Tautological Analysis Pervades Economics

Supplementary Note to *Economics as Applied Mathematics and Political Economy*

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In contemporary economics, where mathematical analysis has come to dominate, model analysis, which simplifies reality so that existing mathematical theorems can be applied and draws certain conclusions from the simplified premises, has become the standard for evaluating researchers' achievements. Finding a problem to which a mathematical theorem can be applied and modeling it, rather than constructing a model based on a factual analysis of the real economy, is a typical example of normative analysis. This is nothing more than a priori idealism.

In mathematical modeling, the emphasis is on logical consistency, but it hardly matters how well the model reflects reality. That is fine for mathematics and logic, but as a social science, it falls short of the mark. However, many mathematical economists who work on applied mathematical analysis are not very interested in real economic society. Mathematical economists who are not interested in society and are absorbed in normative analysis are not social scientists. They have little awareness that they are social scientists. They are applied mathematicians whose research topics include abstract and imaginary "economic" problems. Therefore, it is obvious that the research of such a researcher cannot accurately grasp the real economy and contribute to policy development.

In short, it is not only Marxian economics that has lost the raison d'etre. Non-Marxian economics has also degenerated into a normative model analysis and failed to capture the real economic society. Marxian economics has degenerated into exegetics, while non-Marxian economics has fallen into the trap of normative analysis, and as a result, both have lost the ability to analyze reality. Especially, behind the proliferation of fallacious secular economic arguments in Japan lies the degeneration and deterioration of contemporary economics, which is inherently flawed as a social science. Like Marxian economics, non-Marxian economics cannot analyze and conceive of the real economy and society, making theoretical consideration of historical reality impossible.

In contemporary economics, where normative analysis dominates, there is a repetition of meaningless tautological assertions, not only in model analysis but also in theoretical analysis. They are all based on the elementary fallacy of confusing norms with reality.

Let us cite a few typical examples.

Confusion between Definition and Causality

Among politicians and economists in Japan, an argument exists that consumption should be stimulated even by eliminating the consumption tax (VAT) since consumption expansion boosts GDP. Some academics and politicians are so vocal that they claim that "anyone who cannot understand such a simple relationship is a fool."

The argument that consumption expands GDP is based on the definitional formula that gross domestic product (GDP) equals gross domestic expenditure (GDE). This formula expresses a macro bookkeeping (macroeconomic accounting) balance and is based on the recognition of the fact that production and expenditures are equal ex-post (ex-post consistency relationship). It expresses an ex-post book balance and does not tell us under what economic and social conditions each expenditure factor increases or decreases. The bookkeeping balance represents a definitional relationship and has no further meaning. Therefore, it is nothing more than tautology to claim that if consumption spending increases, then GDP will increase according to a definitional equation, without clarifying the socioeconomic conditions under which sustained consumption will increase.

The mistake in this argument lies in the fact that the definitional equation is read as a causal equation. Without analyzing "under what socioeconomic conditions would consumption increase sustainably," this argument is nothing more than a meaningless tautological assertion. Calling for consumption tax cuts or abolition based on an erroneous argument is not justified as a proper policy. The Japanese *Abenomics* policy during the Prime Minister administration was based on this kind of simple assertion and still has been maintained even after Abe's resignation. The most radical political party "Reiwa" demands the abolition of VAT, and the Communist Party also advocates a consumption tax cut, rushing into populism to compete with the radical Reiwa.

Confusion between bookkeeping balance and real harmonization

This kind of tautological argument is not limited to the GDP debate. At the root of this fallacy is the self-contradiction of economics, which does not (or cannot) clearly distinguish between bookkeeping balance and real economic equilibrium. Bookkeeping balance is the recording of credit-debt relationships on the accounting books, which expresses ex-post consistent relationships (hypothetical equilibrium state). Many economists discuss this ex-post and ex-ante equilibrium without making a clear distinction between the two. A bookkeeping balance based on double-entry bookkeeping is an accounting rule (definition), a rule for recording the results of economic transactions or economic activities. It is simply that someone's debt is recorded on the books as someone's credit. This does not indicate that real transactions or economic activities are in a harmonious state of non-contradiction. Only by analyzing each transaction can one determine what the actual economic activity is like. The booking balances do not mean that the actual economic activities are in harmony. It just means that whether there is a problem with the actual transactions or not, the booking of credits and debts are recorded so that the income and expenditures are equal between economic actors.

Recently, T. Yamamoto, the leader of the "Reiwa", has been arguing that government bond is a debt of the government but also a claim of the people, and therefore, there is nothing wrong with issuing government bonds, even in a huge amount. This argument has been put forward for quite some time as a defense of Abenomics and has been used to defend the massive issuance of government bonds by advocating that "the accumulated debt problem does not exist." Now that Abenomics has collapsed in fact, the radical party leader Yamamoto has finally caught up with this argument. However, this argument is also a tautology that confuses formal accounting rules with reality, and the root of its fallacy lies in confusing bookkeeping balance (ex-post consistency) with the equilibrium of reality.

Government bonds are recorded as liabilities of the issuer and assets of the holder. The fact that double-entry bookkeeping is used does not lead to the conclusion that the issuance of large amounts of BOFs is not a problem. The fact that credits and debts are properly recorded and the impact of debt accumulation on the national economy are completely different issues.

Government bonds are mortgage-backed securities secured by future tax revenues. Therefore, these mortgage-backed securities will not be redeemed unless future tax revenues increase substantially. Similarly, the argument that "there is no problem as long as there is enough national savings to cover the accumulated debt" is also incorrect. This is another argument that defends the huge accumulation of government debt. If the government debt repayment is not fulfilled, the household savings will eventually disappear. This means that the household savings are simply taking the form of collateral of the government debt that has no chance of redemption. Historically, hyperinflation has resulted in the cancellation of the government debt and the cancellation of the people's claims. Who is happy with it?

Confusion between corporate accounting and national economic accounting

What is the basis for economist, Takuro Morinaga's argument that "Japan has no budget deficit" and criticizes the Ministry of Finance for spending restraint measures to improve the fiscal balance as "religious-fiscal fundamentalism." His sole rationale is that the nation's accumulated debt, which exceeds 1,000 trillion yen, can be halved if offset against the nation's total assets of 500 trillion yen. Moreover, if most of the government bonds are held by the Bank of Japan, the real debt is zero, and Japan's finances are extremely sound. Therefore, the "balancing principle" of restraining fiscal spending is a fundamentalist evil. This is a very strange argument. If one were to make such an argument at an international conference, one would be ridiculed.

However, this argument was not discovered by T. Morinaga, but by Yoichi Takahashi who has been famous as an advocate of Abenomics. However, Takahashi does not discover this argument by himself.

Some researchers in the U.S. and Europe have conducted comparative studies that promote the efficient management of public assets by creating balance sheets for each country. The study calculates public assets and compares them with public liabilities (e.g., IMF, *Fiscal Monitor-Managing Public Wealth*, October 2018). This research lacks the reliability of data and does not consider the socioeconomic impact of accumulated debt, and the international organization concerned notes that it is an individual research study. Moreover, these studies are not intended to make the accumulated debt look small, as Takahashi and Morinaga do, but to raise the governance of public assets and call attention to the effective use of public assets.

The study documents calculate rough balance sheets for each country and record Japan's balance sheet as being not in deficit but in the black. Y. Takahashi jumped on the discovery of this research material. Since then, he began to argue that Japan is a country with a budget surplus, not a country with a budget deficit. Morinaga's argument is based on the Takahashi's finding.

The IMF does not use a country's balance sheet as a policy criterion because all fixed assets that can be calculated as national assets (real estate such as government offices, universities, research institutes, and highway and port facilities) are difficult to assess the market value or/and to liquidate for cashing. Except for highly liquid financial claims, few national assets can be cashed in when a debt crisis occurs. Moreover, once the economic crisis worsens, the nation's fixed assets will depreciate endlessly (high volatility). In other words, it is difficult to assess the collateral value of most national assets, and the likelihood of being able to sell them during an economic crisis is infinitesimal. Therefore, the IMF has made its position clear that it will continue to use the ratio of budget deficits and accumulated debt to GDP as a criterion for determining fiscal soundness. Governments are also publishing statistical data in line with this.

Put another way, private companies that have fallen into insolvency can sell their fixed assets and use them to service their debts, but this analogy cannot be applied to government debt servicing. The international wisdom, based on historical experience, is that governments do not sell assets to service their debts. In fact, in economic crises, government debt has never been serviced through the sale of assets (although a scheme like the sale of state assets was used for privatization after the collapse of the socialist system. When state companies were privatized, the method of distributing part of their ownership to the public in the form of coupons or vouchers was used, but without success. Most coupon privatizations were used to embezzle state assets by some political and economic criminal groups.) Without exception, in modern economies, the national debt has been reset by hyperinflation, offsetting the claims (savings) of the people.

Takahashi-Morinaga's argument brought up national assets to trivialize the problem of public debt accumulation and thought they could be offset against the national debt, but this argument is another sophistry that tries to drive away the real economic crisis with a formal bookkeeping balance. Here again, bookkeeping balance (ex-post consistency) and real-world equilibrium are being mingled together.

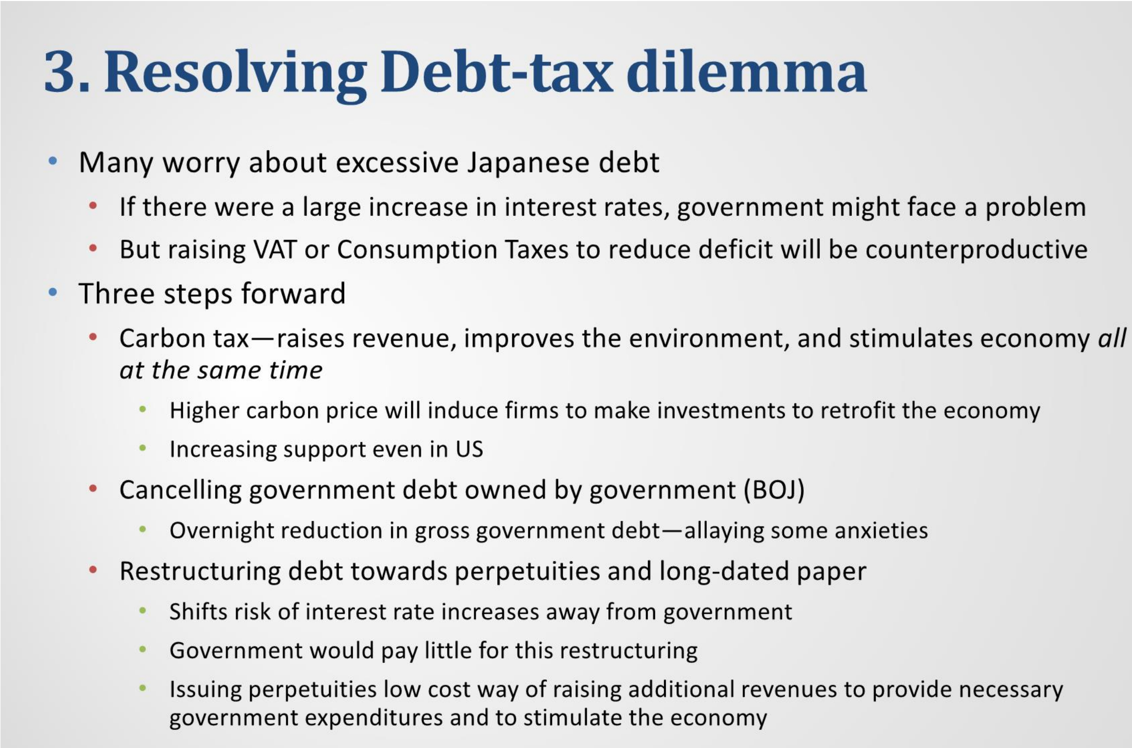
Misunderstanding Relationship between Government and Central Bank: The Fallacy of Stiglitz

Another argument Takahashi-Morinaga relies on is that the JGB assets held by the BOJ are offset by the JGB liabilities of the government. This is the argument that former Prime Minister Abe used to make in his later years when he was on a lecture tour, in which he proudly stated that since the government and the central bank are in a parent-subsidiary relationship if we assume an economic account that integrates the government sectors, the mutual claims and obligations of the government and the BOJ will cancel each other out. This, too, did not come from their original conception.

When Takahashi listened to a somewhat messy lecture when J. Stiglitz was invited to a governmental committee (March 14, 2017), he carefully took note of Stiglitz's sentences that "the government's debt would be offset by the BOJ's assets and the government's debt would be drastically reduced in one stroke. " Stiglitz wrote two sentences in one slide as follows.

Cancelling government debt owned by government（BOJ）

- **Overnight reduction in gross government debt - allaying some anxieties**



Source: J. Stiglitz, *A Transition to Sustainable and Shared Prosperity*, March 14, 2017, Tokyo (A lecture slide page 15).

It is difficult to understand what exactly Stiglitz meant by just two lines of text, but if he meant to suggest that JGBs (credits) held by the BOJ and JGBs (debts) of the government would be canceled, Stiglitz is committing an elementary fallacy. Let us call this elementary fallacy the "Trap of Stiglitz" or "Fallacy of Stiglitz."

This argument is an elementary fallacy that conflates bookkeeping rules with real-world relationships. Believing everything he says just because the speaker is a Nobel Prize-winning scientist only shows their ignorance. JGB assets held by the BOJ do not offset the government's JGB liabilities. This is because JGBs are not a loan instrument between the government and the BOJ. JGBs are government-issued mortgage-backed securities collateralized by the public's future tax revenues, and even if the ownership of the securities changes, their nature as mortgage-backed securities (obligations to the public to be repaid with future tax revenues) remains unchanged. Therefore, they are not securities of a nature that can be offset between the government and the BOJ. If there is an actual offset, it will occur either when the government declares a default on the redemption of the JGBs or when the BOJ disposes of the JGBs as non-performing assets. In either case, if this were to become a reality, the government would be crippled, the Bank of Japan would lose all credibility as an insolvent institution, the yen would plummet, and the national economy would be on the verge of collapse.

The national economic accounting system is constructed in such a way that it cannot be manipulated in favor of the government. The government is the non-financial sector, and the BOJ is the financial sector. The movement of funds in the financial sector is recorded in a way that reflects the supply-demand relationship of funds in the nonfinancial sector. Therefore, they should not be offset as in the case of lending and borrowing between private enterprises. This is a basic principle of national accounting. In particular, the Bank of Japan's inflows and outflows of funds must be recorded to reflect the movement of funds between the government and the private sector and cannot be offset against each other as in the case of settlement relationships between private enterprises (financial and non-financial). It is unacceptable to treat the BOJ as a subsidiary of the government, which sometimes happens in developing countries. Former Prime Minister Shinzo Abe, who thought he could treat BOJ funds as the government wished, is a politician on par with those in developing countries who do not adhere to financial discipline.

The theory and system of national economic accounting is a special field in economics, and there are only a few experts. That is why most university economics departments do not teach the theory and exercise of national economic accounting. It is difficult for those who have never studied the accounting system to understand it, but it is shallow and naive to be happy that "the debt has disappeared" by offsetting what cannot be offset.

In short, the Takahashi-Morinaga argument is a primitive fallacy that confuses corporate accounting with government-central bank accounting and is sophistry based on ignorance.

Blind faith in GDP is the root of illusion (fallacy)

Many people think of GDP as a universal concept for understanding the national economy, but because it is an abstract quantity, there is not much that GDP can tell us about the realities of the economy. The "Blind belief in GDP" as if GDP can tell us everything about the national economy is a misguided way of understanding the economy.

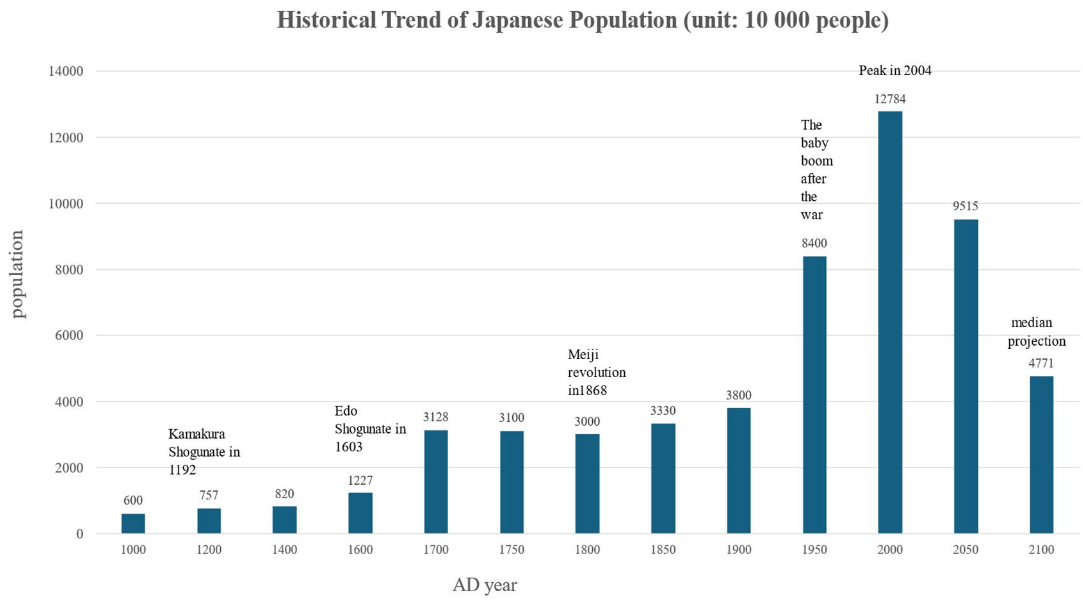
The national accounting system, which captures GDP, is subject to a variety of statistical and imputation (somewhat imaginary) operations, but basically, GDP captures the aggregate value added by corporations (including sole proprietorships) in the social division of labor. The size of value added is determined by the quantity and quality of labor, regardless of the content of labor. Marxian economists sometimes distinguish between productive and unproductive labor, but no such distinction exists in the current system of national accounts (the former Soviet bloc accounted for this separately in their economic accounts). The term "essential worker" was a hot topic during the COVID-19 epidemic, and this argument is like the productive labor-unproductive labor argument of Marxian economics.

As more labor enters the social division of labor, GDP increases. In Japan, the working population has been declining year by year along with the population decline, falling by approximately 10 million in the first two decades of the 2000s. This decline will continue until at least 2100. This is not a phenomenon unique to Japan, but for the first time since Japan became a modern nation, its population has begun to shrink and therefore its economy and society have been shrinking for the first time in these 150 years. From now on, Japanese people will live in a shrinking society, not a growing one for at least following 70-80 years.

However, during the Abe administration, the number of employees increased by 4.3 million and nominal GDP by more than 50 trillion yen despite the drastic decline in the working-age population. Prime Minister Abe boasted the increases as the success of Abenomics. However, a look at the actual increase in employment reveals that the boost in the employees during the Abenomics era was not due to an increase in the employment of young workers but increases in employment of retirees aged 65 and over (up 3 million) and housewives (up 2 million) who were not counted as active employees before. If this is the result of Abenomics, then it is a chilling sign. The increase in the number of employees is merely the result of the hardship of living, and the increase in GDP is merely the result of the increase in the number of active workers, which is not the result of Abenomics, but rather the result of the impoverishment of people's lives.

People tainted by Abenomics believe that GDP can (and should) grow, but if the working population shrinks, GDP will shrink as well. Extension of retirement age, employment of the elderly, and increased employment of housewives will continue for a certain period, resulting in repeated increases or decreases in the number of employees (and therefore repeated slight increases or decreases in GDP). Still, over the long term, the number of employees will decline, and GDP will shrink accordingly.

There is an argument that even if the working population decreases by half, if labor productivity is doubled, GDP will not shrink, but this is merely an arithmetic calculation and says nothing about the structural changes in the real economy and society. The labor shortages that will occur in the real world will have a major impact on the national economy. Japan now stands on the threshold of an era of contraction. Later history will show that the so-called "lost 20 years" or the "lost 30 years" which mentions a long-time stagnation early in the 21st century in Japan was a transitional period when Japan went from an era of growth to an era of contraction. Abenomics will be recorded as a policy failure that, instead of dealing with such historical changes, was stuck in the old growth mentality, piling up endless public debt and leaving a huge burden for future generations.



Note: The lowest projection and the highest projection in 2100 are 38 million and 64 million respectively. The illustration was modified by the author because of the space limitation, therefore differs from the original one.

Source: Long-term Projection of Japanese Population, the government committee in 2011 (https://www.soumu.go.jp/main_content/000273900.pdf)

In Japan, which is entering a period of transition, there are no socioeconomic conditions under which a virtuous cycle of wages and prices can operate for a sustained time. Virtuous cycles operate over the long term when a new labor force enters the labor market year after year and the consumer market expands along with the expansion of the labor market. Japan has long since passed through that period. While growth can be sustained by increasing labor productivity, it is not easy to sustainably increase labor productivity in an advanced economy that has reached a state of economic saturation. Nevertheless, continuing monetary easing policies until a virtuous cycle is created which the present government and BOJ maintain means perpetually accumulating public debt. This is the road to ruin.

Even today, labor shortages are already becoming serious in various economic sectors. The maintenance and management of public infrastructure and the problem of vacant houses will become more serious every year. How will the labor shortage in the essential fields that are indispensable for the maintenance of daily life be resolved? This is the biggest problem that Japan will face in the future.

Rather than economic stimulus policies that intend to increase GDP, which is an abstract quantity, concrete and detailed policies that change the employment structure in line with changes in the social economy will be necessary. Policies will be needed to shift from the so-called "non-essential workers" to "essential workers" in the tertiary industry. The food and beverage service industry, which has grown abnormally large compared to other industrialized countries, and the non-essential entertainment service industry will be eliminated, and their labor force will be shifted to the essential sector. Otherwise, the basic infrastructure of society will not be able to sustain itself. This type of historical and social challenge cannot be solved by policies that seek to increase GDP. The insistence on GDP growth by increasing consumption, even at the expense of the budget deficit, will only accumulate a large negative legacy for the future of Japanese society.

On the other hand, will the contraction of Japan's economy and society produce a bleak future society without prospects, or will the country become poorer as GDP shrinks? If we consider the shift in economic and social life from a society that pursues quantity to one that pursues quality, the values of socioeconomic wealth will change as well.

In a near-future society with a large decline in population, there will be a change in social values such that people will not find pleasure in the temporary flow of consumption, as they do now, but will value the pleasure created by the affordability of life (increase in fixed assets) resulting from improvements in housing and the living environment. Society will place more value on the affordability of life that comes from the use of stock, rather than on the flow of consumption. As the 22nd century approaches, this type of discussion is likely to become more active.

Contemporary Japan is in a transitional period from economic growth to contraction. At least until 2100, Japan will not have the socioeconomic conditions to achieve high economic growth. Accumulated public debt will increasingly become a burden on future generations. Policies that concentrate on the immediate growth and accumulate public debt will only inc future disasters. Despite this, some irresponsible people are loudly calling for fiscal stimulus. There are irresponsible people in every age, but the public should think more seriously about the future. At least as much as they should prepare for the Nankai Trough earthquake, they should be aware of the seriousness of man-made disasters caused by misguided policies. We should not be taken in a well-told irresponsible sophistry.

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