



# KGRI Seminar Reports

No. 1

## Supply Chain Management in the “With Corona” Age

Version1.0

June 2020

Jiro KOKURYO

Keio University, Cyber Civilization Research Center  
Keio University Global Research Institute

This is a revised transcript of a talk at IP-Asia on-line forum on June 15, 2020.

© Copyright 2020 Jiro KOKURYO  
Professor, Faculty of Policy Management/Vice-President, Keio University

## Supply Chain Management in the “With Corona” Age

Jiro Kokuryo  
Keio University  
jkokuryo@sfc.keio.ac.jp

Hello. My name is Jiro Kokuryo. I am vice president of Keio University, the person who convinced the University to launch the Cyber Civilization Research Center, to secure funds to invite Dave, and to retain Jun as university professor when he was scheduled to retire. Perhaps even more importantly, I invited Cherry from Hong Kong to Tokyo to work for CCRC. I am proud that these moves resulted in the creation of such a wonderful forum as this. Thank you all for joining us.

But today, I am talking as a business major who did his doctoral dissertation at Harvard Business School on supply chain management. And I am going to talk like an MBA today.

*Note 1: “With Corona” in the title is an expression often used in Japan to express the anticipation that our societies will have to live with the threat of Covid-19 and possibly other diseases for a prolonged time.*

## Twin Engines: Lost Both?

Since Deng Xiaoping Reforms

- ① Globalization and
  - ② Urbanization
- have been the twin engines of the global economic growth....

Have we lost both?

Since the days Deng Xiaoping introduced major reforms in the Chinese economy, the twin engines for global economic growth have been, ONE, globalization, and TWO, urbanization. Globalization of the supply chain brought huge efficiency gains to the world economy, while urbanization and associated asset price increases helped finance to grow.

One of the huge implications of COVID-19 is that we might have lost both of these twin engines simultaneously. While they are closely linked, let me focus on supply chain tonight.

## Major Supply Chain Disruption caused by Covid-19

Uncertainties over second and third waves linger.  
Uncertainty is nothing less than cost.

Should we stop globalization?  
⇒ loss of efficiency ⇒ higher cost  
⇒ loss of economic growth  
= Stagflation??

I am sure many of you have had similar experience as I, of not being able to buy webcam and other gadgets for remote classes because the supply from China was put on hold. We had to wait for the Chinese to defy the disease and reopen their economy to move our economy. In the meantime, the auto industry suffered huge parts supply disruption resulting in most Japanese auto factories to close until very recently.

Even after the resumption of the supply chain, uncertainties around a second and third wave of the virus are lingering, and such uncertainty is nothing short of additional economical cost. So should we reverse globalization? That does not sound encouraging. Reversal of globalization efficiency gains can result in higher prices and simultaneously produce economic growth slowdown. The long forgotten word, stagflation, may see a revival.

## Globalization was ending even before Corona?

### Geopolitical reason

⇒ Cyber security concerns

⇒ Now spreading to medical and others

### Economic Reason

⇒ Low marginal return for seeking lower wages

⇒ Economic divide leading to anti-globalization sentiments. Failure of “creative industries” to generate middle income class.

As much as we desire to avert such stagnation and return to “normalcy,” however, we must also take note that signs of the approaching demise of globalization have been surfacing even before the Covid-19 pandemic for two reasons, ONE, geopolitical and TWO, economic.

Geopolitical concern has been deepening over national security in overreliance on foreign supplies. This has been a burning issue in the IT sector in the context of cybersecurity, but has now spread into other critical supplies such as medicine and even ordinary ones such as face masks.

On the economic side, there has been the rise in labor cost in emerging economies. Companies have been continuing to shift their supply source to lower labor cost countries for optimal sourcing, but such moves seemed to have encountered lower marginal returns.

Another factor we cannot ignore is animosity toward globalization, which is blamed for the widening economic divide between the haves and have-nots. I have very little sympathy for Mr. Trump, but he does have a point in that the destruction of manufacturing jobs in the developed economies, as a result of globalization, has been a major cause of the divide. We need to admit that high tech, particularly software and information service industries have not been able to generate a “middle class” so much as the manufacturing industries once did in the developed countries. Polarization of society into rich versus poor is a grave threat to our future, and we know it.

## Trends (1)?

1. Split between digital software/service industries and physical goods industry
2. Digital services (experience industry) continuing to globalize
3. Physical: Conflicting scenarios
  - (1) Continuation of globalized mass production model
  - (2) Return of flexible (small lot, large variety) production system

*Technologies exist to advance either scenarios*

So what will we see in the future? I do not claim to have a clear answer. But I do see a couple of important trends that may affect it.

One is the split between the digital service world, which might be characterized as experience industry, and the physical goods world. On the digital service side, we see no less than acceleration of globalization. The digital service providers include both software vendors and platform providers. So we certainly had to pay a lot to international digital service vendors in the last few months to bring Keio University online. The fact I see you more frequently than most other people in my own institution via Zoom is just a symbolic example of the trend at work.

We see a very different picture in the physical world, where we are faced with the uncertainties I mentioned. I have to assume that corporations in view of potential disruptions will at least be trying to hedge risks by sourcing some supplies closer to markets.

As a business major who is focused more on micro impact than macro factors, I am interested in how such a shift in supply chain design may affect business models and business processes.

In that context, I have been observing how globalizing supply chain models of the last thirty years have seen a reversal of the earlier trends toward flexible manufacturing systems in which diverse product lines were manufactured in small lots in more localized production lines. Such a model had led Japanese manufacturing to prosperity in the 1980s. In contrast, the world of iPhones is one in which tens of millions of units of the same hardware models are produced, principally in China, and sold worldwide to bring huge mass production benefits. In fact, one hundred thirty-seven million units of iPhone 6 were shipped. Such massive production requires sales in the global market to justify the investment.

Whether or not the iPhone production model will change, then, is the big question. We may see a return to flexible, more localized manufacturing systems that are more resilient in uncertain markets. We may, on the other hand, see the current mass production and distribution systems prevail, at least for the time being, as COVID-19 subsides. We note that technologies are available to allow either business model to evolve to the next phase.



## Trends (2)?

- Enhanced traceability
- By whom and how will supply chain be monitored?
- Emergence of “digital bloc” economy? Hopefully without a third world war.

Another factor exerting pressure on the supply chain is the requirement for increased traceability. In view of the heightened concerns over national security issues, by whom and how the supply chain should be monitored is set to become a major aspect in the design of future business architectures. There cannot be too many players in this. The implications of this are hard to assess. We may see the return of “bloc economies,” as experienced after the first world war. We must remember, however, that fragmentation of the global economy of that kind resulted in a gravely bloody war one hundred years ago. We would certainly like to avoid a war between a Chinese and an American digital bloc.



Thank You.

There are other things to talk about, but I think I talked enough. The only thing that is clear is that we are at a critical juncture. I will be very keen on hearing your thoughts on what the future may and SHOULD look like. We must think out of the box to develop new models for the world economy to prosper in the new context we now live in.