Changes in the Indices of Production Capacity of Japan’s Manufacturing Industry

【Analysis Point 1】

～When looking at the indices of production capacity on a long-term basis, after the downturn of the crisis in the financial system in 1997, as well as the global economic stagnation in 2008, Japan has entered a new stage～

【Characteristics】

• The indices of operating ratio reached major turning points in 1991, at the time of the “collapse of the bubble economy” and in 2008, during the “global economic crisis caused by the financial crisis in the United States.”

• The indices of production capacity entered a stock adjustment phase, triggered by the “crisis in the financial system” in 1997. Its recovery process ended once due to the global economic stagnation of 2008, and Japan is now entering a new stage.

【Analysis Point 2】

～As the indices of operating ratio shifted downward after the 13th business cycle, the indices of production capacity is on a decreasing trend, and there is a new relationship between the indices of operating ratio and production capacity～

【Characteristics】

• Up until the 12th business cycle, which includes the period before the collapse of the bubble economy and the period after the collapse, the indices of production capacity was fundamentally rising, and a repeated horseshoe shape (increase in operating ratio → increase in capacity → decrease in operating ratio) can be seen.

• Since the indices of operating ratio shifted downward after the 13th business cycle, the graph is shifting in the leftward direction. In addition, since the indices of production capacity is showing a large decrease and modest increase with no horseshoe can be seen, a new relationship between the indices of operating ratio and production capacity is generated.
In responses from survey objects regarding reasons for fluctuations in the indices of production capacity, “reexamination” was frequent. This assumes a change in personnel structure, rather than a physical variation in facilities. Thus, a relational expression that explains the indices of production capacity in terms of capital stocks and labor input was estimated.

Looking at the results, in the phase of decrease in the indices of production capacity after 2009, the indices of production capacity was lowered by reducing the number of permanent employees, rather than reducing capital stock.

When thinking of the “turning point” for the indices of production capacity index, the average at the point in time when the quarter-over-quarter change rises upwards is 110.5, which is still insufficient based on current standards.

When thinking of the “turning point” for the indices of production capacity, the number of timing at which the change from the previous quarter of the indices of production capacity rises upwards was 11 after the 9th business cycle. The average of standards of the indices of operating ratio of these 11 points was 110.5, and this can be thought of as one of the rough indicators for the timing at which the indices of production capacity increases.

In the second quarter of 2014, the indices of operating ratio decreased to 101.4, which is insufficient for the indices of production capacity to rise upwards.

In the second cycle of decline in production capacity after the collapse of the bubble, production capacity decreased due to a reduction in permanent employment, rather than a decline in capital stock. Capital stock itself is increasing due to capital investment based on a purpose other than capacity enhancement, such as maintenance and repair investment. As there is also the fact that the overseas capital investment ratio is increasing, the excess domestic supply capacity also decreased and under conditions of special demand, such as in the first quarter of this year, imports end up increasing.

Based on past experience, the standards for the operating rate index at which the indices of production capacity turns upward are not achieved with the current operating rate, and we are still only halfway on the path to reach an upward rise in the indices of production capacity.

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