



SHIGA UNIVERSITY

**CRR WORKING PAPER SERIES A**

**Working Paper No. A-4**

**Globalization of Asian Economy and the Role of Sciences for Sustainable  
Society: Japan Perspective**

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**January 2005**

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GLOBALIZATION OF ASIAN ECONOMY AND  
THE ROLE OF SCIENCES FOR SUSTAINABLE SOCIETY :  
JAPAN PERSPECTIVE

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January 2005

I am currently serving as Member, Science Council of Japan.

This paper is a revised version of my paper with the same title which was read as an invited speech at The Fourth Science Council of Asia (SCA) Conference, Seoul, Republic of Korea during the period of 13-15 May 2004.

## Abstract

The concept of globalization per se is a relatively new product, thus being subject to scientific scrutiny. It is important to see that although the current stream of economic unification affects Asian economy in many ways, a great variety of Asian societies and cultures once existed and prospered even before the age of globalization. We need to find a way to bridge between globalization and diversification.

According to Adam Smith, the man of the most perfect virtue is the man can hold himself in selfish feelings and find a noble way to unite it with sympathetic feelings of others. It is quite regrettable that Adam Smith' s more favored concept of sympathy and "god society" has somehow been lost in the writings of many modern economists who have one-sidedly promoted his less favored idea of self interest and "invisible hand."

I do not recommend Asian people to ignore globalization altogether. It is neither realistic nor desirable. I just want to say that the extreme ideas exemplified by the market fundamentalism and its total rejection are not working well for Asian people. The third way between these two extremes should be found out. We must seriously take account of the existence of unique histories and rich cultures, and even more so in the age of globalization.

Japan is now in the doldrums and struggling with many problems after the bubble economy collapsed in 1989. Zero economic growth, zero interest rate, rapid increase in bad loans and unemployed workers and lack of confidence of the future and so forth constitute the so-called "no exit dilemma." In order to solve the no exit dilemma, I believe that we must change the prevailing ways of life shown by more production, more consumption and more contamination. We must instead put our best efforts to make the human/natural environment as sustainable as it once was.

Japan is the first country to introduce Western science and technology into the cultures and tradition of Asia. Today's Japan cannot be built in a day. ~ Education has played a vital part in the process. I think that the concept of globalization should be harmonized with diversity at all levels of schools. It is in this sense that all scientists and educationalists in Asia and in the world can work together on the basis of their own capacities and capabilities.

We live in the Age of Risk and Uncertainty. A lot of unexpected events would happen in the future. There is one thing for certain, however. The economic man is

no more than a partial man, and thus must be replaced by the total man with high moral values.

**Keyword :** Globalization, Asian Economy, Role of Sciences, Sustainable Society, Japan Perspective

**JEL Classification Numbers :** A11, F02, P51, N95

## I. Introduction

It is my great honor and pleasure to make an invited speech at the Fourth Science Council of Asia Conference in Seoul. The main title of my talk is "Globalization of Asian Economy and the Role of Sciences for Sustainable Society," with its subtitle being "Japan Perspective." Therefore, there are five key words in my talk. They are globalization, Asian economy, role of sciences, sustainable society, and Japan perspective.

Speaking of myself, I am a sort of American trained Japanese economist. My personal history has been full of risks and surprises. I was born in Osaka one year before the infamous Pacific War began. During the war, I hid myself with my family in an underground air shelter, and occasionally got out of the shelter to find safer places in my neighborhood. In hindsight, I would say that I could have been lost my life with a probability of 35 per cent or so. When the war ended in 1945, the Japanese society was in shambles, and people had a very hard time to feed their beloved families.

In the 1960s, people spent the time of instability and turbulences in which almost all major universities were shut down and my office at Kobe University was occupied by radical students. Then I made up my mind to go abroad for the continuation of my study of economic science. After successfully completing a doctoral course at the University of Rochester in 1972, I was given an opportunity to teach economic theory at the University of Pittsburgh. Because of family obligations, however, I got back to Japan in 1979, and worked at Hiroshima University, later at the University of Tsukuba, and now at Shiga University. At present, I have the honor of serving as a member of the Science Council of Japan, belonging to the Third Division as a professional economist.

Considering my long career as a teacher at many universities in Japan and abroad, I think that I am in a rather unique position to discuss the role of sciences for sustainable society in the Age of Globalization, with special reference to Asian Economy and Japan perspective.

Let me start my talk by referring to a famous quotation made by a very noted natural scientist ages ago. The name of the scientist is late Pro. Dr. Seishi Kaya (茅誠司先生), then served as the President of the University of Tokyo and a one-time President of the Science Council of Japan. In 1957, Kaya sensei remarked in a prestigious newspaper:

"On reflection it is really ridiculous that mankind cannot live on this globe peacefully with each other when they possess the knowledge and know-how even of making a round-trip to the moon. The most important thing from now on seems to join our efforts in making as short as possible the time span when we can all visit the moon as friendly tourists, in stead of being involved in the clash between communism and capitalism."

As the saying goes, time flies like an arrow. Almost fifty years have rolled on since the aforementioned remark made by Kaya sensei . In reflection, it seems to me that his remark remains to be valid even today although it may not be 100 per cent correct.

On the one hand, some people possess the knowledge and know-how even of sending a vehicle to the Mars and of investigating sands and rocks to seek for the trace of sea water. Our industrial and medical technology has developed so significantly since Kaya sensei's remark. At present, all people on this globe can very easily communicate with each other by making full use of high information technology such as mobile phones and E-mails.

On the other hand, it appears that people cannot live on this globe peacefully even today because of the reasons that may be more or less different from those fifty years ago. There existed no pressure for globalization at all a half century ago. In fact, the world was then divided into the two camps. They are capitalism and communism. The clash between the two was conspicuously called the Cold War. In order to understand how harsh the clash once was, let me recall the following well known question from Paul A. Samuelson' best selling textbook, Economics, Seventh Edition, 1967.

"America leads Russia, but will the gap narrow?"

This phrase is attached to Figure 40-1, page 791, in Chapter 40 "Alternative Economic Systems," the very last chapter of Economics. There were two economic systems under fierce competition's capitalist and communist systems. Samuelson who won Nobel Prize in Economic Science in 1970 indicated that in 1960s, Russian real GDP was about one-half U.S. real GDP. See Appendix 1.

Russian economic growth rate was then around two times as large as American one, so Samuelson hinted even the possibility, if not the probability, that in 2000, forty years from then, Russia would overtake America in terms of real GDP.

We are now in the 2000s, the target years of Samuelson's prediction. In 1989,

U.S.S.R. unexpectedly collapsed and has divided into Russia Federation and many other countries. The clash between communism and capitalism seems to be weakened a great deal, if not totally vanished. We can learn one lesson from this history No economic systems are almighty and will eventually lose their politico economic powers. The sun rises and sets , and might rise again.

We must understand that the concept of globalization per se is a relatively new product, thus being subject to scientific scrutiny. It is definitely important to see that although the current stream of economic unification affects Asian economy in many ways, a great variety of Asian societies and cultures once existed and prospered even before the age of globalization. We need to find a way to bridge between globalization and diversification.

## II. Globalization and its Impact on Asian Economy

In this talk, I am mainly concerned with the following series of questions. What is globalization all about ? How does it work theoretically and/or practically? Is it really good or bad for the economy and welfare of Asia ?

These questions are of much interest and even fashionable. I think, however, that we should not so hastily find a definite series of answers from a mere economic viewpoint before taking account of many other moral and cultural factors.

I find it very convenient to begin my talk by rereading Adam Smith's two great books. They are *The Theory of Moral Sentiments* 1759, and *The Wealth of Nations* 1776. Adam Smith is now called "The Father of Economics" from which all later economic theories have originated. I must recall ,however, the historical fact that Adam Smith was Professor of Moral Philosophy rather than Professor of Political Economy at the University of Glasgow, ant that he presumably preferred the first book (*The Theory of Moral Sentiments*) to the second book (*The Wealth of Nations*). He made his last ditch efforts to revise *The Theory of Moral Sentiments* Indeed, he published its final sixth edition shortly before his death in 1790.

Let me cite the very first sentence of *The Theory of Moral Sentiments*:

"How selfish man may be supposed, there are evidently some principles in his nature. Of this kind is pity or compassion, the emotion which we feel for the misery of others."

According to Adam Smith, the man of the most perfect virtue is the man who can hold himself in selfish feelings and find a noble way to unite it with sympathetic feelings of others. On reflection, it is really ridiculous that Adam Smith's more favored concept of sympathy and "good society" has somehow been lost in the writings of many modern economists who have one-sidedly promoted his less favored idea of self interest and "the invisible hand."

I believe that the advocates of global capitalism base their arguments on a very simplistic model of the market economy, in which Adam Smith's invisible hand is supposed to work, namely the model of perfect competition and perfect information. In other words, it is nothing more than the utopian idea of "market fundamentalism," a resurrection of the laissez-faire policies which were advocated by a group of economists in the nineteenth century. In the real world, however, competition is far from perfect, and information flow is not evenly distributed among people .

George Soros is a man with many faces. He is not only a legendary investor in the world of international finance, but also he distinguishes himself as a noted scholar who have published so many books and articles. In one of his recent books, he remarked:

"The development of a global economy has not been matched by the development of a global society. The basic unit for political and social life remains the nation-state. International law and international institutions, insofar as they exist, are not strong enough to prevent war. Ecological threats are not adequately dealt with."

I am inclined to say that this is the essence of globalization. The present state of the global economy is characterized not merely by free trade in goods and services, but even more so by the free movement of financial capital across the borders. We must bear in mind, however, that human life is basically subject to the country/region constraint. Man is regarded as the complex product of country, history, culture and religion.

In Asia, there are many countries which have their own histories and cultures. Some cities and towns are 2000 or 3000 years old, and others are even more than 5000 years old. It is quite intolerable to see that such old traditions with much diversity might become the victim of the relatively new wave of globalization. As was rightly pointed out by Joseph Stiglitz, a winner of the Nobel Prize for Economic Science in 2001, globalization today is not working for many of the developing countries. It is not working for much of the environment such as world-wide pollution and global warming either.



Let me make my position clear. I do not recommend Asian people to ignore globalization altogether. It is neither realistic nor desirable. I just want to say that the extreme ideas exemplified by the market fundamentalism and its total rejection are not working well for Asian people. The third way between these two extremes must be found out. We must seriously take account of the existence of unique histories and rich cultures, and even more so in the age of globalization. Imagine that all the people have the same height and weight, and wear on the same suits and pants, and have one and the same opinion for all agenda. This would be absolutely absurd.

The question to ask is whether and to what extent we can make a bridge between globalization and diversity. I am sure that our fellow scientists in Asia can work together to seek a reasonable solution. As the saying goes, two heads are better than one. And there are much more than two heads present at the meeting.

### III. The Role of Sciences for Sustainable Society Japan Perspective

I am a member of the Science Council of Japan, having the honor of representing the science community in Japan. I believe that this council is a quite unique organization in the sense that it embraces all the fields of sciences, not merely natural sciences but humanities and social sciences as well. The council is expected to offer opinions and advice to the government and the public from a very wide and high viewpoint.

More specifically, the Science Council of Japan consists of seven divisions. The first division is related to humanities such as philosophy, literature and history. The second division, jurisprudence and political science; the third division that I myself belong to, economic and business sciences; the fourth division, natural sciences such as mathematics, physics and chemistry; the fifth division, engineering sciences such as electrical, civil and nuclear engineering; the sixth division, agricultural and forest sciences; the seventh division, medical sciences such as anatomy, clinical and social medicine.

The Science Council of Japan established the Japan Perspective Committee in December 2000, namely at the end of the 20th century, in order to discuss how much people have positively or negatively accomplished in the areas of science, technology, industry, economy and so forth, and whether or not in the 21st century, we can continue

to stay on the same course as before. The committee chairman was Prof. Dr. Kiyoshi Kurokawa (黒川清先生) , then Vice President and now President of the Science Council of Japan and I was one of the thirteen members. The Pamphlet entitled *The Japan Perspective* is the culmination of discussions held by this special committee over almost two years. I think that the Fourth Science Council of Asia Conference in Seoul in May 2004 would be the right place at the right time for me to inform you of some key points of *The Japan Perspective*. See *Appendix 2*.

As everyone would agree, there are three main events that can characterize the 20th century. They are the world wars and revolutions, the explosive development of science and technology, and the rapid growth of population. Japan is currently in the doldrums and struggling with many problems after the bubble economy collapsed in 1989. Zero economic growth, zero interest rate, rapid increase in bad loans and unemployed workers and lack of confidence of the future and so forth constitute the so-called "no exit dilemma."

Someone might say that the no exit dilemma is a phenomenon peculiar in Japan. I do think, however, that all Asian countries have more or less been influenced by it, and will have to face this dilemma themselves sometime in the 21st century.

There are two different approaches to solving the no exit dilemma. The first approach is to change the environment surrounding the dilemma by means of more innovation , more production and more consumption, while maintaining the existing values and ways of life. The result will be more global warming, more destruction of forests and more acid rain. The second one is to change the prevailing awareness and values by which the dilemma is confronted , while putting our best efforts to make the human/natural environment as sustainable as it once was. I think that the second approach is a more desirable one.

Everyone in the street would agree that the Earth may be blue and beautiful yet is finite in terms of space. The Earth is a planet with limited air, limited soil, and limited seas, lakes and rivers. I am afraid that the everlasting expansion of human activities without a considerable change in the way of human life would make it likely that the 21st century will be a century of disputes and environmental destruction.

Japan is the first country to introduce Western science and technology into the culture and tradition of Asia, and it has achieved the second largest economy in the world. Today's Japan cannot be built in a day, however. I should stress the fact that education has played a vital part in the process. The modernization of Japan in the

Meiji era 140 years ago was largely based on the adoption of a compulsory elementary school system covering the entire population regardless of income, sex or religion. The extension of this compulsory education was done in the aftermath of the Second World War more than 50 years ago. In Japan, the rate of literacy is 99.97 percent substantially all people can read and write the Japanese language. And a system of higher education is well developed in Japan, thus contributing to higher intellectual levels among the general populace.

Education, lower or higher, is very important for the society to be stable and sustainable. I think that the concept of globalization should be harmonized with diversity at all levels of schools. It is in this sense that all scientists and educationalists in Asia and in the world can work together on the basis of their own capacities and capabilities.

#### **IV. Conclusion**

In ancient China, more than 2500 years ago, there lived a great philosopher whose works have formed one of the cores of Oriental civilization. His name is Confucius (孔子). I think that even today, his thought remains very important for understanding the present states of the world and the future prospects. The Discourses and Dialogues (『論語』), the main book of Confucius's teaching, begins with the following sentences:

"The Master or Confucius said, 'Is it not so pleasant to learn with a constant practice and application? Is it not so delightful to have friends coming from a long distance?'"

Here at Seoul, Republic of Korea, so many men of learning from distant places have come to have discourses and dialogues on a set of important problems facing us today. Following Confucius's teaching, I would say that it is no more pleasant and no more delightful meeting than this one.

In my opinion, Confucius as a great Oriental philosopher, and Adam Smith as a great Western thinker economist have many things in common. Both of them find much interest in ethics or the study of standards of conduct and moral judgment. Confucius teaches his followers that men should be those with complete virtue (君子)

rather than those with low standard ( 小人 ) . High morals, benevolence and humbleness are among virtues recommended by Confucius. Likewise, Adam Smith stresses that men's selfish behaviors are not enough to guarantee the working for the good society. Other moral sentiments such as sympathy and compassion must be indispensable for human welfare in its true sense. The economic man is no more than a partial man , and thus must be replaced by the total man with high moral values.

We live in the Age of Risk and Uncertainty. As I mentioned before, my personal history is the one with many risks and surprises. I am afraid that a lot of unexpected events will happen in the future. There is one thing for certain, however. In this new century, the concept of a sustainable society is more important than the one of a sustainable development. It is very important that all scientists in a variety of fields may come together at one place like the Fourth Science Council Conference to discuss urgent topics such as globalization of Asian economy and the role of sciences for sustainable society.

Information flow may be more powerful than money flow. Besides, continuation is equally imperative. I would like to end my talk in the hope that this century will be the Century of Asia.

## Acknowledgement

An earlier version was presented as an invited speech at The Fourth Science Council of Asia (SCA) Conference in Seoul during the period from 13 to 15 May 2004.

I am grateful to Dr. Ho Wang Lee (President, Science Council of Asia), Prof. Man Woo Lee (Korea University), Prof. Michiatsu Kaino (Vice President, Science Council of Japan), and Prof. Robert William Aspinall (Shiga University) for invaluable comments and helpful discussions. Any errors or imperfections which might remain are my own responsibility.

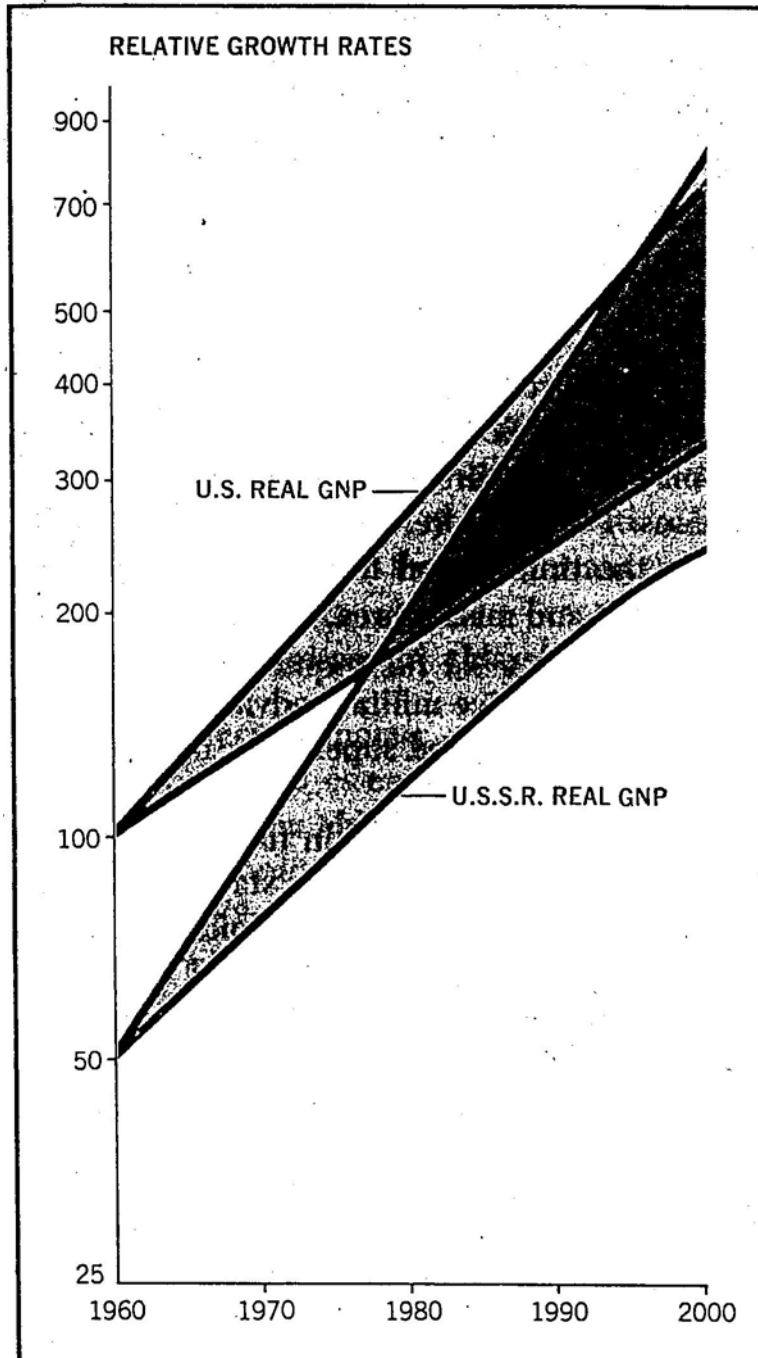
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Appendix 1.

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America leads Russia, but will the gap narrow?



Appendix 2.

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