

## Video Transcript for “Structural Causes of Japan’s Lost Decades”

Online at <http://spice.fsi.stanford.edu/multimedial/structural-causes-japans-lost-decades>

### Kyoji Fukao

Professor of Macroeconomics and Productivity, Hitotsubashi University

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Japan had a big financial crisis in the 1990s and after that Japan dissolved the problem of banks non-performing loans and firms balanced the balance sheet by 2000. But Japan’s economic growth didn’t accelerate after that. So now it is so-called Japan’s two lost decades, so we had economic stagnation for more than 20 years.

And so behind this stagnation, I think that some structural factor works. And one of the main factors for Japan’s slow economy growth is the stagnation of productivity. This figure shows total factor productivity level of manufacturing and non-manufacturing sector. And total factor productivity means the index of technology level and efficiency of the economy. And we can see that from 1990, the TFP growth slowed down in manufacturing sector substantially. So there is a kink of the TFP growth in manufacturing sector. And also in the case of non-manufacturing sector, Japan’s TFP growth has been always not so amazing. But again, there is a slowdown of TFP around 1990s.

And if we look at why TFP growth slowed down, both in manufacturing and non-manufacturing sector, in the case of manufacturing sector, please look at this figure. And this figure is a result of productivity dynamics analysis. That is based on factory-level data of the manufacturing sector, and using factory level data we can decompose the TFP growth of the manufacturing sector into these four components.

The blue graph shows within effect. If productivity increases within each factory, this becomes a positive value. And the reallocation effect takes positive value if more productive factory expands its production. And the entry effect takes positive value when more productive factory starts up. And exit effect takes positive value when less productive factories are shut down.

And what we can see from this figure is that the slowdown of TFP growth in the manufacturing sector was mainly caused by two factors. One is the decline of the within effect, and the other is negative exit effect. And the negative exit effect increased substantially from the 1990s. Negative exit effect means more productive factories are shut down and less productive factories continue. And why within effect declined—this figure shows TFP growth by factory size—factory size group. And we can see that in the case of large factories—most of them are owned by large firms—increased a lot, even after 1990.

So we didn't have lost decades or two lost decades for large firms, but we can see that TFP growth slowed down in small and medium size factories (most of them are owned by small and medium sized firms). So, my hypothesis is SMEs—small and medium sized firms—were left behind in R&D and internationalization. And in Japan, the R&D intensity of small and medium sized firms is much lower than that of large firms. And also, probably technology spillovers from large firms to SMEs declined in this period.

So next, let me explain about why in the manufacturing sector the exit effect was negative. And according to international comparison, Japan is special. It has negative exit effect. And according to our analysis, the negative exit effect occurred because Japanese large firms, like Toyota and, you know, these companies, relocate their relatively productive factories abroad. Of course they are rational and shut down their factories, which are not so productive in comparison with other factories they have. But from the viewpoint of industry average, their factories shut down are much more productive than other, you know, factories owned by other, smaller firms. So that caused a negative exit effect. And that means that both the decline or within effect which observed mainly in SMEs and negative exit affect are closely related. Both are caused by relocation of factories by large firms and because SMEs cannot get the spillover of technology from large firms, their own TFP growth also slows down, that decline of within effect.

As you pointed out, the ICT investment in Japan has been very low. And so this figure shows ICT investment gross value-added ratio of distribution services. Distribution services means wholesale and retail and transportation sector. And this was very low in Japan. And you can see, in the case of U.S. and the U.K., there was a huge, very rapid increase of ICT investment in this sector. And because of active ICT investment, U.S. experienced so-called ICT revolution. Their productivity increased a lot in, for example, distribution sector. But in Japan that kind of ICT revolution didn't occur because – simply because – we didn't do investment in ICT.

And there are several researches on why ICT investment didn't increase in Japan. And I can point out several structural factors behind it. One is because in Japan the jobs are secured. And one of the reasons why firms introduce ICT is to make efficiency of production. And sometimes firms can save unskilled labor input. But because of jobs are secured, Japanese firms cannot get that kind of benefit from ICT introduction.

And also, in Japan the ICT experts—experts of, say, graduate of technology department, et cetera—want to work at large firms to have secure job at the large firms. But in the case of U.S., the engineers easily move among firms and don't hesitate to work at small and medium sized firms. So that caused, especially for Japanese small and medium sized firms, difficulty to find good engineers and introduction of ICT was difficult for such firms.