

A TAX SYSTEM THAT DOES NOT TRUST THE PRODUCTIVE POWER OF THE PEOPLE

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Abstract

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The global economy grew by 2.8 times from 1997 to 2019. Meanwhile, Japan's economy grew by only 15%. Even heavily sanctioned countries such as North Korea, Venezuela, and Iran, grew by 60%, 75%, and 5.6 times respectively during the same period of time. Even war-torn countries such as Somalia, Libya, and Afghanistan, grew by 26%, 80%, and 6.5 times respectively (United Nations Statistics Division¹). Japan was the second largest economy in the world in 1997. However, Japan's growth rate has been the worst in the world since then. What has happened to the country? Japan's economy began to slow down in the fiscal year (FY) 1990 and reached negative growth from FY 1997. After that, thanks to unprecedented monetary easing and enormous-scale fiscal spending, Japan's nominal gross domestic product (GDP) reached a record high in FY 2016 for the first time in 19 years; however, more easing and more fiscal spending can no longer be expected. Because Japan's tax revenue effectively peaked in FY 1990 and that caused a huge budget deficit and accumulated public debt. And this made the social security system in jeopardy. Japan's strength until the 1980s was neither a coincidence nor a miracle; it was the tax system that supported the economy and public finances well. At that time, there was no consumption tax that levies on sales no matter how the economic condition is, while the income tax which is the fruit of production was highly progressive. The corporate tax rate was also high. This allowed people to compete in a more equal environment, which resulted in higher productivity and consequently higher tax revenue. The tax reform of FY 1989 destroyed Japan's economy. In the face of higher inflation coupled with a weaker yen, another tax reform that goes back to the pre-1989 system is urgently needed. The tax system is the foundation of a country. This paper may give a clue to how to solve your own country's problems as well.

Keywords: Japan's Economy, Tax System, Social Security, Public Debt, Wealth Gap

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¹ <https://unstats.un.org/unsd/snaama/Basic>

1. INTRODUCTION

At a press conference on March 18, 2022, the Bank of Japan (BOJ) announced that it has decided to maintain its long- and short-term interest rate operations (yield curve control), which guide short-term interest rates to -0.1% and the yield on the 10-year Japanese government bonds (JGB), the benchmark for long-term interest rates, to around 0%. It also maintained its asset purchase program to buy up to 12 trillion yen per year in equity exchange-traded funds (ETFs) as needed. In other words, it will continue its ultra-easy monetary policy, which cannot be expected to go any further (Bank of Japan, 2022b).

On the other hand, the BOJ expressed caution about inflation, saying that “future trends require caution” (Bank of Japan, 2022b) because of the significant rise in the price of oil and other resources. At the same time, the Central Bank revised downward its fundamental assessment of the domestic economy and personal consumption in light of the expanding infection of Omicron variant of COVID-19.

In other words, the BOJ expressed concern about stagflation, a situation in which inflation and recession are concurrent.

This means that the BOJ cannot raise interest rates due to the weak economy, although it is unusual for the central bank to continue its ultra-easy monetary policy in the face of global inflation and a weaker yen.

The BOJ’s policy rate has remained below 0.50% since April 1997 and introduced a negative interest rate policy in January 2016.

In addition, as of February 2022, the money supply was 670.5 trillion yen, a 13.3-fold increase from the 50.4 trillion yen in April 1997. Compared to the most recent nominal gross domestic product (GDP) of 538.2 trillion yen in the fiscal year (FY) 2020, this is 1.25 times the nominal GDP. In FY 1997, GDP was 543.5 trillion yen, so the money supply at that time was only 9.3% of the size of the economy (Bank of Japan, 2022a).

This suggests that neither negative interest rates nor money supply had any effect on economic growth. Nor did they have any effect on the escaping of disinflation. However, can that happen?

The reason for the smaller size of the economy cannot be explained by the fact that interest rates have been ultra-low for more than two decades, during which time the money supply has increased more than 13-fold. Rather, it is better to explain that because the ultra-accommodative policies prevented the further decline of the Japanese economy, recovered the housing prices, and made stock prices rise to this level.

It is the tax system since FY 1989 that has left the Japanese economy devastated.

Japan’s social security system is on the verge of collapse. The main reason is that the average tax revenue from FY 2011 to FY 2020 is 53.4 trillion yen per year, while the average expenditure is 107 trillion yen per year (Ministry of Finance, 2020a).

Japan’s tax revenue has so far exceeded 60 trillion yen only three times: 60.1 trillion yen in FY 1990, 60.4 trillion yen in FY 2018, and 60.8 trillion yen in FY 2020.

Sixty trillion one hundred billion yen was achieved by the old tax system, 60.4 trillion yen was

achieved by BOJ’s unprecedented easing and 60.8 trillion yen was achieved by the super-large budget after the COVID-19 pandemic. The latter two would not be expected to continue.

If tax revenues will not exceed 60 trillion yen, how can we pay over 24 trillion yen for government bond expenditures and over 36 trillion yen for social security expenditures? These two alone have already reached 60 trillion yen. And they will inevitably continue to increase.

The only option for reviving Japan’s economy and securing the social security system must be to go back to the old tax system.

Although there may be many other reasons behind the rise and fall of Japan, the possible most important single factor of them will be focused on here. In this paper, Japan’s tax system is to be discussed as the main reason for its economic and fiscal disruption by analyzing graphs of data provided by the government and international organizations.

Moreover, the consumption tax not only stopped Japan’s economic growth but also the growth of tax revenue of Japan.

This paper consists of 13 sections, including the introduction. The rest of the paper is structured as follows. Sections 2 and 3 explain how Japan’s 1989 tax reform not only halted economic growth but also reduced tax revenues, examining GDP data and the trend of the breakdown of tax revenues. Sections 4 and 5 describe the problems with Japan’s monetary policy, examining money supply and JGB yield curves. Sections 6, 7 and 8 explain how the introduction of the consumption tax led to recession, lower tax revenues, and disinflation, which in turn increased government debt and widened the gap between the rich and the poor. Sections 9 through 12 compare Japan’s tax revenue structure with that of Denmark, which has one of the world’s highest consumption tax rates and discuss the possibility that a tax system that believes in the productive capacity of the people will lead to economic development and a stable social security system. Section 13 concludes the paper.

2. TAX SYSTEM OF JAPAN

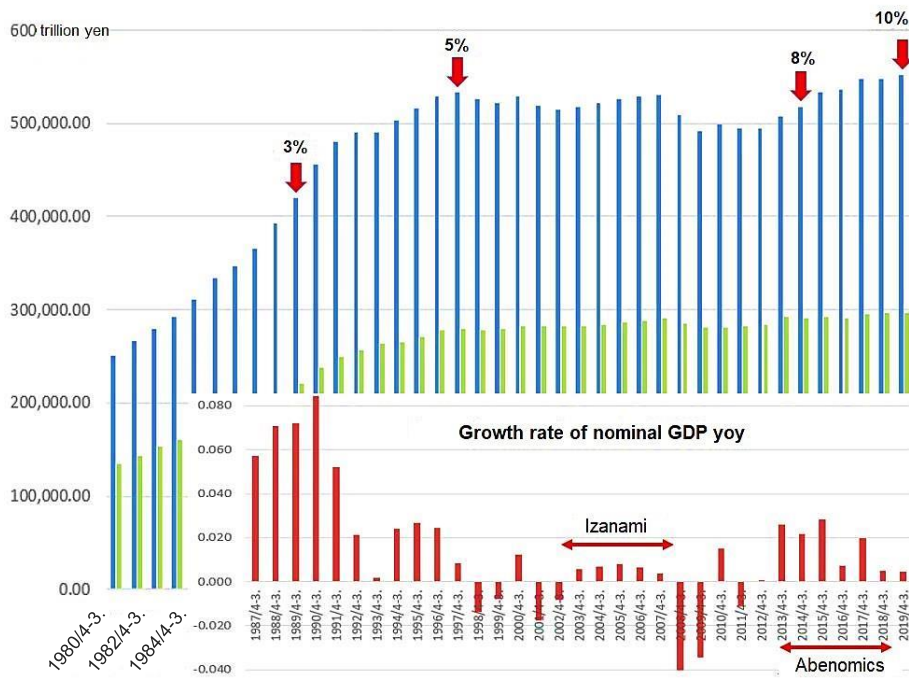
Japan’s economy first peaked in FY 1997. In Figure 1 below, the longer bars show the trend in nominal Japan’s GDP from FY 1980 to FY 2019. The shorter bars behind the inserted chart are personal consumption, the largest component of Japan’s GDP.

We see Japan’s nominal GDP (the size of the economy) in yen because the GDP in US dollars is affected by the exchange rate, although it is easier to compare Japan with other countries, as in the data from the United Nations Statistics Division described in Figure 2 below. And the real GDP is affected by the inflation rate.

Bars in the inserted chart of Figure 1 are showing the year-on-year growth rate of nominal GDP since FY 1987 overlaid on the nominal GDP trends from FY 1980 to FY 2019.

Abenomics lasted 71 months (from December 2012 to October 2018), just two months shy of the 73 months of the “Izanami boom” (from February 2002 to February 2008), which was considered the longest post-war expansion.

Figure 1. Trends in nominal GDP and growth rate and consumption tax rate



Source: Compiled data from the Cabinet Office (n.d.).

This shows that even during periods of economic contraction, personal consumption has been stable, and taxing it here would provide a stable source of revenue.

On the other hand, the fact that the government has uniformly imposed taxes even during periods of economic slowdown suggests that it has become a burden on households and business activity. Therefore, the possibility that this has prolonged the economic slowdown cannot be ruled out.

Japan's nominal GDP began to slow down in FY 1990; the year after the consumption tax was introduced, and began to decline in FY 1997, the year the tax rate was raised to 5%. And

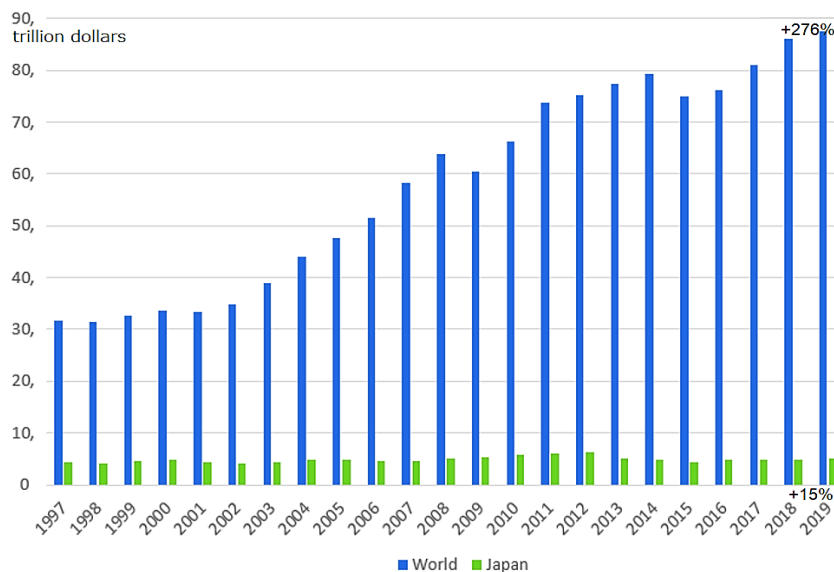
the economic scale of 542.5 trillion yen in FY 1997 became the peak for the next 19 years. It was topped in FY 2016, when the calculation method was revised and added 30 trillion yen to the figure, bringing the total to 544.8 trillion yen.

Figure 1 shows that 3% of the consumption tax slowed the economic growth that had been one of the fastest in the world until then, and 5% of it stopped the growth perfectly.

Figure 2 shows the nominal GDP in dollars for Japan and the world from 1997 to 2019. During this period, the world grew by 276%, while Japan grew by only 15%.

As a result, Japan's share of the world economy which was 14.1% in 1997 fell to 5.9% in 2019.

Figure 2. Trends in nominal GDP in Japan and the world



Source: United Nations Statistics Division (<https://unstats.un.org/unsd/snaama/Basic>).

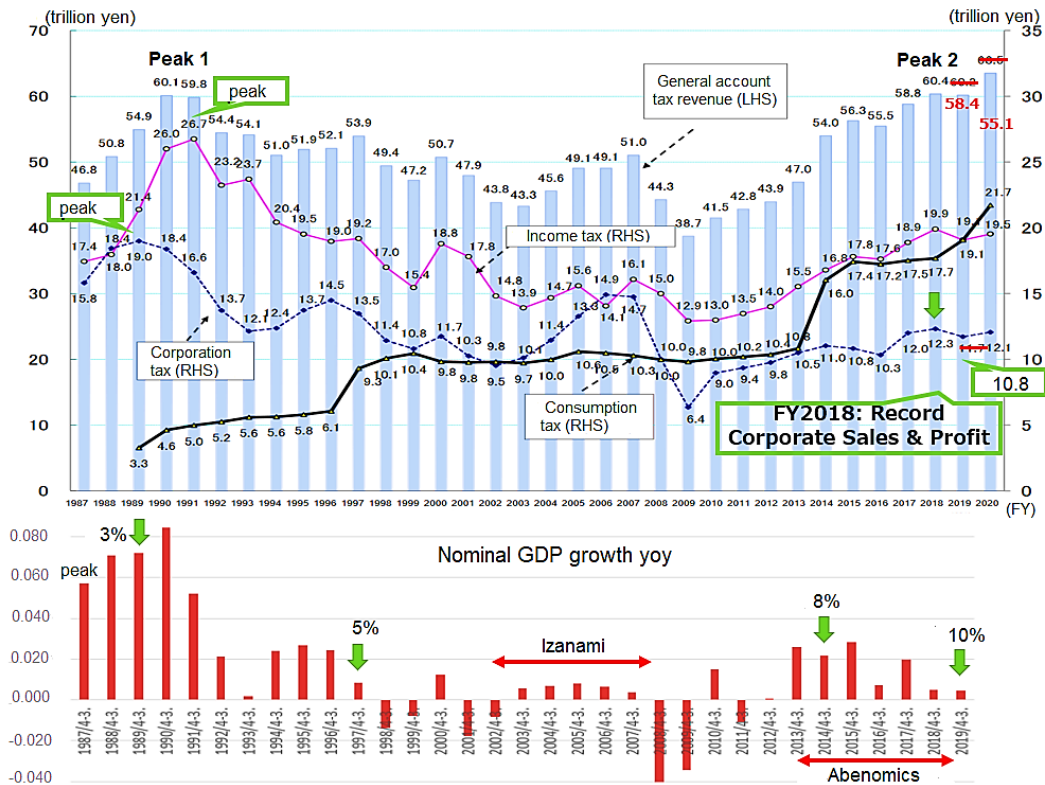
3. TAX SYSTEM THAT IS UNLIKELY TO INCREASE TAX REVENUE

The tax system is the foundation of a country. Although Japan has introduced the consumption tax and has continued to raise the tax rate, a decline in tax revenue has been seen. Why is that? The answer may be found by looking at the breakdown of tax revenue and the economic growth rate in Figure 3.

From the upper part of Figure 3, the trends in the breakdown of Japan's tax revenue since FY 1987 can be seen: total tax revenue (bars), income tax revenue (thin solid line), corporate tax revenue (dotted line), and consumption tax revenue (thick solid line).

The lower part shows the change in nominal GDP over the same period compared to the previous year. The arrows indicate when the consumption tax was introduced and the tax rate.

Figure 3. Tax revenue and nominal GDP growth



Notes: FY 1987-FY 2018: Settled figures. FY 2019: Based on the supplementary budget. FY 2020: Based on the initial budget. Source: Compiled data from data of the Ministry of Finance (2020a) and the Cabinet Office (n.d.).

In the same year that the consumption tax was introduced, corporate tax revenue peaked and since then has declined to nearly half of it.

Two years after the introduction of the consumption tax, income tax revenue peaked and is now less than two-thirds of what it was.

Because of the sharp decline in these tax revenues, the total tax revenue peaked one year after the introduction of the consumption tax and became the peak for the next 28 years, despite the new revenue source of the consumption tax being added.

The bars in the bottom graph of Figure 3 show the growth of nominal GDP over the previous year. The momentum of the bubble economy was sustained for a while after the introduction of the consumption tax, but it clearly began to slow down after FY 1990.

This was the period when the bubble economy burst, but since tax hikes are also a means of curbing economic overheating; the additional tightening effect of the introduction of the consumption tax could be seen as having successfully killed the economy.

And from FY 1997, when the consumption tax rate was raised to 5%, the Japanese economy experienced negative growth.

The Asian currency crisis occurred during this period. Anyhow for some reason, Japan was the only country that remained stagnant even after the other countries in the region had recovered from the crisis.

The consumption tax revenue is shown as a solid black line. The consumption tax is touted as a "stable source of revenue". As can be seen in Figure 3, it has indeed been a stable source of tax revenue since its introduction and has now become the largest source of revenue for the Japanese government.

Nevertheless, the meaning of a stable source of revenue indicates that the government has been a major burden on households and businesses by steadily confiscating money from them even as the economy shrank. And it also implies that this has prolonged deflation.

A stable source of revenue also means that tax revenues are stable even during periods of economic

expansion. Even when the economy expands, tax revenue does not increase that much, and only when the tax rate is raised does the consumption tax revenue increase noticeably, as seen in Figure 3.

This also means that even if the economy improves in the future, significant tax revenues cannot be expected.

What Figure 3 clearly shows is that Japan's total tax revenue has declined because income tax revenue and corporate tax revenue have declined in exchange for the consumption tax revenue. The most significant reason for the decline in tax revenue is that the consumption tax leads to economic recession. In other words, the consumption tax has a trade-off relationship with the rate of economic growth.

What is wrong with the consumption tax? The government budget is financed by taxes on the people's activity. The government builds infrastructure, creates an environment where business can be conducted safely, and collects taxes on the share of the wealth created by the people through production. At this time, income tax and

corporate tax are collected according to the results of production.

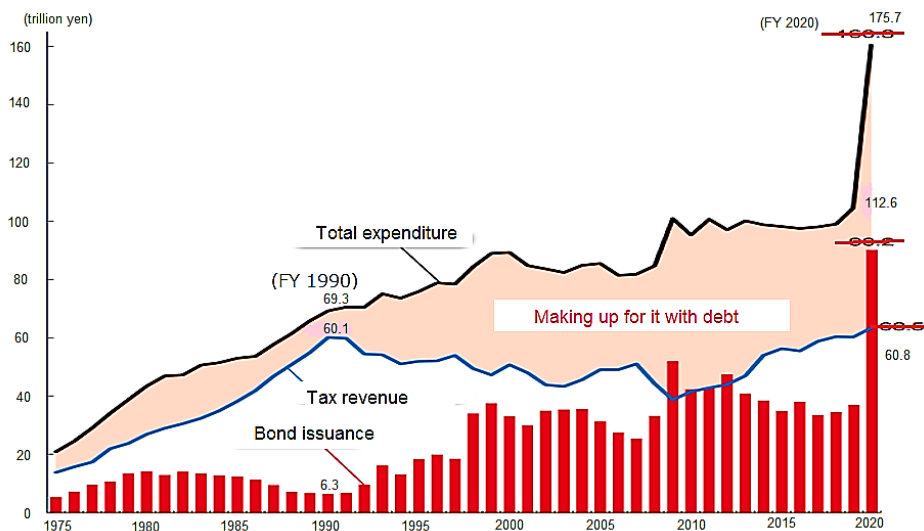
The consumption tax, on the other hand, is like an entry fee-charging 10% on seeds and seedlings for production, instead of waiting for the harvest in the fall. This will cause production to stagnate because some of the sources of the harvest have been taken away, which in turn will reduce tax revenue.

Another factor in the decline in tax revenue is the reduction in the corporate and income tax rates. In fact, at the height of the Abenomics effect in FY 2018, corporate sales and corporate profits were both the largest on record, but corporate tax revenue was 12.3 trillion yen, only 65% of the FY 1989 level, due to the reduction in the corporate tax rate.

As a result, Japan's budget deficit skyrocketed and public debt accumulated to the second largest versus GDP in the world after Venezuela.

Japan's budget deficit has been wider and wider like the jaws of an illustrated crocodile on the web page of the Ministry of Finance below, as the expenditure continuously increases, while the revenue decreases.

Figure 4. Trends in Japan's fiscal balance



Notes: These figures have been revised several times and may be revised in the future, but minor revisions are not important to the big picture and can be ignored as they are within the margin of error. Source: Ministry of Finance (2020b), translated by the author.

Figure 4 shows Japan's budget balance from FY 1975 to FY 2020. The upper line shows the trend of expenditure. The lower line shows tax revenue. The shadow area sandwiched between the two lines is the budget deficit. The bottom bars show the amount of new government bonds issued to finance the deficit, which basically corresponds to the shadow area.

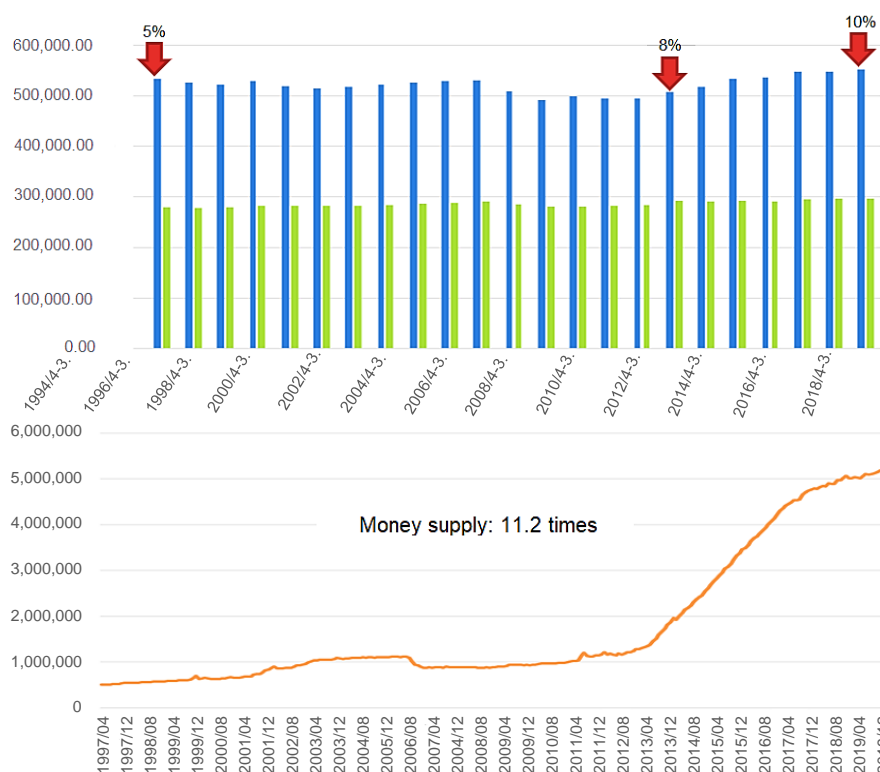
Yet the 63.5 trillion yen in tax revenue has been revised downward to 60.8 trillion yen due to the COVID-19 pandemic and the halt in economic activity to deal with it, while spending has been increased to 175.7 trillion yen in the third supplementary budget to get the halted economy back on its feet. This indicates that the fiscal deficit for FY 2020 will be over 110 trillion yen. In fact, new government bond issuance, which was estimated to

be 90.2 trillion yen, is now expected to be over 112 trillion yen. Since this is supposed to fill the deficit, the deficit is almost twice as large as the tax revenue.

4. MONEY SUPPLY SINCE 1997

Figure 5 shows the relation between the size of the economy and the money supply from FY 1997 to FY 2019. The long bars show the change in nominal GDP, and the short bars show the change in personal consumption. The line chart below shows the Bank of Japan's money supply over the same period. It is clear that the money supply, which was less than 10% of the size of the economy in 1997, has now exceeded the size of the economy.

Figure 5. Trends in the size of the economy and the money supply



Source: Compiled data from data of the Cabinet Office (n.d.) and the Bank of Japan (n.d.a).

When analyzing the relationship between Japan's economy and its tax system, it is not acceptable to bypass the achievements and problems of Abenomics. This is because if Abenomics has been effective for the sake of Japan's economy, then subsequent governments will need to continue it. On the other hand, it has jeopardized Japan's economy, it is necessary to quickly change course.

Abenomics is a series of forbidden economic policies, including the supply of funds that exceed the size of the economy, fiscal financing (the central bank, which is capable of producing currency, buys government bonds, effectively allowing the government to produce its own currency and eliminating the need for fiscal discipline. In Japan, this is against the law, negative interest rate policies, and stock purchases by the central bank. And the consumption tax rate was raised twice from 5% to 10% during the tenure.

The reason why the term "forbidden" is used, is because, in addition to its marginal monetary policies, it has postponed a great deal of risk for future generations by ruining the function of the government bond market, severely undermining the profitability of bank lending operations, increasing the country's credit risk, and making the central bank the largest shareholder of Japanese corporations.

However, even though the economy has reached the peak of 544.8 trillion yen in FY 2016 after 19 years from the previous peak of 542.5 trillion yen in FY 1997, the weakness of the Japanese economy after the hollowing out of the manufacturing industry advanced by globalization and in turn relying on inbound tourism, finally resulted in negative growth when

consumer spending fell due to the increase in the consumption tax rate to 10% in October 2019.

This was followed by a halt in economic activity due to the counter-Corona measures, which resulted in a return to an annualized 506.6 trillion yen in the April-June 2020 period. In other words, from a macroeconomic point of view, the growth rate of Abenomics, which attempted to pre-empt future growth with a series of forbidden measures, resulted in almost zero growth, leaving only the paying bill to the next generation.

At the start of Abenomics in April 2013, when the Bank of Japan Kuroda began its unprecedented monetary easing, the unemployment rate at that time was 4.4% for men and 3.8% for women, for a total of 4.1% for men and women. By August 2020, the rates had fallen to 3.0%, 2.9%, and 3.0%, respectively. This is a great achievement. However, it was still a big step back from the lowest levels of 2.3%, 2.0%, and 2.2% in November 2019, respectively (Ministry of Internal Affairs and Communications, Statistics Bureau, 2022a).

It should be noted that although the unemployment rate declined under Abenomics, the percentage of non-regular employment increased significantly, and both nominal and real wages declined since 1997.

Nevertheless, it is fair to say that both the size of the economy and tax revenues have temporarily reached new peaks. It must be the money supply that contributed the most to this record-breaking. In other words, it was quantitative easing that broke the record by force.

The size of the economy is the amount of money, such as 500 trillion yen, that represents the vital activities of the people, such as production or spending.

When the amount of currency is increased, it can be assumed that the prices of goods and services indicated by the currency, as well as the numerical value of the size of the economy as a result of these transactions, is to also increase, even if only in a pretense.

However, while the volume of currency has increased rapidly, the size of the economy has remained almost flat. Since both graphs of Figure 5 are from zero to 600 trillion yen, the difference appears to stand out as it is without any exaggeration. Normally, the size of the economy should be much larger than it is.

A possible reason is that much of the money may not have been spent. In fact, the short bars showing consumer spending seen in Figure 5 are flat.

It is also known that both households and businesses have been building up their bank deposits and cash reserves.

On the other hand, both nominal and real wages declined means that the households of ordinary workers have not received the currency even though the country as a whole has been filled

with affluent money. Even less has been given to part-time workers.

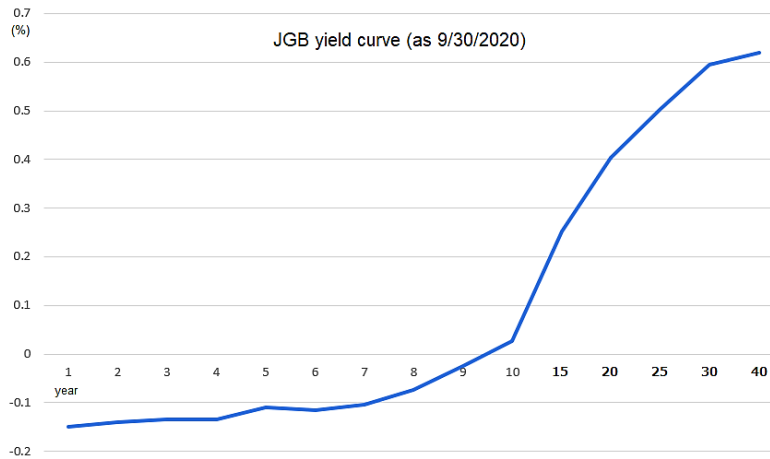
What this suggests is that the gap between the rich and the poor is widening.

5. INTRODUCTION OF NEGATIVE INTEREST RATE POLICY

Figure 6 shows the yield curve of Japanese government bonds (JGBs) as of the end of September 2020. The yield curve connects the yield levels from short-term to long-term, in this case from 1-year to 40-year JGBs. The yield is a percentage of the increase in investment capital, and usually refers to the average yield per year.

For example, if 1-year JGB is bought at the end of September 2020 for 1,001,490 yen at the market price, it will be redeemed one year later at the end of September 2021 for a face per value of 1 million yen, resulting in a yield of minus 0.149%. Figure 6 shows that the yield will be negative from 1-year to 9-year JGBs.

Figure 6. Japanese government bond yield curve



Source: Compiled data from the Ministry of Finance (n.d.c).

The fact that banks have become a structurally depressed industry and the stability of the financial system has been undermined because the policy rate of Japan never stayed above 0.51% since March 1997 becomes more serious after the introduction of the negative interest rate policy in January 2016.

Negative interest rates are like putting the cart before the horse where lenders pay interest rates to borrowers so that borrowers make more money the more they borrow, and lenders lose a lot of money when they lend more. Considering that banks are the leading lenders in the economy, this means that the central bank has introduced a policy of bullying banks.

The policies of Abenomics were in a way meant to encourage people to “take more risks”, but this would have the opposite effect if the returns from the short-term financial instruments market were eliminated.

Short-term financial instruments are a safety net for fund management, and if the returns from these instruments are positive, fund managers can face greater risks. Even if risk-taking fails, the return

from short-term financial instruments will compensate for it.

Back in the days when short-term interest rates offered decent positive yields, there was something called “forbidden T-bill buying” among bond dealers at financial institutions. T-bills are short-term certificates of obligation issued by the Treasury, discount bonds with maturities of 2, 3, 6, or 12 months. Discount bonds are issued at a discount and redeemed at face value, with no interest payments, and the trading profit becomes the yield.

For the sake of clarity, let us use a 1-year T-bill as an example. Suppose the yield is 2%, the T-bill is issued at 98 yen and redeemed at 100 yen. Whoever buys it will make a profit of 2 yen. In other words, it has nothing to do with the trading skills of the dealer, but if he buys a T-bill with a face value of 100 billion yen for 98 billion yen, he will make a capital gain of 2 billion yen with almost no risk (since it is the risk of his own government, it is considered risk-free). And that 2 billion yen will act as a safety net for risk-taking.

As a dealer, the author used to deal huge amounts of money for a large company, and being a

large company was a safety net for me. In such an environment, where failure would lead to the collapse of the company and the loss of many people's jobs, people with normal sense would be reluctant to take risks.

Figure 6 shows that the Japanese government bond market has no choice but to take a 10-year or longer time horizon risk if you want a positive yield. And when you look back at what happened in the world and what happened in Japan in the decade between 2010 and 2020, you will see that that is an extraordinary risk.

Since the introduction of the consumption tax in 1989, the risk has been about 30 years. When you invest 100 million yen for 30 years now, the return will be only 595,000 yen per year.

6. CONSUMPTION TAX HIKES HAVE LED TO DISINFLATION

Figure 7 shows the trend of the consumer price index of Japan from 1980 to 2019 with the timing of hikes and the rates of the consumption tax and lined up with the trend of the policy rate since 1980.

In the lower part of the figure, when interest rates fall sufficiently, the prices in the upper part of the chart begin to show an upward trend, but when there is a consumption tax hike at the point where they are raised, it can be seen that they begin to fall again.

Figure 7. Trends in the consumer price index and the BOJ policy rate



Source: Compiled data from Dashboard Statistics (n.d.) and Bank of Japan (n.d.b).

Of these five peaks in prices, the peak around 2008 is thought to be the impact of the Lehman shock. The consumption tax hike seems to have an impact comparable to that of the Lehman shock.

The trend of the policy rate since March 1997, seen in the lower part of Figure 7, shows that the policy rate had been sticking to the ring of almost zero interest rates (0% to 0.5%) in order to somehow raise consumer prices, but was finally forced out of the ring and fell into negative territory when the tax was raised to 8%.

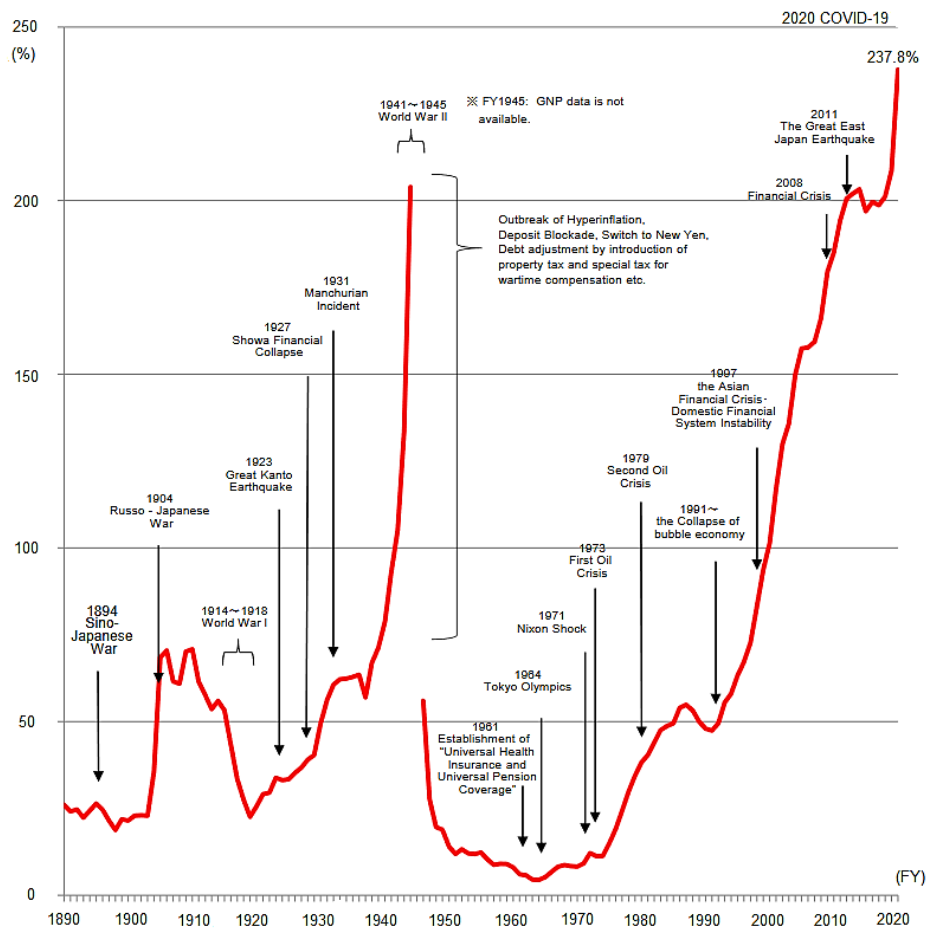
This also illustrates a key challenge facing Japan's next generation. Monetary easing is no longer an option. Japan's future monetary policy will be neutral at best, with virtually no other option but to tighten.

What is likely to happen with tighter monetary policy is disinflation, recession, higher loan interest burden including JGB interest payment costs, and plummeting bond prices. This means that Japan's monetary policy is checkmated for a chess game and already has no way out.

7. BALLOONING PUBLIC DEBT

Figure 8 shows the ratio of Japan's outstanding public debt to GDP from FY 1890 to FY 2020 on the Ministry of Finance's website (<https://www.mof.go.jp/>). They have written down the events that are supposed to have a significant impact on the outstanding debt.

Figure 8. The scale of outstanding debt is unprecedented



Source: Ministry of Finance (2021b).

GDP was relatively small before the Second World War, but even so, the outstanding public debt was far below GDP even during the Sino-Japanese War, Russo-Japanese War, Showa Financial Depression, and Manchurian Incident.

In the Second World War, it skyrocketed to over 200% of GDP and eventually led to the denomination of currency devaluation.

Even after the war, there was the Nixon shock that led to the shift to a floating exchange rate system for currencies, and the oil shock, but until the bubble period, the debt was capped at just over 50% of GDP. However, as mentioned above, with tax revenues peaking in 1990, there has been virtually no way to prevent the expansion of debt.

Figure 8 shows that the angle of increase becomes sharper from around 1990.

In other words, after 1989, Japan became a completely different country. Unfortunately, the government continued to hike the consumption tax as if it were the only thing on its mind, even

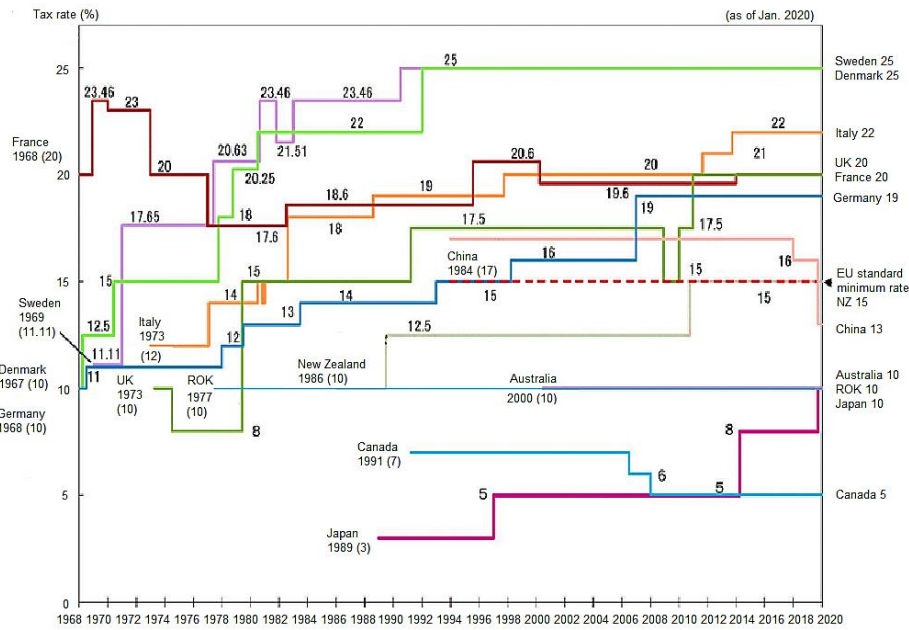
though it was unable to revive the economy or increase tax revenue.

The rightmost figure is for 2020, but it is actually the one of a couple of years ago, and even then, the angle has already become even steeper, on par with the angle on the eve of the Second World War. And, there is no prospect of paying off this debt with the current tax system.

8. THE WIDENING WEALTH GAP CAN BE STOPPED

Figure 9 shows the evolution of the consumption tax (value-added tax) rates since each country introduced it. This shows that the EU has set a standard tax rate, with a lower limit of 15%. The consumption tax was not in place anywhere before 1966, and if France is excluded, which has had a high tax rate of 20% since its introduction, it can be seen that in many countries the tax rate has been rising since its introduction there.

Figure 9. Trends in standard VAT rates in various countries



Source: Ministry of Finance (n.d.b), translated by the author.

Closing the gap between the rich and the poor may be difficult. Because in addition to the traditional inequalities in educational opportunities, recent years have seen platform companies monopolize, control, use, and sell customer information, and dominate financial, delivery, and retail price competition. In addition, the increase in non-regular employment and the tendency of corporate income distribution to favor managers have also contributed to the fixation on inequality.

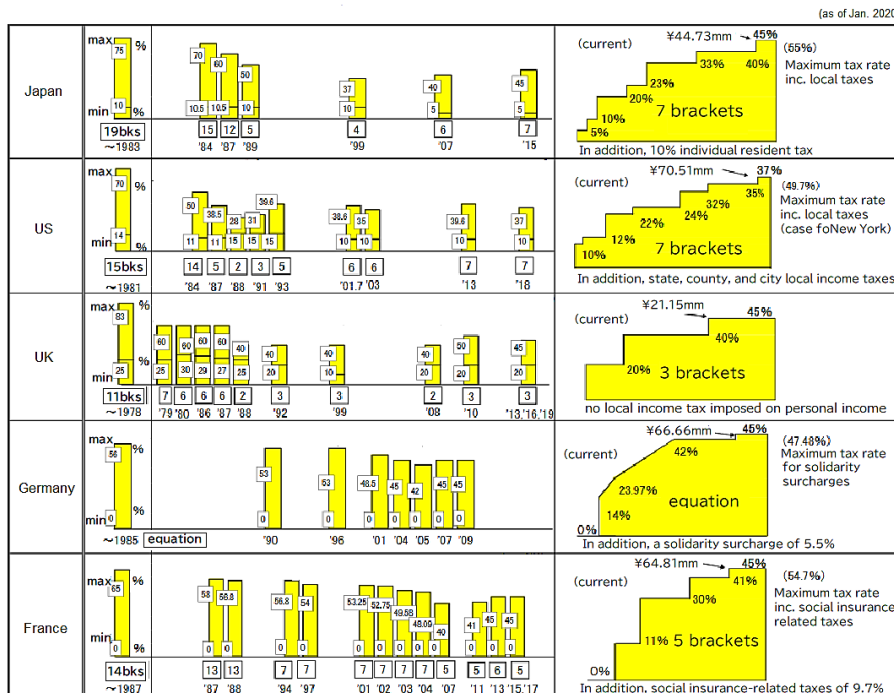
But improvement is easy. Since the global consumption tax hike (Figure 9), income tax cut (Figure 10) and corporate tax cut (Figure 11) have

contributed to the widening gap between the rich and the poor, the trend can be reversed.

Figure 9 shows that the history of consumption taxes, including value-added tax, is not very old; it was introduced in European countries around 1967. What this shows is that Japan's tax rate is still on the low side. Seeing this, the advocates of higher taxes in Japan have been calling for raising the consumption tax rate to the level of other countries, but no country has ever stopped economic growth as Japan has.

The possible explanation of this will be discussed in the following sections.

Figure 10. Trends in income tax rates in major countries



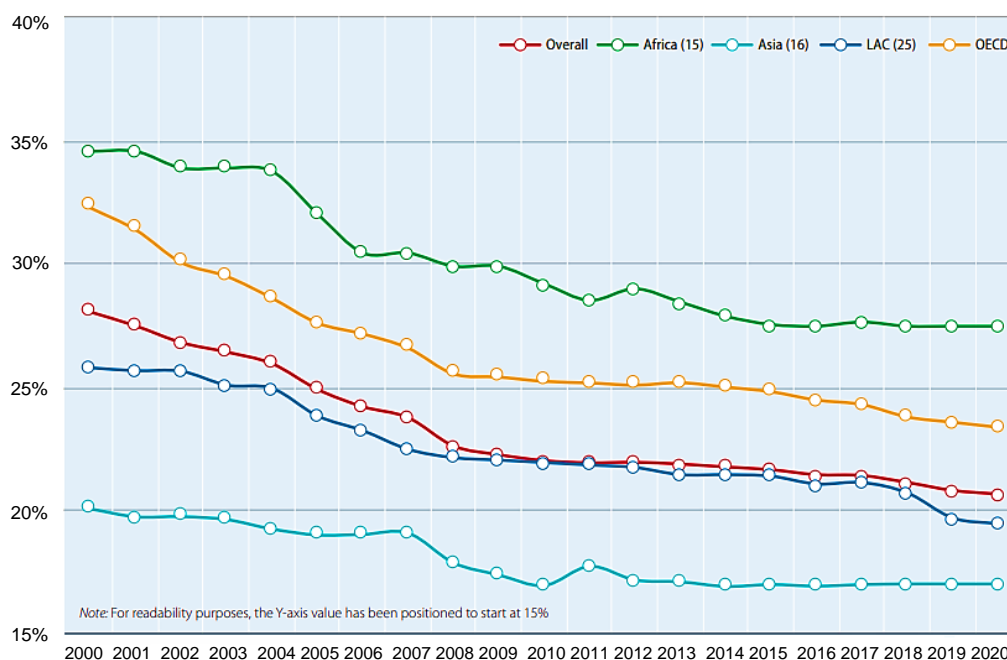
Source: Ministry of Finance (n.d.a), translated by the author.

Figure 10 shows the income tax rates of the G5 countries from around 1980 to the present. From top to bottom, Japan, the United States, the United Kingdom, Germany, and France.

While the trends in consumption tax rates around the world seen in the previous Figure 9 generally rose steadily, the trends in income tax rates in major countries seen on the left side of Figure 10 have generally fallen steadily.

This suggests that these major countries have tried to secure financial resources to cut taxes on high-income earners by raising consumption tax rates, which are considered harsh on low-income earners. In other words, each country has adopted a tax system that leads to the widening of the gap between the rich and the poor.

Figure 11. Average statutory corporate tax rates by geographic region around the world



Source: OECD (2020).

Figure 11 shows the statutory average corporate tax rate by region in the world from 2000 to 2020. The top line shows the average corporate tax rate for African countries, the second for Latin America, the third for Organisation for Economic Co-operation and Development (OECD), the fourth for the world as a whole, and the bottom line for Asian countries. Incidentally, of the 38 OECD countries, Hungary now has the lowest corporate tax rate at 9%, followed by Ireland at 12.5%.

This shows that the decline in corporate tax rates has been a global phenomenon.

What did globalization mean for Japan? In the 1980s, Japanese companies boasted that they were the most competitive in the world. The trade surplus was so huge that the US pointed to it as a problem. What was being said at the time was that there was nothing in the world that could compete with products developed for the discerning Japanese consumer.

However, while many countries have grown by taking advantage of Japan's technology, Japan's domestic industry has been hollowed out, and economic growth stopped after FY 1997. As domestic consumption stagnated, Japan began to rely on overseas consumers for inbound tourism and hoped for special economic zones. If the cause of the stagnation is the strong yen, it is not logical to rely on inbound consumption, which is meant to

force people to buy more expensive Japanese products.

Nevertheless, the biggest impediment may be the consumption tax because the consumption tax is something like an entry fee-charging 10% on seeds and seedlings for production, instead of waiting for the harvest in the fall. On the other hand, income tax and corporate tax levy on profits of the harvest which are the result of the production.

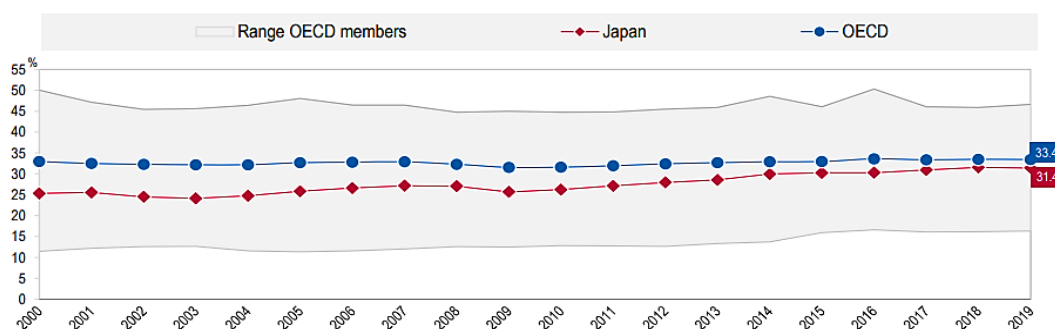
The consumption tax has caused production to stagnate because some of the sources of the harvest had been taken away, which in turn has reduced tax revenue as well.

So let us try to gain some insight by comparing Japan's tax revenue structure with that of Denmark, which has the highest consumption tax rates in the world.

9. TAX REVENUE TREND OF JAPAN

Figure 12a shows the ratio of tax revenue to GDP for OECD countries from 2000 to 2019. The blue line is the average of the 38 OECD countries, and the red line is for Japan. Japan's tax revenue as a percentage of GDP has been consistently low, but as of 2019, it has risen to 31.4%. However, the average for the 38 OECD countries is 33.4%, which means it is still relatively low.

Figure 12a. Japan's tax revenue trends and tax revenue of other countries



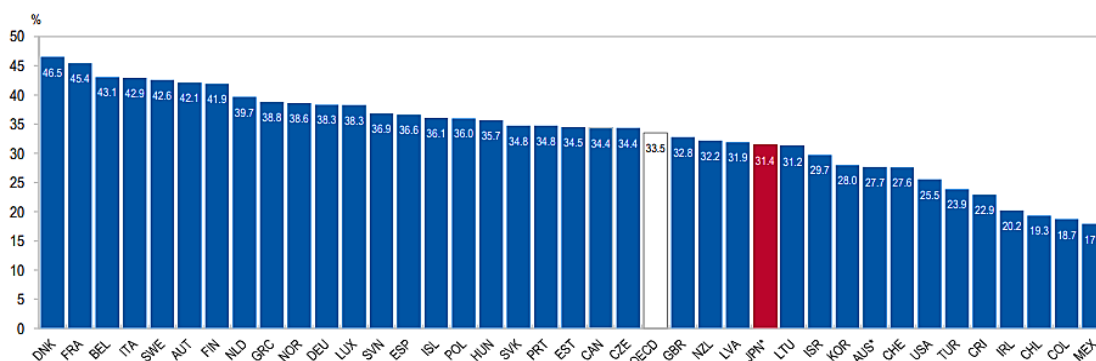
Notes: The OECD's annual revenue statistics report found that the tax-to-GDP ratio in Japan decreased by 0.1 percentage points from 31.6% in 2018 to 31.4% in 2019. The corresponding figures for the OECD average were a decrease of 0.1 percentage points from 33.5% to 33.4% over the same period. The tax-to-GDP ratio in Japan has increased from 25.3% in 2000 to 31.4% in 2019. Over the same period, the OECD average in 2019 was slightly above that in 2000 (33.4% compared with 32.9%). During that period the highest tax-to-GDP ratio in Japan was 31.6% in 2018, with the lowest being 24.1% in 2003.

Source: OECD (2021a).

Figure 12b shows a country-by-country comparison of tax revenues as a percentage of GDP in 2020 for 38 OECD countries. Only Japan and

Australia have figures for 2019, and Japan is indicated as the red bar. This shows that Japan is ranked 26th.

Figure 12b. Japan's tax revenue and tax revenue of other OECD countries



Notes: The figure above shows tax-to-GDP ratios for 2020. As Japan is unable to provide 2020 data, the latest available data from 2019 has been used. Japan's 2019 tax-to-GDP ratio ranked in 26th out of 38 OECD countries in terms of the tax-to-GDP ratio compared with the 2020 figures. In 2019 Japan had tax-to-GDP ratio of 31.4%, compared with the OECD average of 33.5% in 2020 and 33.4% in 2019.

* Australia and Japan are unable to provide 2020 data, therefore their latest 2019 data are presented with this country note. The differences between tax-to-GDP ratios shown may not sum correctly due to rounding. In the OECD classification the term "taxes" is confined to compulsory unrequited payments to general government or to a supranational authority. Taxes are unrequited in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments.

Source: OECD (2021a).

10. TAX REVENUE STRUCTURE OF JAPAN

The tax system of Japan has stopped its economic growth as well as the growth of tax revenue. In other words, it made the country weaker. Now, let us look at the tax revenue structure of Japan.

Figure 13 compares Japan's tax revenue sources in 2019 with the OECD average for similar tax revenue sources. The dark bars of each pair are those of Japan. The light bars are those of the OECD average. Japan does not have payroll taxes and others.

It is important to note that Japan's largest source of tax revenue is social security contributions, which account for 41% of tax receipts in the broad sense.

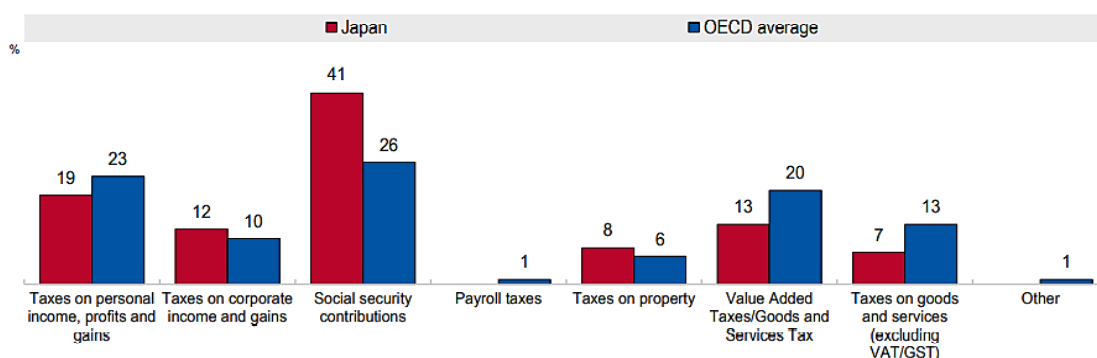
Social security is a generic term for medical insurance, pension insurance, nursing care

insurance, worker's compensation insurance, and unemployment insurance. In other words, Japan's consumption tax, which is supposed to be a source of funding for social security, is positioned as a supplementary source of revenue.

What we can learn from Figure 13 is that when 41% of social insurance premium revenue, 20% of the consumption tax revenue, and 8% of property tax revenue are combined, nearly 70% of Japan's tax revenue is collected like a stable source of revenue with little fluctuation due to the economy.

However, stable revenue sources carry a greater risk of prolonging the recession by collecting taxes without mercy even when the economy is bad. On the contrary, even when the economy is good, there is no significant upside.

Figure 13. Tax revenue structure of Japan, compared to the OECD average, 2019



Notes: Relative to the OECD average, the tax structure in Japan is characterised by:

- Substantially higher revenues from social security contributions and higher revenues from taxes on corporate income and gains and property taxes.
- A lower proportion of revenues from taxes on personal income, profits and gains: value-added taxes; and goods and services taxes (excluding VAT/GST).
- No revenues from payroll taxes.

Source: OECD (2021a).

In addition, when it comes to social security contributions, Japan collects more than 1.5 times as much as the OECD average. This suggests that even if a spending cut is attempted to restore government finances, it will be difficult without addressing the social security system.

However, Japan’s social security system is already on the verge of collapse, and spending cuts are unthinkable. This means that instead of trying to reduce social insurance premium income, it is inevitable to increase tax revenue from income tax and corporate tax that have less risk of recession than those taxes mentioned above.

The reason why these two have less risk of recession is that they levy salaries and profits

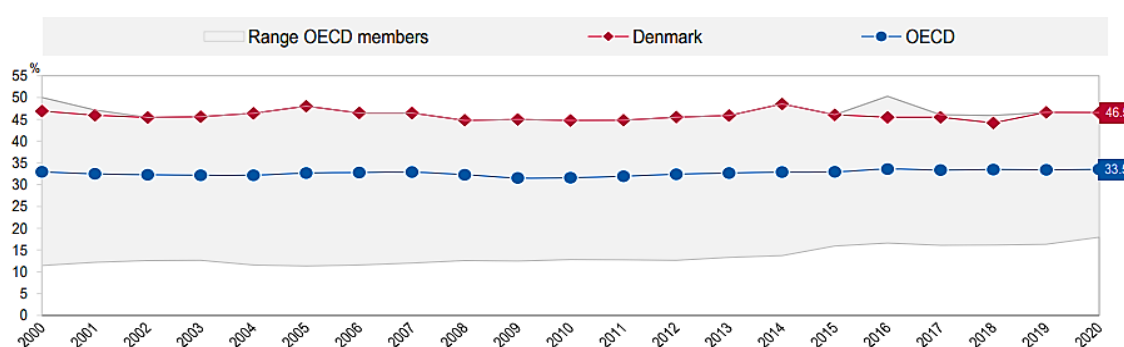
resulting from business operations on a results basis.

Then, what about Denmark, which has the highest consumption tax rate (value-added tax rate) along with Sweden, as seen in Figure 9 above?

11. TAX REVENUE TREND OF DENMARK

Figure 14a shows the tax revenues of OECD countries as a percentage of GDP from 2000 to 2020. The blue line is the average of the 38 OECD countries and the red line is for Denmark. It can be seen that Denmark’s tax revenue as a percentage of GDP has been consistently high.

Figure 14a. Denmark's tax revenue trends and tax revenue of other countries

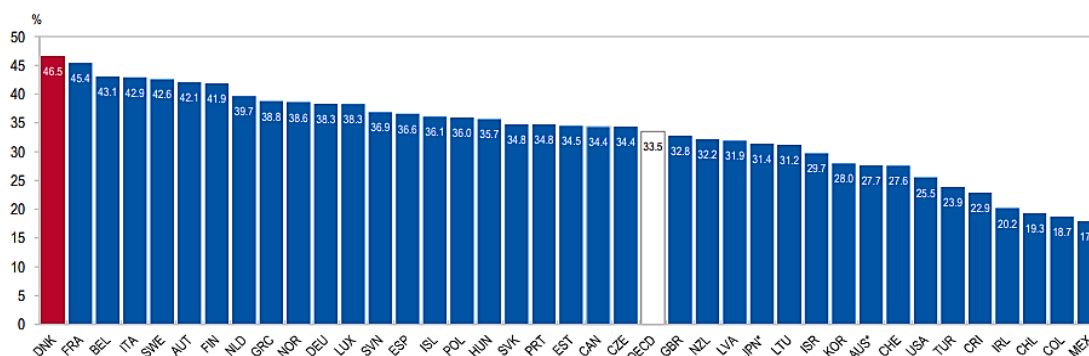


Notes: The OECD’s annual revenue statistics report found that the tax-to GDP ratio in Denmark did not change between 2019 and 2020, remaining at 46.5%. Between 2019 and 2020 the OECD average slightly increased from 33.4% to 33.5%. Since the year 2000, the tax-to-GDP ratio in Denmark has decreased from 46.9% to 46.5%. Over the same period, the OECD average in 2020 was slightly above that in 2000 (33.5% compared with 32.9%). During that period the highest tax-to-GDP ratio in Denmark was 48.5% in 2014, with the lowest being 44.2% in 2018.
Source: OECD (2021b).

Figure 14b shows a country-by-country comparison of tax revenues as a percentage of GDP for 38 OECD countries in 2020. Denmark is indicated as a red bar. This shows that Denmark,

the country with the highest consumption tax rate along with Sweden, had a tax revenue of 46.5% of GDP in 2020, ranking top.

Figure 14b. Denmark's tax revenue and tax revenue of other OECD countries



Notes: Denmark ranked 1st out of 38 OECD countries in terms of the tax-to-GDP ratio in 2020. In 2020, Denmark had a tax-to-GDP ratio of 46.5% compared with the OECD average of 33.5%. In 2019, Denmark was also ranked 1st out of the 38 OECD countries in terms of the tax-to-GDP ratio.

* Australia and Japan are unable to provide provisional 2020 data, therefore their latest 2019 data are presented within this country note. The differences between tax-to-GDP ratios shown may not sum correctly due to rounding. In the OECD classification the term "taxes" is confined to compulsory unrequired payments to general government or to a supranational authority. Taxes are unrequired in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments. Source: OECD (2021b).

According to the basic data of the Kingdom of Denmark on the website of the Ministry of Foreign Affairs of Japan (2022a), the country's economy is as follows:

1. Main industries: Wholesale and retail, pharmaceuticals, livestock, and agriculture, transportation, energy.

2. GDP: 350.9 billion dollars (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a).

3. GDP per capita: 60.692 billion dollars (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a).

4. Economic growth rate: 1.2% (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a).

5. Price inflation rate: 0.7% (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a).

6. Unemployment rate: 5.0% (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a).

7. Total trade value: (1) Exports: 107.9 billion dollars; (2) Imports: 101.4 billion dollars (Statistics Denmark, as cited in Ministry of Foreign Affairs of Japan, 2022a).

8. Main trade goods: (1) Exports: Pharmaceuticals, industrial machinery and its parts, apparel; (2) Imports: Automobiles, petroleum and petroleum products, electrical equipment, and parts

thereof (Statistics Denmark, as cited in Ministry of Foreign Affairs of Japan, 2022a).

9. Major trading partners: (1) Exports: Germany (15.9%), Sweden (9.9%), United States (8.6%), China (4.4%), Japan (1.4%); (2) Imports: Germany (23.0%), Sweden (12.3%), Netherlands (8.5%), China (7.7%), Japan (0.5%) (Statistics Denmark, as cited in Ministry of Foreign Affairs of Japan, 2022a).

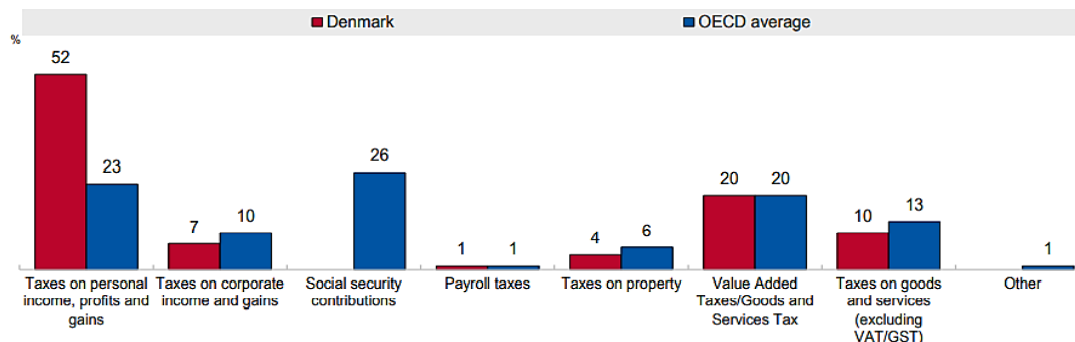
10. Currency: Danish krone.

While Denmark has the highest consumption tax rate in the world, it has a GDP per capita of 60.692 billion dollars (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a.), which is 1.55 times higher than Japan's 39.082 billion dollars (IMF statistics, as cited in Ministry of Foreign Affairs of Japan, 2022a). In addition, Denmark's economic growth rate for 2019 according to the IMF is 2.35% growth, which is much higher than Japan's 0.67% growth.

12. TAX REVENUE STRUCTURE OF DENMARK

In the tax revenue structure seen in Figure 15, the red bars of each pair are those of Denmark. The blue bars are those of the OECD average.

Figure 15. Tax revenue structure of Denmark



Notes: The structure of tax receipts in Denmark compared with the OECD average is shown. Relative to the OECD average, the tax structure in Denmark is characterized by:

- Substantially higher revenues from taxes on personal income, profits and gains.
- Equal to the OECD average from payroll taxes and value-added taxes.
- A lower proportion of revenues from taxes on corporate income and gains; property taxes; and goods and services taxes (excluding VAT/GST).
- No revenues from social security contributions.

Source: OECD (2021b).

The weight of the consumption tax revenue is on par with the OECD average, but income tax revenue is large. And the social security contribution is zero. Now, about the Danish social security system, which does not collect social insurance premiums, we quote directly from the Danish Embassy page on Facebook, as of April 3, 2017:

"[The relationship between Denmark's generous social security system and its financial resources and burdens].

Denmark's generous social security system, which includes the following, is one of the reasons why Danes feel they are among the happiest countries in the world.

(1) Medical care is free of charge, as well as home nursing care and overseas medical care when necessary. Family members who need to accompany and care for the patient will also receive income protection.

(2) Nursing care and other necessary services are provided free of charge, 24 hours a day, at home. Wheelchairs and other necessary equipment will be provided free of charge.

(3) All citizens are entitled to a basic pension of about 200,000 yen per month.

(4) Child allowance is from 14,000 yen to 22,000 yen per month. Maternity and childcare leave is available for a total of approximately one year.

(5) Education is free up to graduate school. All students receive a monthly benefit of close to 100,000 yen (if living separately from parents).

On the other hand, these generous programs are covered by a heavier tax burden than in Japan.

Income tax is 35-48% on average (less than 10% in Japan), consumption tax is 25% (8% in Japan), and there are no reduced tax rates, including for food. On the other hand, corporate taxes are kept low at 22% in Denmark, compared to about 30% in Japan. The tax system is designed to be neutral to economic activities, with more freedom in the upstream of wealth-generating economic activities.

Furthermore, social security is entirely funded by taxes, and not by an insurance system like in Japan (there is no premium burden for health and nursing care insurance or pension insurance). Therefore, unlike, for example, the national pension insurance premiums, where a fixed amount of money is paid regardless of income, in Denmark all citizens pay their fair share, while social security benefits are equalized so that those who need them can receive the necessary services for free, regardless of wealth. There is no such thing as a "no pension" because you did not have insurance.

A high income tax rate and a consumption tax with no reduction rate may seem regressive (heavy burden on low income earners), but in Japan, part-time and non-regular workers may not be able to get social insurance, whereas in Denmark, since taxes are the source of funds, all necessary people can receive necessary social security services, and as a result, the income redistribution function of social security is the best functioning in the world (the gap between the rich and the poor is small).

In addition, since the same consumption tax rate is applied regardless of the item, the problem of political intervention regarding the items to which the reduced tax rate is applied and the complexity of tax collection calculations are avoided.

To sum up the above, although the burden is high, with a relatively simple burden, everyone can receive the necessary social security equally. For this reason, high welfare and high burden are accepted by the people in Denmark, I guess.

The Danish people may have a strong sense of attachment and patriotism toward their country due to both a sense of security in their lives through such social security and a sense that they are contributing to society by paying taxes" (Embassy of Denmark, 2017, translated by the author).

The point seems to be "in Denmark all citizens pay their fair share, while social security benefits are equalized so that those who need them can receive the necessary services for free, regardless of wealth" (Embassy of Denmark, 2017, translated by the author).

In addition, although the tax burden is considered to be higher as the income tax rate and the consumption tax rate are higher than in Japan, the total stable source of revenue, such as property tax revenue, consumption value-added tax revenue, and consumption tax (excluding value-added tax) revenue, is only 34%, as 4%, 20% and 10% respectively, which is less than half of Japan.

The fact that Denmark's tax system is a retributive rather than a stable source system, which leads to the smallest gap between rich and poor in the world, seems to contribute to its decent economic growth.

Comparing the tax revenue structures of these two countries, Denmark relies on the productive power of its citizens, while Japan relies on a stable source of revenue that it collects even during economic downturns. In other words, the government of Denmark trusts its people much more than the government of Japan does.

The government of Japan, too, used to trust the Japanese people before FY 1988 as far as the tax system is concerned. And the economic growth was also decent.

13. CONCLUSION

There is an economy that was once called the best in the world suddenly turned at some point and has become the worst growing since then. If such a thing could happen to even the best in the world, no economy could avoid a sudden downturn and fall deep into the recession.

It is necessary to find out the reason why such a thing happened in order to avoid following the country with this miserable outcome.

For this reason, this paper is very important for any country and opens a new field for economists for further research, if still not any or few studies.

Japan has changed its tax system since FY 1989. In the same year that the consumption tax was introduced in FY 1989, corporate tax revenue peaked and has declined to nearly half of it since then. Two years after the introduction of the consumption tax, income tax revenue peaked and is now less than two-thirds of what it was. Because of the sharp decline in those tax revenues, the total tax revenue peaked one year after the introduction of the consumption tax, despite the new revenue source of tax being added.

This tax system also created long-term stagnation in Japan's economy. Japan's nominal GDP began to slow down in FY 1990; the year after

the consumption tax was introduced, and began to decline in FY 1997, the year the tax rate was raised to 5%. And when the tax was raised in FY 2014 and FY2018, the Japanese economy also slowed down. Consumer prices and wages declined as well.

Stable sources of revenue such as social insurance premiums and consumption tax, on which Japan relies heavily, are egocentric sources of revenue that want to ensure a certain amount of tax revenue regardless of whether the economy is good or bad.

This also means that while they can provide a certain amount of tax revenue when the economy is bad, they can only provide a certain amount of tax revenue when the economy is good. In this sense, the Japanese government does not trust the capability of the Japanese people to create wealth.

The tax system is the foundation of a country. The data suggest that Japan has to change the tax system that trusts its own people's ability in order to revive its economy. It must be easy. Just go back to the old system when people there were much more equal than in the present.

The only way to save the Japanese economy is to return to the pre-1988 tax system. Because of that tax system, Japan was even called the best economy in the world.

This paper has limitations. There is no theoretical background of this research. The author of this paper, as a former dealer for financial institutions and a money manager, uses directly the primary information sources that can be found on websites. Therefore, it is unknown whether the topic of this paper has been investigated previously in Japan or in other countries.

Besides, the problems of collecting figures and data on the websites are that those links to the websites often change without notice and that those data are frequently revised.

However, these limitations and problems will not reduce the importance of this study. On the contrary, this study may open up a new aspect of the research of the relationship between the tax system and economy for those who have an academic background.

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