sources: Ministry of Employment and Labor, *Strikes Statistics*, Statistics Korea, *Internal Migration Statistics* and *Korea Statistical Year Book*

Similar concerns are being voiced in Taiwan and South Korea as they experience the same migration of factories to China and other even lower-cost locations in Southeast Asia. These two countries passed their LTPs around 1985 and entered a golden age that lasted perhaps until 2005. The frequency of Korean labor disputes also shot up during this period (Exhibit 10) as workers gained bargaining power for the first time and won large wage concessions. In Taiwan, wages climbed sharply during the post-LTP golden era but peaked around 2005 and stagnated thereafter (Exhibit 11). Both countries are now feeling the pinch as China steadily takes over the industries that were responsible for so much of their past growth.

Exhibit 11: Taiwanese wages peaked around 2005 when country entered pursued phase



Source: Nomura Research Institute, based on the data from Directorate General of Budget, Accounting and Statistics (DGBAS), the Executive
Yuan, Taiwan, *Consumer Price Indices* and *Average Monthly Earnings*

China is not immune from this process of globalization either. Even though China's per capita GDP has grown 30 times since 1978 when the country opened its economy to the outside world, higher wages in China are now prompting both Chinese and foreign businesses to move factories to lower-wage countries such as Vietnam and Bangladesh. This is increasing fears in China that the country will get stuck in the middle-income trap.

This trap arises from the fact that once a country loses its distinction as the lowest-cost producer, many factories may leave for lower-cost destinations, resulting in less investment and less growth. In effect, the laws of globalization and free trade that benefitted China when it was the lowest-cost producer are now posing real challenges for the country.

If China hopes to maintain economic growth in the face of rising wages (and a shrinking workforce), it needs to increase incentives for the businesses to continue investing at home. This means supply-side reforms such as deregulation and tax cuts to increase return on capital at home are needed. But these policies are likely to worsen income inequality as experienced in other countries. These are precisely the challenge advanced countries faced when they were pursued by China and other emerging economies in earlier decades.

Manufacturing and happiness of nations

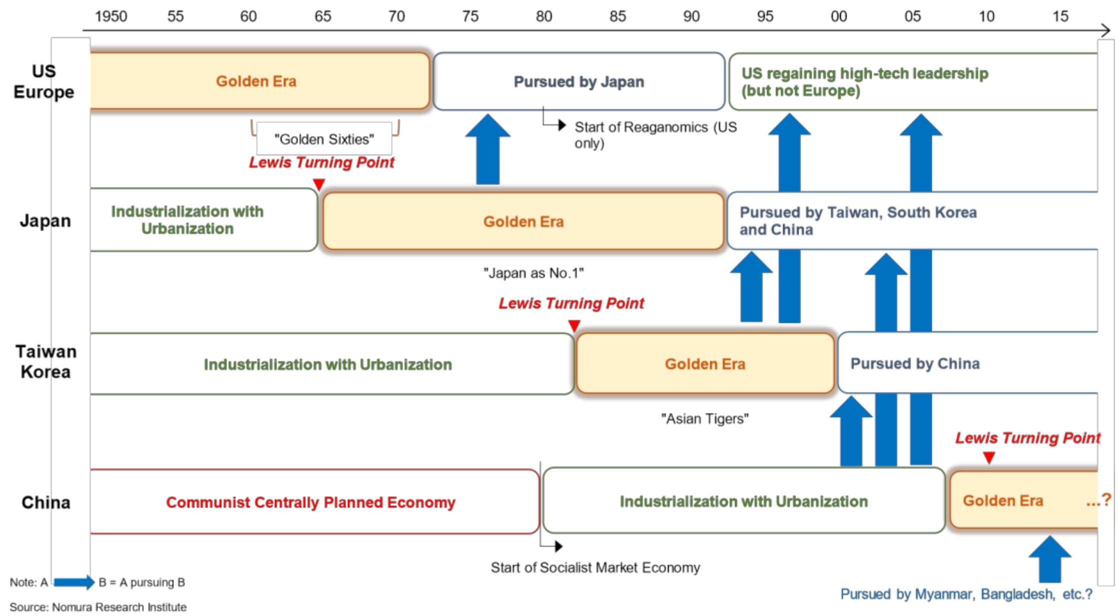
If a nation's happiness can be measured by (1) how quickly inequality is disappearing and (2) how fast the economy is growing, then the post-LTP golden era would qualify as the period when a nation is at its happiest. During this period, strong demand for workers from a rapidly expanding manufacturing sector forces all other sectors to offer comparable wages to retain workers. Since manufacturing jobs do not require advanced education, the whole of society benefits when the economic growth is propelled by manufacturing as wages rise for everybody. People are hopeful for the future, and inequality shrinks rapidly.

In this sense manufacturing is a great social equalizer: when manufacturing industries are prospering, those without advanced (and expensive) education can still earn a decent living. When manufacturing is driving job creation, it raises the wages of even the least skilled. That, in turn, raises wages in all other sectors.

US manufacturing employment peaked in 1979 at 19.6 million, with the bulk of the increase taking place from 1946 (12.7 million) to 1969 (18.8 million). This timeframe coincides with the period of shrinking income inequality in the US as noted above. Manufacturing employment has now fallen to 12.4 million, or just 8.5 percent of total nonfarm employment. The corresponding figure in 1946 was 32 percent[6]. A similar loss of manufacturing jobs has been observed in all advanced countries.

[6] These figures are calculated with the data from U.S. Bureau of Labor Statistics.

Exhibit 12: Growth, happiness and maturity of nations



Manufacturing is also where the greatest productivity gains can be expected. The above rise and fall of manufacturing employment in the US are consistent with the productivity growth numbers for the US from Stanley Fisher as noted earlier. Income inequality begins to worsen once manufacturers start migrating to lower-cost countries, and only those with advanced education and skills can keep up with the changes and continue to do well.

Disappointment with post-industrial society

The concept of "post-industrial society" popularized by authors such as Daniel Bell and the present concept of pursued era are both referring to the same period in history. When the former concept was first introduced in the 1970s, people were excited about the prospect of societies becoming cleaner and more humane as knowledge-based businesses become more dominant in the economy. This contrasts with the age of industrialization where pollution problems were pervasive, and people had to work long hours in dirty and oily factory floors.

Today, most advanced countries are indeed enjoying cleaner air with fewer factories operating inside their borders. But for a large part of the population, the rosy and humane scenario promised by the proponents of post-industrial society never materialized. Instead, many are feeling more insecure and less hopeful now than they felt in the manufacturing dominated golden era.

The rosy and humane scenarios of post-industrialization never came true because for that scenario to come true, highly paid knowledge-based jobs must be increasing so rapidly that they are taking workers away from the manufacturing industries. If that were the case, manufacturers would be forced to leave the country because they cannot compete for workers when knowledge-based businesses are paying such high wages.

What actually happened, however, was that advanced countries were *forced* to deindustrialize because the wages were lower and the return on capital was higher abroad than at home. In this case, the society will suffer from a slower growth in productivity and wages as well as widening income inequality because only those with advanced degrees needed for knowledge-based jobs will do well.

Although knowledge-based businesses are expanding in most societies, their expansions are far from enough to offset the loss of jobs in manufacturing industries. The result is the slow growth and increased inequality advanced countries face today. Since these developments are not positive for a large part of the society, the author coined the term "pursued era" instead of using the term “post-industrial society” to convey the sense of urgency that is needed to address the difficulty posed by the inferior return on capital at home.

Labour’s progression during three stages of economic development

In formulating the policy response to this predicament, it is important to know where the problem unique to the pursued economy originates. It was already noted that when the economy is in the pre-LTP urbanizing phase, capitalists can take advantage of workers because there are so many of them in rural areas who are willing to work for the going wage in urban factories. Workers also have no bargaining power prior to reaching the LTP. During this phase, the limited opportunities for education and vocational training in rural areas mean most workers are neither well-educated nor highly skilled when they migrate to the cities. And with so many of them competing for a limited number of urban jobs, there is little job security.

Once the economy passes the LTP, however, the tables are turned completely in favour of the workers. The supply of surplus workers in rural areas is exhausted and the labor supply curve takes on a significant positive slope. As long as some businesses seek to increase their workforce, all businesses will be forced to pay ever-higher wages. At this stage, businesses also have plenty of reasons to expand because workers’ purchasing power is growing rapidly. Expansion here means *domestic* expansion: firms have little of the experience or know-how needed for overseas production, and as long as domestic wages are below EQ, they are likely to be competitive.

To satisfy increasing demand while paying ever-higher wages, businesses invest in both productivity- and capacity-enhancing equipment. Investments in additional equipment effectively raise the productivity of employees even if the workers themselves are no more skilled or educated than before the country reached its LTP.

With wages rising rapidly, job security for workers also improves significantly as businesses try to hold on to their employees. Lifetime employment and seniority-based remuneration systems become more common. Working conditions improve as businesses offer safer, cleaner working environments to attract and retain workers. The emerging power of unions also forces employers to enhance job security. In contrast to the pre-LTP period, when businesses were effectively exploiting workers because there were so many of them, businesses in the post-LTP golden era “pamper” their employees with productivity-enhancing equipment so they can afford to pay them more.

Workers are on their own in pursued phase

At some point, however, wages reach point EQ in Exhibit 1, and businesses are forced to look for alternative production sites abroad because domestic manufacturing is no longer competitive. It is at this point that firms realize that capital invested abroad earns higher returns than capital invested at home.

In the new pursued era, the way businesses perceive workers changes once again because they now have the option of tapping overseas labor resources. With capital going much further abroad than when invested at home in labour-saving equipment, businesses have fewer incentives to undertake domestic investment. As investment slows, growth in labor productivity, which shot up during the golden era, also starts to decelerate, a trend that has been observed for some time now in most advanced countries.

It is at this point that the ability of *individual* workers begins to matter for the first time because only those able to do things that overseas workers cannot will continue to prosper. This stands in sharp contrast to the previous two stages, where wages were determined largely by macro factors such as labor supply/demand and institutional factors such as union membership, both of which had little to do with individual skills. Once the supply constraint is removed by the option of producing abroad or engaging in outright outsourcing, the only reason a company will pay a higher wage at home is because a particular employee can do something that cannot be easily replicated by a cheaper foreign worker.

If workers were “exploited” during the pre-LTP urbanization era and “pampered” during the post-LTP golden era, they are entirely “on their own” in the pursued era because businesses are much less willing to invest in labour-saving equipment to increase the productivity of the domestic workforce. Workers must invest in *themselves* to enhance their productivity and marketability.

In this pursued phase, job security and seniority-based wages become increasingly rare in industries that must become more agile and flexible to fend off pursuers. It is no accident that lifetime employment and seniority-based wages, which were common in the US until the 1970s, disappeared once Japanese competition appeared. The same thing happened to the Japanese labor market with an increased use of “non-regular” workers after China emerged as a competitor in the mid-1990s. Achieving a more flexible labor market has also been a major social and political issue in Europe.

Workers who take the time and effort to acquire skills that are in demand will continue to do well, while those without such skills will end up earning close to minimum wage. Those who benefited from union membership during the post-LTP golden era will find the benefits of membership in the new pursued era are not what they used to be. Income inequality will increase again, even though *when adjusted for skill levels* it may not change all that much.

Workers who want to maintain or improve their living standards in a pursued economy must therefore think hard about their individual prospects and the skills they should acquire in the new environment. To the extent that the answer to this question differs for each individual, workers are truly on their own. The “good old days,” when businesses invested to increase worker productivity so they could pay employees more, are gone for good. In some sense this is only fair, since it means workers who put in the time and effort to improve their productivity will be rewarded more generously than those who do not.

Increased importance of education in pursued era

The fact that workers are on their own and most good jobs in de-industrializing pursued economies are in "knowledge-based sectors" means that the importance of education is far greater in the pursued era than in the golden era. This means any attempt to reduce inequality in the pursued era must start with the provision of equal access to quality education. If it is difficult to ensure equality of income in a pursued era, the least the policy makers can do is to ensure equality of access to quality education.

President Ronald Reagan, in the face of Japanese onslaught, pushed hard to increase return on capital at home by cutting taxes and deregulating the economy. Although such supply-side reforms are necessary in pursued economies, he did the opposite with expenditure on education. As Peter Temin pointed out, this is one of the key reasons why the inequality and social divide have grown so large in the US three decades later[7]. Although President Donald Trump's effort to help manufacturers in the country is laudable, he is also making exactly the same mistake Reagan made in cutting budget on education.

The government in a pursued economy should be increasing resources for education so that everyone who wants to study has access to quality education. As workers are entirely "on their own" in the pursued era, access to quality education is where the battle to contain inequality should be fought.

Inequality and social choice

The above also suggested that there is an economic reason for inequality to increase in a pursued era. But even within the pursued economies, the degree of inequality differs greatly which suggests that policy choices can have an influence on the degree of inequality even if the direction toward a greater inequality cannot be changed. Those policy choices, in turn, have a lot to do with societal choices.

The US is considered one of the most un-equal countries in the developed world, where the top few percent owns a large share of the assets in the country. But when one looks at who is at the very top, they are mostly founders of new companies (Exhibit 13) that literally transformed the way people live and work all around the world. In other words, except for Warren Buffet who made money investing in the stock market, all others became rich because they took the risk and brought something completely new and useful to the world.

[7] Temin, Peter, (2017), *The Vanishing Middle Class: Prejudice and Power in a Dual Society,* Cambridge, MA: MIT Press, p.22 and Chapter 10.

Exhibit 13 Richest persons in the United States

Rank	Name	Industry	Net wealth
1	Jeff Bezos	founder Amazon	$114 B
2	Bill Gates	founder Microsoft	$106 B
3	Warren Buffett	Berkshire Hathaway	$80.8 B
4	Mark Zuckerberg	founder Facebook	$69.6 B
5	Larry Ellison	founder Oracle	$65 B
6	Larry Page	founder Google	$55.5 B
7	Sergey Brin	co-founder Google	$53.5 B
8	Michael Bloomberg	founder Bloomberg LP	$53.4 B

Source: Forbes, "The Forbes 400: The Definitive Ranking Of The Wealthiest Americans," October 2, 2019, Edited by Luisa Kroll and Kerry A. Dolan, https://www.forbes.com/forbes-400/#45b49a177e2f

There are those further down the list who made money in largely zero-sum finance/real estate investments or through established companies and inheritance. But no other country in the world has the top ranks of the wealthiest people dominated by those with transformative technology. The fact that seven out of eight at the very top are self-made individuals with transformative ideas suggests that the implication of US inequality is different from those of the other countries where the top ranks are mostly filled with more traditional and established types.

This may have a lot to do with the transparency of the US economy where the people (and products) are valued for what they can do, not where they come from. That, in turn, may have a lot to do with the fact that the US is an immigrant society in comparison to traditional societies of Japan and Europe with their attendant baggage. In those traditional societies, someone like Steve Jobs, a college drop out with a humble background, would have faced a far greater resistance to realizing his ideas than in the US.

Another frequently raised inequality issue in the US is the high cost of medical care. This is important because most Americans, who are brought up in the pioneering spirit of self-reliance, really do *not* want to talk about inequality as long as they are earning a living wage and have a dignified life.

Their rugged sense of self-reliance, however, could be shattered overnight with a catastrophic medical bill. Indeed, a huge share of personal bankruptcies filed in the US is due to this cause. Even for those who are lucky enough to be healthy and have good health insurance, the fear that they might lose one or both at any time is undermining their faith in the system.

There is a huge room for improvement in the US medical industry, especially in comparison to those available in Japan and some other countries. For example, an appendicitis operation in the US can easily cost 20,000 dollars when the same operation in Japan can be done with only

3,000 dollars[8]. Although Japanese doctors frequently complain that they are not paid enough, this one-to-seven difference in cost is adding to the sense of inequality and insecurity among many people in the US. In other words, if an average American faced Japanese medical bills, his or her sense of inequality would be far less.

At the same time, it is said that almost all new drugs that are brought to the market in the world today are developed in the US. This is because the US does not impose a cap on drug prices the way it is imposed in very many other countries including Japan. As a result, drug companies can recoup the enormous cost of developing a new drug *only* in the US. This is indeed one of the reasons why the medical cost in the US is so high.

If the US imposed a cap just like the one in Japan, chances are high that the research and development on new drugs will come to a standstill which it almost did when Hillary Clinton tried to devise a national health insurance with a cap on drug prices when her husband was the President of the US. Some would argue that such a stoppage in medical research would be against the interest of humanity.

This American preference on growth and progress instead of on redistribution served the country well during its golden era because its strong manufacturing-led growth improved the life of everybody and reduced inequality, as noted earlier. The question is whether the same trade-off is appropriate in a pursued economy where inequality is destined to rise with highly undesirable social consequences.

It has been reported, for example, that among the young people in the US today, the word socialism does not have the same bad connotation which it had with the earlier generations who fought the cold war. Wall Street Journal for January 17, 2020, for example, wrote "Fifty percent of adults under 38 told the Harris Poll last year that they would 'prefer living in a socialist country'. That outlook recurs in many more surveys and far surpasses figures from even the radical hey days of the '60s and '70s'.[9] [10] This fifty percent is probably feeling that with a huge student loan burden, high housing costs and prohibitive medical bills, the present system is working only for the old and the rich, that the deck is stacked against them.

The continued popularity of leftist politicians such as Bernie Sanders and Elizabeth Warren also reflect this dissatisfaction. This means some re-balancing of priorities in the US are imminent not only because the economy is in a pursued phase but also because the weight of those younger voters will only grow in the future.

Although some shifts in priorities are imminent, those shifts must be in correct direction to be beneficial to the public. This is because the pursued era imposes its own constraints and dynamics on the economy that did not exist during the golden era. In particular, the return on

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[8] Wakakura, Masato, (2006), "Kokusai Hikaku: Nihon-no Iryo-hi ha Yasusugiru (International Comparison: Japan's Medical Costs are too Inexpensive.)," *Voice*, June 2006, Tokyo, PHP Institute, p.159

[9] Ukueberuwa, Mene, (2020), "Boomer Socialism Led to Bernie Sanders," *Wall Street Journal*, January 2020.

[10] https://www.wsj.com/articles/boomer-socialism-led-to-bernie-sandershttps://www.wsj.com/articles/boomer-socialism-led-to-bernie-sanders-11579304307?mod=searchresults&page=2&pos=611579304307?mod=searchresults&page=2&pos=6

capital must be raised so that more investment and jobs are created at home. That means *lower*, not higher taxes on those who are making investment decisions. This is the opposite of the traditional leftist agenda pursued by the above two politicians.

For example, the US was able to win back the high-tech leadership from Japan in the late 80s thanks to the Reaganomics which drastically reduced taxes and deregulated the economy. Those policy changes encouraged those with ideas to try harder, and all those with transformative technology in Exhibit 13 realized their ideas during this period. But the same policy also increased income inequality.

In contrast, the Japanese and Europeans, who shied away from such drastic supply-side reforms, fell behind on the high-tech race and experienced slower job growth and investments. It is indeed ironic that all those young people who are complaining about inequality and espousing socialism are also the most avid users of devises and services pioneered by those who are at the top of the list of richest persons in America.

Right kind of supply side reform needed

Moreover, overzealous effort to correct inequality can have big negative consequence on growth. Japan's inheritance tax, for example, kicks in with a very low deductible and its marginal rate increases to 55 percent very quickly. As a result, there is a huge industry in Japan on how to reduce this tax liability, and many successful business people are wasting their time on such tax-reduction activities instead of using their time on what they do best, i.e., pursue their dreams by expanding their businesses. Some have moved out of Japan altogether.

Forcing people with a track record of success to waste their time renting apartment houses, which anybody can do, or leave the country altogether constitute a huge misallocation of entrepreneurial resources in the country. After all it is these people who create new jobs and industries, not academics or bureaucrats. For Japan, which has one of the lowest rates of new business formation among advanced countries, such a loss of talent is nothing short of suicidal.

The key question, therefore, is that of balance. The policy makers must constantly fine-tune the tax structure so that it will result in most investments at home while securing sufficient tax revenue to maintain necessary government services including education.

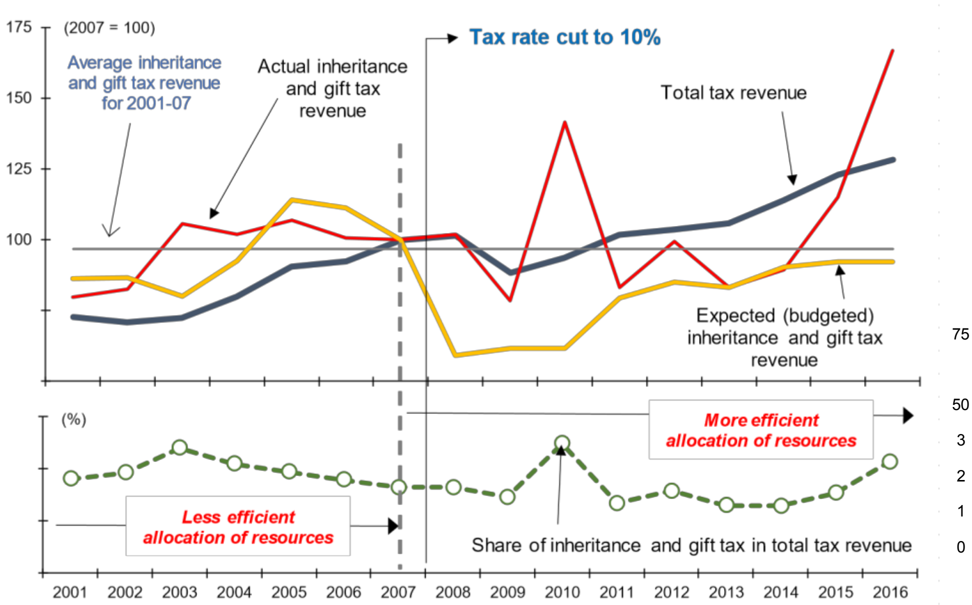
In 2008, the Taiwanese government drastically reduced its tax rate on inheritance and gifts to 10 percent so that Taiwan's pool of entrepreneurial resources will not be wasted on efforts to reduce this tax liability. In doing so the government fully expected the revenue from these taxes to fall and that was reflected in their budget for the following year (Exhibit 14).

The actual tax receipts, however, did not fall at all. This is because many people simply decided to pay the tax so that they don't have to waste time crafting elaborate schemes to minimize the tax liability.

This is an example of supply side reform implemented correctly. It encouraged talented people to concentrate their effort on what they do best while maintaining the tax revenue for those who need help. Although such reforms will increase relative inequality, it will help the economy to grow which should help those who are not so talented.

The policy makers who are concerned about the slowdown in growth and an increase in inequality in pursued economies should be concentrating their efforts in devising such tax structures. They should also explain to the public why the golden era tax regime, which looked fair and worked well when there was a surfeit of attractive domestic investment opportunities, is not necessarily the best for the economies in the pursued era, when a conscious effort is needed to encourage businesses to increase investment at home.

Exhibit 14 Taiwan's inheritance and gift tax cuts enhanced efficiency of resource allocation, and tax revenues did not fall



Source: Nomura research Institute, based on the data from Ministry of Finance R. O. C.

Real source of Thomas Piketty's inequality

The analysis presented here contradicts one of the key historical points Piketty makes. Namely, he claims that the extreme inequality that existed prior to World War I was corrected by the wealth destruction of two world wars and the Great Depression. He then goes on to argue that the retreat of progressive taxation in the developed world starting in the late 1970s ended up creating a level of inequality that approaches that seen prior to World War I.

Although he has ample data to back his assertions, his pre-World War I results may also be due to the fact that those industrializing countries were all in the pre-LTP urbanization era, which is characterized by a rapid increase in inequality. His post-World War I findings may also be attributable to the West's entering the post-LTP golden era where a rapidly expanding manufacturing sector allowed everyone to enjoy the fruits of economic growth accompanied by shrinking inequality. Piketty attributes this to the destruction of wealth brought about by two world wars and the introduction of progressive income taxes, but this period was also characterized by an end to rapid urbanization in most of these countries. For Western economies, the four decades through 1970 was their golden era as their manufacturers were ahead of everyone else and were being chased by no one.

Finally, Piketty's post-1970 results may be due to the fact that Western economies entered their pursued era as Japan and other countries began chasing them. For Western capitalists able to utilize Asian manufacturing resources, this was a golden money-making opportunity.
But it was not a welcome development for a large number of Western factory workers who had to compete with competitively priced imports.

This also suggests that the favorable income distributions observed by Piketty in the West before 1970 and in Japan until 1990 were *transitory* phenomena. These countries enjoyed growing incomes and shrinking inequality not because they had the right kind of tax regime but because they were in a golden era when manufacturing prospered. And manufacturing prospered because the global economic environment was one in which these countries were either ahead of everyone else or chasing others but were not being pursued, i.e., the return on capital was the highest at home.

Just because such a desirable state of affairs was observed once does not mean it can be maintained or replicated. Any attempt to preserve that equality in the face of fierce international competition would have required massive and continuous investment in both human and physical capital combined with trade protectionism, something that most countries are not ready to implement.

It is not even certain whether such investments constitute the best use of resources, since businesses may still find that the return on capital is higher elsewhere. To the extent that businesses are under pressure from shareholders to invest in countries offering the highest returns, forcing them to invest at home is no easy task.

Conclusion

In a pursued economy which is characterized by a paucity of domestic investment opportunities, the government must implement a two-pronged approach to address the challenges of slow growth and increased inequality. First, the government must push for supply-side reforms to increase return on capital at home in order to encourage businesses to invest more at home. Even though such business-friendly measures may increase the sense of inequality among some groups, they are needed in the pursued era to accelerate growth and create jobs.

Second, because workers in a pursued era are largely on their own, the government should help them improve their skills by providing affordable access to quality education. Furthermore, because good jobs in a de-industrializing pursued era are likely to be in knowledge-intensive sectors where the level of educational attainment matters a lot, the government should push for improved access to education at all levels. This is where the battle to contain inequality should be fought in a pursued economy. And for the US, a more affordable healthcare system would be of great help in reducing the sense of vulnerability and inequality felt by a large part of the society. Perhaps the recent disaster with the COVID-19 pandemic will finally push the country to address this long-overdue issue.

Unfortunately, there has been virtually no macroeconomic theories or models that address the policy implications of capital earning higher returns abroad than at home, and very little of the policy debate in advanced countries is couched in these terms. On the contrary, economist's continued emphasis on the efficacy of monetary policy and disdain for fiscal policy are all based on the assumption that the economy is still in a golden era where the private sector is faced with a surfeit of attractive domestic investment opportunities.

In the golden era, the choice between supply side reforms such as tax cut and increased expenditures on social programs such as education was a matter of preference. In the present pursued era, when businesses are hard pressed to find attractive domestic investment opportunities and inequality is increasing amid slow growth, both supply-side reforms *and* increased expenditure on education are needed to hold the country together.

Since the former requires a lower tax rates while the latter requires higher tax revenue, a carefully calibrated tax structure is needed to achieve both. All of this suggests that economic management in the pursued era is far more demanding than in the golden era. Although many people are still longing for the return of the golden era while others are espousing socialism, none of them will be able to improve people's lives until they recognize the reality of the pursued economies in a global context.

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