

At the beginning of the 21st century, many countries entered a process of high economic growth.

We invited a wide range of stakeholders to discuss what is needed for growth in these emerging economies, and what ITOCHU Corporation should do moving forward to assist in this growth. (Discussion held on May 20, 2010)

Social and economic situation and challenges for growing emerging economies

Akamatsu Our jobs and personal lives are involved closely with development in the BRICs and throughout Asia, and this development must be sustainable.

Today, I would like to ask for your suggestions on the businesses that ITOCHU should operate in the emerging economies.

Ka Discussing the Earth's capacity, I am reminded of the 1972 report from the Club of Rome, "The Limits of Growth." It has been several decades since this report was



published, and my thought on sustainability now is whether the current growth is sustainable.

I think that we have to think seriously about an economic theory that lets us be happy without growth. In the future, if China becomes as prosperous as Japan, and reaches the same level of car ownership as Japan has now, then that will be 700 million cars. If that happens, then the Japanese islands will be covered in smog yearround. As an example, I think that the time has come to seriously consider a scheme where people can be happy without riding in cars.

Kikuchi On the other hand, when you ask about the level of material wealth that people want, China's paper consumption went from 80 million tons in 2008 to 94 million tons in 2009. This is an 18% increase over the course of a year, greatly outpacing the growth in GDP.

When you look at national consumption per capita, in 2008 it was 266 kg in America, and 242 kg in Japan, while just 59 kg in China, and 9 kg in India. There is thus a large amount of latent demand for pulp in the emerging economies, and if we run out of forest resources, then it could destroy the environment as well.

Aoki When you go to the emerging economies, the people there want the things that we use in countries like Japan. It would be irrational to tell them not to get those things. If you cannot understand this desire, then there is no way to move the discussion forward. It is important to think about how we can balance material prosperity with the Earth's capacity.

Kawaguchi Over the past 50,000 years of human history,

Outside experts



Prof. Haruhiko Ando
Visiting Professor, the University
of Electro-Communications
Director for Science, Technology
and Innovation, Cabinet Office



Mr. Ka Ryu Senior Fellow Fujitsu Research Institute



Ms. Mariko Kawaguchi General Manager, CSR Promotion Department Daiwa Securities Group Inc.



Dr. Hiroyuki KawashimaAssociate Professor
Graduate School of Agricultural
and Life Sciences / Faculty of
Agriculture, The University of Tokyo

ITOCHU Corporation



Toshihito Tamba
Executive Vice President (LINEs)



Yoshihisa Aoki Senior Managing Executive Officer President, Food Company



Satoshi Kikuchi Managing Executive Officer President, Chemicals, Forest Products & General Merchandise Company



Yoshio Akamatsu Senior Managing Executive Officer Chairman, CSR Committee

while we were hunter-gatherers and farmers, growth was quite slow, essentially tied to the productive capacities of the Earth and sunlight. But in the industrial revolution, with the discovery of coal and oil, which are a storehouse of the sun's energy, we are now about to use up the Earth's assets and heritage. I think that we have to gradually transition to an economic model of seeking and increasing spiritual happiness.

Kikuchi After the Stone Age, Bronze Age, and Iron Age, we are experiencing the Petroleum Age. We didn't

go from the Stone
Age to the Bronze
Age because we ran
out of stones; new
ages arrived because
we created new
things: bronze tools,
and then iron tools.
We are now in an
unprecedented era
in which humans are
about to completely
use up our
petroleum resources.



India. My specialization is agriculture. When farmers spread fertilizer on their fields, although it raises productivity, eutrophication caused by that fertilizer pollutes lakes, rivers, and bays. Sewers must be built using public money, so ODA from Japan is probably also necessary, but there is nothing that individual people or companies can do unless the government makes a move. It would be great if trading companies could leverage Japan's experiences in building infrastructure, and serve as a bridge between Japanese technology and governments in emerging economies.

Meanwhile, I think that concerns that we will run out of food are nearly groundless. Over the past 30 to 40 years, while GDP has increased several fold, food prices have less than doubled. This is because overproduction has destroyed the balance of supply and demand.

The problem is food distribution. Nearly all starvation is caused by civil war, conflict, and inadequate agricultural policies. I think that it is a mistake to tie this to food shortages.

Water and food issues

Ka Placing the focus on China and India, I think that the most vexing issue is water. I was born and raised in Nanjing, and lived right next to the Yangtze River. When I was young I used to swim in it, but I do not feel at all like swimming in it now. Industrial wastewater, agricultural wastewater, and sewage from cities flow into the river without sufficient treatment, and the river has now become a filthy sewer.

Kawashima Water pollution is also a severe problem in



Excessive food production also means that farmers are becoming poorer. In Asia in particular, the pace of economic growth has been fast, and farmers have been unable to keep up with these changes, leading to a gap between rich and poor in society.

Aoki There are aspects of food whose future cannot be predicted clearly. Some examples are issues of water and technological innovation. Depending on how these changes, I truly cannot tell whether or not we will have enough food. But I guess we will make our utmost efforts to ensure that there is

enough. There are regional disparities, and gaps between supply and demand. Our challenge as a trading company is to respond to shortages and needs in emerging economies by creating new models, such as combining production with distribution.



Kawashima The

issue of virtual water also comes up frequently. As market economies have developed, the appropriate production has come to be carried out in the appropriate locations worldwide. I think that it is more reasonable to see this as the beginning of movement of virtual water. I think that this is friendlier to the environment than excessive irrigation in order to grow food in places that aren't suited to farming. Overall, I think that it will go better if organizations like trading companies promote the appropriate transportation of goods that are produced in the appropriate places.

What environmental technologies are demanded by the emerging economies?

Ka In the debate over global warming, the emerging economies all claim that it is a conspiracy by the industrialized countries. But it is certain that if they do not make efforts now, they will be harming the planet, and by harming the planet, they will harm themselves. But despite this, the issue of global warming is not a high priority for them, because the focus is placed on economic growth.

I think that in order to advance environmental measures in the emerging economies, we need to change the awareness of the people, and create schemes and policies that incentivize people and companies. Japan has experience improving the environment, so I hope that they bring not only their technologies, but also their know-how in changing awareness and creating schemes to the emerging economies.

Ando It seems to me that at first, the emerging economies were imitating the industrialized countries; however, that recently they are taking advantages of "modular architecture," a new industrial structure, and quite often succeeding at managing to mix and match various modules and technologies and creating huge business value very rapidly.

In BRICs, the abundant resources and population



(potential huge market) are the backbone of their growth, so they leverage these factors to swiftly incorporate new business models and achieve rapid growth. I think that this is the current economic trend. **Tamba** I work in L-I-N-E-s*1, where we are creating new ITOCHU businesses that cross through the whole company. In this role, I would like to describe our solar and smart-community*2 initiatives.

Turning to solar power, what makes solar power stand out is that it can be installed anywhere, and technology innovation has progressed further than any other forms of renewable energy. This will mitigate global warming, while at the same time promoting employment in emerging economies. In the sense of not being dependent on other countries for energy, it also signifies energy security. We are working to create a value chain both upstream and downstream. Our focus is on Japan, Europe, and America, but moving forward we will probably move into the emerging economies. Recently, we have begun a project to generate solar power in villages without electricity, and supply water from wells using electrical pumps.

Kawaguchi Distributed energy using solar power is said to be suited to BOP*3 businesses. These businesses also add value to health and education in poor rural villages in India, so although profitability comes into play, I hope that you will continue with these initiatives. **Tamba** Also, smart communities are an attempt to build infrastructures and systems for all of society, including electric power as well as buildings, homes, and new transportation systems.

This can create new business opportunities across all industries, so we are advancing experimental pilot projects in Japan and the United States. In Japan, we started a joint pilot project in Tsukuba City on May 17th, 2010, for a new low-carbon transportation social system (see pages 9-10).

In China, we are advancing a plan to develop the

island of Changxing, in the city of Dalian, in Liaoning province, as an "eco island." ITOCHU is coordinating a wide range of fields, from water and transportation systems to recycling, together with Japanese, Chinese, Korean, and European companies.



The role of ITOCHU Corporation

Ando Your company is making bio-ethanol in the Philippines. That is good; however, it is necessary to look very closely at whether the total process including manufacturing method is truly sustainable. I think that we must always be careful at whether things are truly sustainable, looking 50 or 100 years down the road, and focusing on energy, water, food, and many other aspects.

Under the Obama Administration, America is currently creating new markets for biofuels and the like, including creating schemes and regulations. For example, many countries are creating programs that provide support for innovation, in anticipation of future rises in the prices of fossil fuels, resources and carbon credits.

I think that Government needs to encourage companies to seek innovations on environmental issues, by creating affirmative, systematic legal frameworks, and create opportunities for people to tackle.



Tamba Speaking for example of smart communities, Japan Smart Community Alliance was created in April, with the New Energy and Industrial Technology Development Organization (NEDO) playing a central role in its creation. The alliance currently has 330 corporate members. The government and enterprise in Japan need to work together as a united team. These sorts of opportunities are being created in the fields of renewable energy and smart communities in particular. Amid this, the question is how we can tie this into new businesses. Although it will take a significant amount of time, I believe that it is vital to do this with a longrange view.

Kawaguchi Rather than single technologies, I think that it is important to think about frameworks like the pilot project in Tsukuba City, or how to incorporate them into social programs. Your company has the perspective of thinking in terms of networks, and I hope you will continue to use your capabilities to take the role of a coordinator.

Ando Looking at general trading companies in Japan, I think that they have been playing a fundamental role by bringing things physically from where there are surpluses to where there are shortfalls, to fill unmet needs. Intangible assets, assets that you cannot see, are becoming more important now. There are demands on how we create new business models and paradigms that can link to invisible and intangible things.

In 2002, ITOCHU Corporation worked on a cooperative agreement with the Los Alamos National



Laboratory, located in the US state of New Mexico and where the most advanced technologies and talents are available. I think that everyone at ITOCHU Corporation carries on the DNA of the founder, Chubei Itoh, to continually take on new challenges with an eye to the future, which can be found in his motto "One step over hyaku shaku kantou (aiming to take one step higher when seemingly reaching a pinnacle of success)." I expect all of you to do your utmost to help create a new, sustainable world, including spurring the government into action.

Conclusions

Akamatsu Economies are connected, and actions are not easily undone. The growth of the emerging economies has also been founded on economic globalization, so we should think about overall maintenance, including food issues, while remaining aware of connections and sustainability.

It is extremely difficult to measure prosperity and happiness. However, considering what we can do and how we can contribute to society so that the people of the world can enjoy what the industrialized nations enjoy, without losing energy or resources, there are many things we can work on, including advancing the creation of

infrastructure, and utilization of environmental technologies.

The important thing is to maintain the connectivity and sustainability of our economies, while maintaining the viewpoint of an equal partnership.

Today's discussion was valuable, and it has given us a lot to

think about. Thank you all for your time today.

- *1 L-I-N-E-s: Life Care, Infrastructure, New Technologies & Materials, Environment & New Energy, synergy
- *2 Smart community: A social system using such technologies as smart grids and electric vehicles (EVs)
- *3 BOP: Base of the Pyramid. It refers to the people with the lowest income levels: annual incomes of less than \$3,000. It is estimated that this group accounts for 70% of the world's population, or about 4 billion people.