Toward a Full-fledged Recovery in Private-sector Capital Formations

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PERSONAL DATA

Professor Miyagawa's expertise includes macroeconomics, Japanese economics and Asian economic trends. He obtained his B.A. in Economics from the University of Tokyo in 1978 and Ph.D. in Economics from Hitotsubashi University in 2006. Prior to his current position started from 2009, he served as a professor in the faculty of economics at Gakushuin University, a director of the Nagoya Branch at the Development Bank of Japan (formerly Japan Development Bank [JDB]), an associate professor of the Economic Research Institute at Hitotsubashi University, and so on.
Major works: *Economic Analysis of Long-term Slumps: Structural change and globalization,* the University of Tokyo Press, 2005, *Productivity and Japan's Economic Growth: Industry-level and firm-level studies based on the JIP database* (co-editer: K. Fukao), the University of Tokyo Press, 2008, and others.

Changes in capital formation structures

Over a year and half has passed since the collapse of Lehman Brothers, which sent the global economy into a recession. However, Japanese people remain gripped by a persistent sense of gloom over the course of the economy and the nation's employment situation shows no sign of improvement with the unemployment rate hovering around 5%. Amid this difficult economic environment, the government adopted a New Growth Strategy (Basic Policies) at the end of 2009. The strategy set out a path toward a balanced recovery driven not only by external demand but also by domestic demand, reflecting lessons from the recovery in the first half of the 2000s that was overly reliant on external demand. Domestic demand consists of private final consumption expenditure, private-sector capital formation, and public-sector capital formation. Of these, public investment is difficult to increase in an agile manner due to the massive fiscal deficit and snowballing government debt. This leaves us to look for an increase in the remaining two components—private final consumption expenditure and private-sector capital formation—as a recovery driver.

With respect to private final consumption expenditure, it is hoped that new government policies—such as a child allowance program called "kodomo teate" and high school tuition subsidies that would virtually make high school education free—will help raise the overall consumption level. However, it will inevitably take some time before the effect of these policies begins to show because, if the government is to change the trend of private consumption in any significant way, it needs to convince the general public about the prospect of a sustainable improvement in the income level.

Private capital formation has long been the key driving force behind the business cycle in Japan. As shown in **Table 1**, increased private-sector capital formation served as a growth engine for the Japanese economy in past recovery periods. However, in the latest recovery period that began in the early 2000s, private-sector capital formation relinquished its place to external demand, posting the smallest percentage increase in the past 30 years for growth observed during recovery periods.

Table 1: Business Cycle in Japan

	GDP growth	Change in household consumption	Change in private-sector capital formation	Change in public-sector capital formation	Change in net exports
1980:1-1983:1	2.46	2.84	0.21	-0.53	15.66
1983:1-1985:2	3.61	3.07	8.48	-4.96	17.10
1985:2-1986:4	3.44	3.12	8.47	3.65	-17.18
1986:4-1991:1	5.36	4.42	11.99	3.05	-8.05
1991:1-1993:4	0.32	2.40	-10.38	11.75	4.49
1993:4-1997:1	2.93	2.81	6.24	-1.74	-5.14
1997:1-1999:2	-0.55	-1.02	-2.35	4.02	13.54
1999:2-2000:4	2.81	1.12	12.64	-12.60	13.73
2000:4-2002:1	-2.45	0.71	-10.83	0.03	-5.25
2002:1-2007:4	1.94	1.21	4.01	-7.82	32.51
2007:4-2009:3	-3.71	-0.63	-12.98	-0.57	-24.52

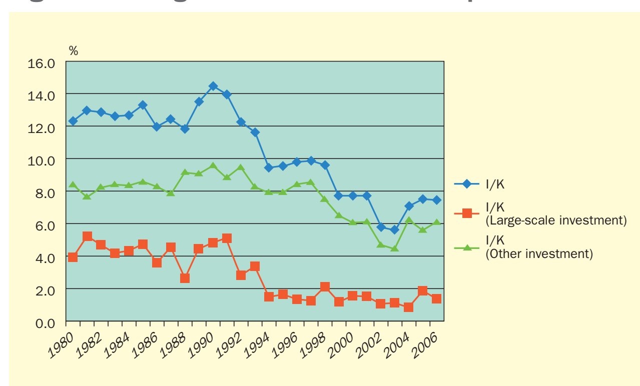
Source: "System of National Accounts of Japan," Economic and Social Research Institute (ESRI), Cabinet Office

Notes: 1) All figures are expressed as annualized percentage changes.
2) Rows in light blue represent economic downturns and those in dark blue represent recoveries.

In the RIETI Discussion Paper (DP No.09-J-032) co-authored by Kenji Tanaka of the Development Bank of Japan (DBJ) and myself, we focused on recent trends in firm-level large-scale investments and explored factors behind changes in private-sector capital formation structures. For the purpose of this research, a company's capital formation is defined as a "large-scale investment" when the investment amount represents more than 20% of the company's capital stock, i.e. the cumulative total of past capital formations. Using data from the DBJ financial databank, we identified large-scale investments for each of the listed companies excluding financial and insurance institutions. Then, we divided the sum of those large-scale investments by the total amount of all capital formations made by the sampled companies to calculate the ratio of large-scale investment to total investment for each year. Our calculation results show that large-scale investments have accounted for an average of 25% of total investment in terms of monetary amount since the 1980s. Meanwhile, the ratio of companies that made large-scale investments to the total number of sampled companies sharply declined over the years, from 37% in fiscal 1990 (April 1990 through March 1991) to 10% in fiscal 2006.

We also calculated the ratios of total investment, large-scale investment, and other investment to capital stock for each year. Changes in the respective ratios are shown in **Figure 1**, from which we can see that the total investment and the large-scale investment, both as a ratio to capital stock, generally moved in tandem until around the end of 1990s. This means that large-scale investments set the capital formation cycle during that period. After 2000, however, large-scale investment has remained stagnant while other investment has taken over as the trendsetter. Now, the behavior of the large-scale investment can be decomposed into two factors: (1) changes in the scale of large-scale investments made by individual companies and (2) changes in the number of companies that made large-scale investments. The stagnation after 2000 is attributable to the second factor, i.e. a decrease in the number of companies that made large-scale investments, rather than a decrease in the scale of individual large-scale investments.

Figure 1: Changes in the investment-to-capital stock ratios



Factors that have caused a decrease in the number of large-scale investments

Then, why did the number of large-scale investments decrease in recent years? First, the proportion of companies that made large-scale investments has been persistently low in the non-manufacturing sector. In the early 1990s, the proportion of companies that made large-scale investments turned downward both in the manufacturing and non-manufacturing sectors. However, in the last economic recovery, the investment trend picked up in the manufacturing sector while the nonmanufacturing sector continued on the downward trend. It is inferred that this is because manufacturers—many of them competing in the global market—made significant investments to expand production capacity particularly for products with competitive advantage, whereas non-manufacturers—which are mostly, if not entirely, reliant on domestic demand—found no incentive to expand facilities. This shows that the expansion of outbound foreign direct investments driven by globalization was not the primary cause of a decrease in large-scale investments.

Another factor behind the decrease in the number of large-scale investments is changes in the nature of capital formations. A comparison of companies that made large-scale investments in and after 1990 and those that did not reveals marked improvements in productivity and profitability for the first group of companies relative to those in the second. In the past, Japanese companies tended to behave in a lock-step fashion, making large-scale investments for the sake of keeping pace with others. As a result, many companies ended up having excess production capacity, which in turn resulted in a low return on investment. However, such lock-step behavior, which had been particularly conspicuous in the 1980s, became less and less observable among companies that made large-scale investments in the 1990s and thereafter. It is believed that in making investment decisions, Japanese companies became more focused on the potential impact of a specific investment on productivity and profitability. Such a shift in companies' attitude toward capital formations, focusing less on quantity and more on quality, is a desirable change in itself. But this also means less competition in capital formations, which in turn translates into greater difficulty to stimulate domestic demand. Then, what can and should be done to boost large-scale capital formations while maintaining the quality of investments, rather than returning to the lock-step investment behavior?

Revive motivation to develop new products

It is believed that large-scale capital formations are driven by the development of new products and the creation of new markets. In Japan, changes in product portfolio by existing companies, rather than the development of new start-up businesses, have traditionally served as the primary driver of capital formations. Utilizing their technologies, companies that had firmly established their position in a certain business developed new products and, in some cases, moved into new fields beyond industry boundaries to blaze new paths for growth, enhancing productivity in the process. For instance, Toyota Motor Corporation, which has grown into the world's leading automaker, started as an automatic loom manufacturer. Meanwhile, Nikon Corporation has utilized its technologies for camera products to develop semiconductor production equipment, for which the company holds the world's largest market share today. As demonstrated by those examples, the activation of changes in the product portfolios of individual companies could lead to an increase in large-scale capital and hence deliver improved productivity in the nation's economy as a whole. In the research currently undertaken by my research assistant, Atsushi Kawakami, and myself using data from the Census of Manufacturers, we have found that companies having changed their product portfolios tend to achieve an increase in sales and productivity in the subsequent years, but that the dynamism of such product portfolio restructuring has been in gradual decline since 2000. One factor behind this is the effect of the so-called "select-and-focus" strategy. The strategy, pursued by many Japanese companies after the nation's financial crisis in the late 1990s, typically called for restructuring business to focus management resources on selected areas with high profitability. However, when companies keep to an overly defensive strategy, their capital formations tend to be confined to those for a mere renewal of existing facilities.

In order to increase capital formations, which constitute one of the main pillars of domestic demand, we must, first and foremost, revive Japanese companies' unflagging enthusiasm to develop new products such as the one that used to be observed in the past. The development of new products involves the development of human resources and the investment of significant financial resources. Only on the firm foundation of "people" and "money" can large-scale capital formations be realized as "goods." In today's Japan, however, spending on the development of human resources is slowing down, while at the same time, banks remain cautious in lending to finance processes leading to capital formations due partly to the lack of experience.

In addition to the machinery industry, an area of its traditional strength, Japan has a series of potential growth areas including environment-related industries that are attracting global attention and service industries, the productivity of which remains relatively low. It is hoped that through large-scale investments, such potential will be turned into a driving force for delivering new products onto the market, and that such products will be broadly recognized by consumers, thereby generating new demand to create a virtuous growth cycle. In order to enable this to happen, the government needs to implement measures to support and facilitate processes leading to large-scale capital formations. It is strongly hoped that government initiatives for the development of human resources and the enhancement of technological competence, highlighted in the New Growth Strategy, will be fleshed out and give a boost to large-scale private-sector capital formations.