Japan's productivity paradox

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Once seen as the crucible of hi-tech approaches to improving productivity, Japan is now better known for its ageing society and persistently anaemic inflation. Under prime minister Shinzo Abe's latest reforms, however, that could be set to change.

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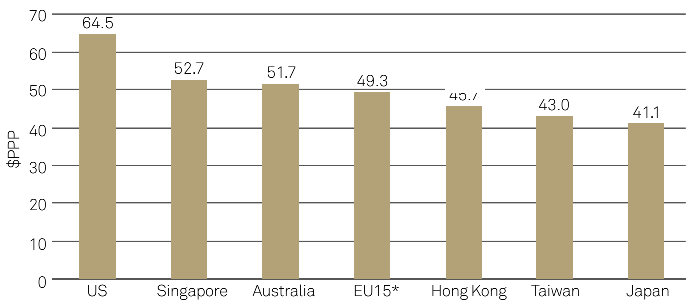
Productivity – doing more with less – is the ultimate source of prosperity. This is particularly true in Japan. Because its working-age population is shrinking, its economic progress depends on getting the most out of each worker that remains. To students of productivity, however, Japan presents a paradox. It is both cutting-edge and hidebound; futuristic and nostalgic. It is simultaneously a land of impressive innovation and of baffling inertia, embracing the new but never quite surrendering the old. The classic example is, of course, the fax machine, which is widely used and highly evolved in Japan, even as it is edging towards extinction elsewhere.[1]

In September, Japan's prime minister, Shinzo Abe, announced a bold target to increase Japan's nominal GDP by about 20%.[2] It was one of three new "arrows" of Abenomics, his campaign to revive Japan's economy, complementing the original arrows of monetary stimulus, fiscal pragmatism and structural reform. To achieve this growth, Japan will have to defeat deflation, prevent the workforce shrinking too fast, and increase labour productivity (GDP per worker) by roughly 2% a year.[3]

How feasible is that for a country like Japan? In its heyday, Japan's manufacturers set about productivity improvement (or kaizen) with quasi-religious zeal. They pioneered new production techniques, organizing workers into tight-knit teams with the authority and incentive to iron out every kink and inefficiency in the manufacturing process. In recent decades, Japan has become a self-proclaimed "robotics superpower", with about 300,000 industrial robots in use, almost a quarter of the global total, according to a report by the Headquarters for Japan's Economic Revitalization.[4] In some of its factories, sophisticated machines churn out manufactured goods with barely a worker in sight. And yet, measured across the economy as a whole, Japan's labour productivity is surprisingly poor.

FIGURE 1: LABOUR PRODUCTIVITY (OUTPUT PER HOUR, 2013)



*Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK

Source: Asian Productivity Organisation, Productivity Database 2015.

1 *The New York Times:* 'In High-Tech Japan, The Fax Machines Roll On', 13 February 2013.
2 *The Japan Times:* 'Abe aims arrows at new targets with three fresh goals for "Abenomics," 20% rise in GDP', 24 September 2015.
3 *CAO:* 'Economic and Fiscal Projections for Medium to Long term Analysis', 12 February 2015.
4 *Meti:* 'Japan's Robot Strategy', 10 February 2015.

The Asian Productivity Organization (headquartered tellingly in Japan) calculates that the country's GDP per worker is only two-thirds of the US level.[5] Worse than that, it is now a full 20% below the equivalent figure in Taiwan, one of the "flying geese" that once belonged in Japan's slipstream (according to the famous metaphor coined by Akamatsu Kaname, a Japanese economist in the 1930s). Part of the gap with Taiwan reflects the island's long workweeks. But even when judged by output per hour, Japan compares unfavourably with Taiwan and much of Western Europe, let alone America and Singapore (see figure 1).

On the face of it, this is dispiriting. But it also has one encouraging implication. Because Japan's productivity level is so low, it also has ample scope to grow. Japan's progress need not depend on the painstaking work of pushing back the frontiers of knowledge. It can improve its productivity simply by adopting some tricks of the trade that other countries pioneered years ago. Indeed, Japan could increase its GDP by 20% merely by replicating the productivity performance of the European Union's older members (i.e., the 15 countries in the EU before the May 2004 enlargement). Japan, accustomed to leading Asia's flock, can fly in the slipstream of other nations for a while. It has become a "catch-up" economy.

In what ways does it need to catch up? Highly productive economies typically have ample stocks of human and physical capital. Japan already has both. Its workforce is unusually well educated, boasting the third highest proportion of university and college graduates in the OECD.[6] Its 15-year olds also registered the third highest score in the 2012 PISA (Program for International Student Assessment) science tests[7], which compare academic achievement across countries. It does not lack for raw brainpower.

Nor does it suffer from a shortage of physical capital. According to the APO, Japan's capital-output ratio is the highest in Asia: 3.8 compared with 3.1 in China, a country often accused of overinvestment, and 2.9 in Taiwan. Japan's businesses also invest a relatively high proportion of the country's GDP in research and development. Among OECD countries, only Swedish and Israeli firms invest more, relative to the size of their economies.

Japan's problem is not, then, weak powers of invention or capital accumulation. Its shortcomings lie elsewhere: in its powers of adaptation. It lacks sufficiently sharp incentives to restructure corporations and industries to make the most of new technologies and fresh organizational thinking. Japanese firms spend heavily on software, for example.[8] But, according to Kyoji Fukao of Hitotsubashi University and his co-authors, they hoard the unskilled "clerical" workers whom information-and-communication technologies (ICT) would normally render obsolete.[9] Japan also underinvests in other kinds of "knowledge-based capital", like firm-specific training, market research, brand-building and improved corporate decision-making, according to the OECD.

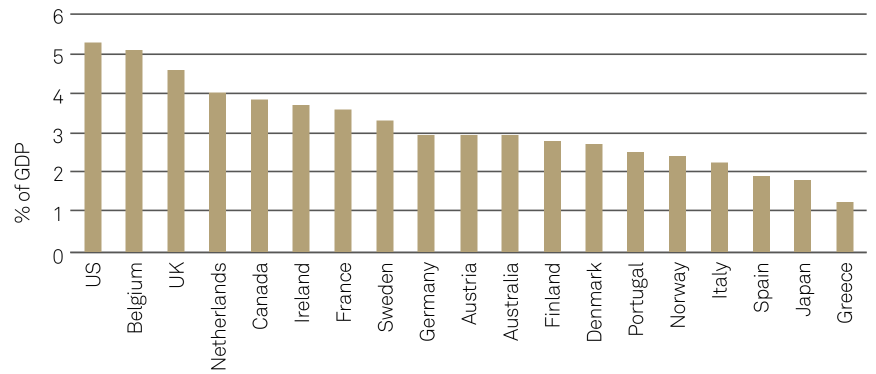
The OECD attributes this inertia partly to a lack of competition. In Japan's overly regulated service industries, firms are sheltered from the market forces that would push them into making better use of labour and capital. Until recently, for example, Japan's bricks-and-mortar pharmacies faced little competition from e-commerce, because regulations barred the online sale of many over-the-counter medicines. Those regulations have been largely lifted as part of Abe's piecemeal structural reforms.

A lack of competitive "push" in Japan's economy may, however, be less important than a shortage of demand "pull". Japanese firms can get away with hoarding workers in unproductive jobs partly because those workers have few better options. Japanese unemployment may be low, according to the official statistics, but underemployment, as abundant anecdotal evidence attests, is rife, especially in Japan's service sector. Every visitor to Japan notes the "elevator ladies", who greet people in the foyers of high-end hotels, and the "baton men", who stand guard by every set of road-repairs waving illuminated batons to warn drivers of the danger.[10]

If Japanese spending picked up, activity quickened, and hiring strengthened further, these workers might find more interesting and lucrative things to do with their time. Japan's firms would then adapt to life without them—perhaps by employing the same labour-saving technologies that other countries embraced long ago.

Even Japan's beloved fax machine might come under threat. In a more buoyant, demand-led Japanese economy, the additional labour required to service the machines and process faxed instructions might become costly. And if that cost were passed on to consumers, even the technologically challenged might discover they like online ordering after all.

FIGURE 2: INVESTMENT IN "ECONOMIC COMPETENCIES"



2010 or latest year available.
Economic competencies include firm-specific human capital, organisational structure, brand equity.

Source: OECD Japan Economic Survey, April 2015.

5 *APO:* 'APO Productivity databook', 2015.
6 *OECD Economic Surveys, Japan* April 2015.
7 *OECD Economic Surveys, Japan* April 2015.
8 *OECD Economic Surveys, Japan* April 2015.
9 *IAO:* 'The Structural Causes of Japan's Lost Decades', accessed 17 November 2015.
10 See "*Bending Adversity*" by David Pilling.