Mizuho Economic Outlook & Analysis

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Japan's potential growth rate was revised upward to nearly 1% reflecting the new GDP standard

< Summary >

◆ Reflecting the new GDP standard (2008 SNA), the recent potential growth rate was revised to +0.9 percent from the +0.5 percent estimated before the revision, with the increase based mainly on the greater contribution of the potential capital input and TFP (productivity).

◆ From the perspective of achieving the real economic growth target of +2 percent, the potential growth rate remains low, making it imperative that the public and private sectors do all they can to execute measures to raise productivity through such means as the fourth industrial revolution.

◆ The estimate of the GDP gap remained almost unchanged. On the other hand, from the viewpoint of "FTPL (Fiscal Theory of Price Level)", a theory that began attracting attention last year, a rise in the potential growth rate could have the potential to trigger a price increase.

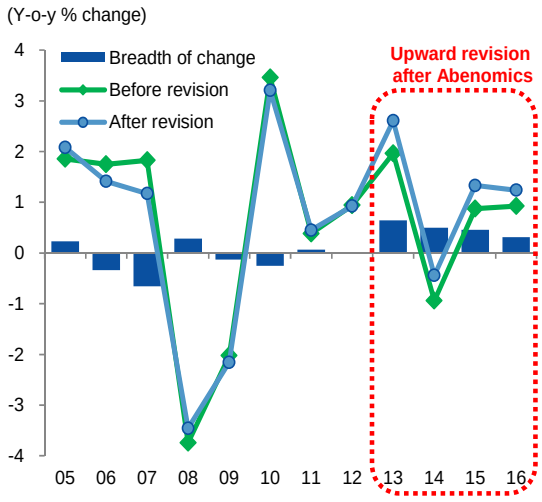
Mizuho Research Institute Ltd.
Hidenobu Tokuda, Senior Economist, Economic Research Department
hidenobu.tokuda@mizuho-ri.co.jp

1. Reflecting the new GDP standard, the potential growth rate rose to nearly 1 percent

Japan's growth rate for the period following the launch of Abenomics (2013-2015) [1] (**Chart 1**, figures for FY2016 are MHRI's estimate) was revised upward by 0.5-0.6 percentage points reflecting the new GDP standard released on December 8, 2016. The outcome of the revision strengthened the view that the potential growth rate would also improve substantially, but to confirm this view we had to wait for the release of the capital stock statistics compiled under the new GDP standard.

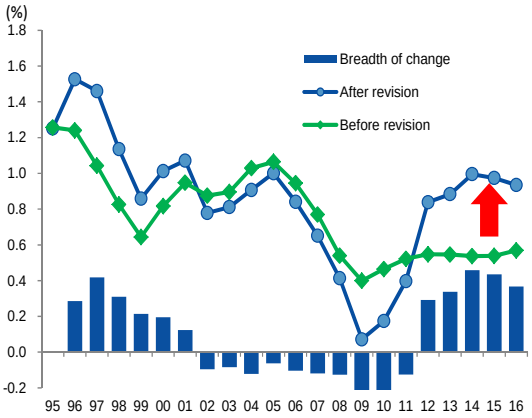
On January 25, the new capital stock statistics were released, enabling us to calculate the potential growth rate reflecting the standard revision up to present. As MHRI estimated the potential growth rate after the standard revision, the average value for FY2013-FY2016[2] was +0.9 percent, an increase of 0.4 percentage points from the +0.5 percent before the revision (**Chart 2**). While this figure remains low compared to the government's real economic growth rate target of 2 percent, its impact will be sufficient to reverse the pessimistic view on the Japanese economy.

Chart 1: Real GDP growth rate (comparison before and after the revision)



Note: Figures for FY2016 are estimated by MHRI.
Source: Made by MHRI based on the Cabinet Office, *Quarterly Estimates of GDP*.

Chart 2: Estimate of potential growth rate (comparison before and after the revision)



Note: Estimates are based on the "production function approach."
Source: Made by MHRI based on the Cabinet Office, among others.

[1] This is attributable to the higher than expected growth in R&D investment that was newly included in the statistics (particularly in FY2014) based on the latest version of the international statistical standard for national accounts (2008SNA) and the revision of the estimation method for construction investment (particularly in FY2013). In addition, the increase in personal consumptions due to the annual revision (particularly in FY2015) also supported the upside adjustment.

[2] For periods after October to December 2016, where statistics necessary to calculate the potential growth rate are not available, we estimated the potential growth rate by extending each of the base data of MHRI's forecasts.

2. Despite the upward swing in the potential capital input and TFP, they lack sufficient strength to achieve the real economic growth target of 2 percent

If we divide the factors behind the upward revision of the FY2013-FY2016 potential growth rate into three items (potential capital input, potential labor input and TFP [Total Factor Productivity]), we can see that potential capital input and TFP contributed to the upward swing (they both accounted for a 0.2 percentage point increase in the potential growth rate)[3] (**Chart 3**). Potential capital input made almost no contribution to potential growth before the standard revision up until FY2016, but did in fact contribute to the growth after the revision toward FY2016. This can be explained by buoyant real estate investment after the launch of Abenomics, and the rise in investment related to labor savings measures following the serious labor shortage as well as R&D investment growth.

Concerning the contribution of TFP, the average contribution for FY2013-FY2016 was revised upward after the standard revision (+0.6 %Pt ⇒ +0.8 %Pt). Nonetheless, the contribution of TFP was low compared to when it exceeded 1 percentage point in the 1990s and the 2000s, and therefore we cannot evaluate Abenomics' growth strategy as producing solid results. Thus, it is imperative that the public and private sectors devote their efforts to tackling the issue of productivity improvement through such means as the fourth industrial revolution.

It should be noted that no change was observed in the contribution of the potential labor input before and after the standard revision, and the degree of its negative contribution narrowed toward FY2016 in both scenarios. This is primarily due to the impact of the increasing number of working women that is offsetting the decline in the working age population. However, as the response of society falls behind the pace of women's expanding participation in the labor force, various social issues have begun to emerge, including the increased burden on women in term of housework and childcare and the serious shortage of nursery schools in urban areas. By cutting back on long working hours under the government's work style reform, it is important to promote the participation of men in housework and child rearing. We also need to secure sufficient numbers of nursery school teachers by shortening their working hours[4] to sustain the expansion of women participating in the labor force. While correcting long working

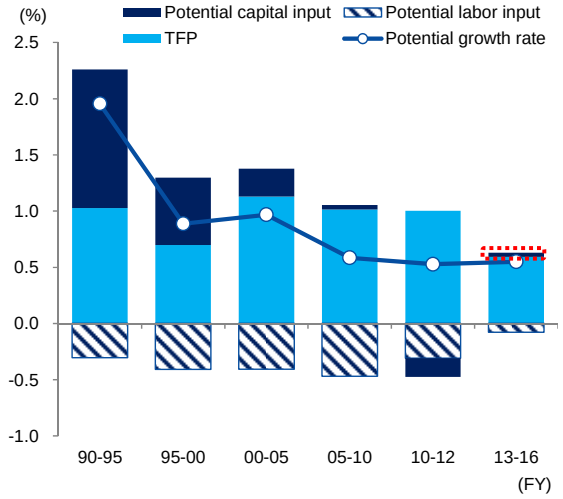
[3] The primary reason for the upward swing of the potential capital input was the upward revision of capital investment in FY2013 and 2014 due to the standard revision. Also, the upward revision of TFP was the result of the upward revision of the GDP growth rate that exceeded the upward change in the potential capital input. It is noteworthy that there was no change in the potential labor input before and after the standard revision because the base data applied in labor input come from sources other than the GDP statistics (such as the Labor Force Survey and Monthly Labor Survey).

[4] At present, the extension of nursery school teachers' working hours, set assuming long working hours of parents, constitutes one reason why women leave their jobs.

hours may reduce the average working hours of men, it may also lead to an increase in the number of female employees and their average working hours, thereby pushing up the overall labor input (number of employees × average working hours).

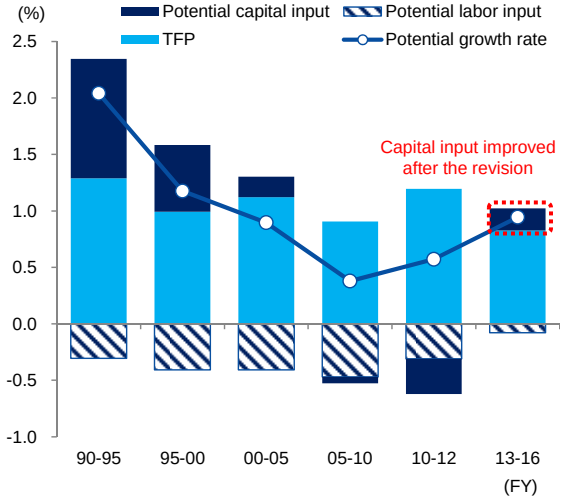
Chart 3: Breakdown of contributing factors of the potential growth rate

Before the standard revision



Note: Estimates are based on the "production function approach." For capital input we used the gross capital stock figures of private companies, which were then modified to net figures using information from the JIP database.
Source: Made by MHRI based on the Cabinet Office, among others.

After the standard revision



Note: Estimates are based on the "production function approach."
Source: Made by MHRI based on the Cabinet Office, among others.

3. Renewed household confidence should place upward pressure on prices

In the last section, we consider how an upward revision of the potential growth rate triggered by the latest standard revision can affect monetary policy. Change in the potential growth rate normally affects monetary policy through change in the GDP gap and change in the natural interest rate.

First, the GDP gap during the July to September period of 2016 was revised upward from -1.1 percent to -0.7 percent (**Chart 4**). This is because the breadth of upward revision of the real economic growth rate following the standard revision (average of FY2013-FY2016: +0.5 %Pt) exceeded that of the potential growth rate (average of FY2013-FY2016: +0.4 %Pt). But since the degree of change was rather small, the impact of the GDP gap on monetary policy is viewed as unchanged before and after the standard revision.

Second, the natural interest rate is considered to move upward in conjunction with the potential growth rate. This implies that the extent of recent monetary easing was stronger

than expected before the standard revision. In view of the prolonged stagnation of prices, however, there seems to be no change in the current monetary policy stance toward maintaining a low interest rate level with the expectation of pushing up prices.

Standing apart from conventional ideas, the theory called "FTPL (Fiscal Theory of Price Level)" has recently gathered attention (this theory was explained by Professor Christopher Sims of Princeton University at the 2016 Jackson Hole Economic Symposium and later supported by Professor Koichi Hamada of Yale University). The main premise of this theory is "the fiscal policy stance in the future affects inflation." Professor Sims actually proposed in his Jackson Hole address that Japan suspend the consumption tax hike until the inflation target is met.

However, the policy implication of "FTPL" does not always mean that "fiscal expansion is required to generate inflation."[5] Among the various policy implications which FTPL carries, the one that draws our particular attention is "the potential growth rate affects the real household burden required for fiscal balance, which further affects price levels".[6] [7] In fact, the decline in the growth rate coupled with stagnant inflation seen in major countries seems to back up this view to a certain extent. Assuming this view is correct, the current upward revision of the potential growth rate may place upward pressure on prices through an improvement in household sentiment. We will continue to watch developments as they unfold in the future.

Chart 4: GDP gap (comparison before and after standard revision)

Source: Made by MHRI based on the Cabinet Office, among others.

[5] An opposite policy implication of "fiscal consolidation" may be obtained depending on the economic environment assumed. (Refer to Kimura [2002] "Two views on the price change mechanism.")

[6] If the potential growth rate rises, the expected value of the lifetime income of households will increase and alleviate the future fiscal burden in relative terms. As a result, the propensity of households to save will relax and place upward pressure on prices.

[7] Refer to Kimura et al. (2011) "Money and growth expectation: discussion on the price change mechanism," among others.