Symposium & Workshop

DRC-RIETI Workshop

The Growth of Chinese Industries in the Global Economy

May 22, 2009

RIETI held an international workshop "The Growth of Chinese Industries in the Global Economy" in conjunction with the Chinese State Council's Development Research Center (DRC). The workshop included discussions on the issues and prospects of Chinese trade and economy in the global recession and the recent research and development trends of Chinese corporations.

Introduction

At the outset of the workshop, RIETI Faculty Fellow Ryuhei Wakasugi provided an overview of DRC-RIETI research, explaining its background, objectives and main research themes. Corporate activities, such as increased outsourcing by Japanese companies to China, have significantly contributed to the expansion of trade between Japan, China, and the United States in recent years, while economic integration between Japan and China is rapidly taking place at the micro level through cross-border direct investment and outsourcing by companies. Given these observations, Wakasugi pointed out the essential nature of firm-level analysis, for instance in examining the relationship between China's economic growth and international trade. Accordingly, he said, the thrust of joint DRC-RIETI research is the empirical examination of firm-level data to determine to what extent the innovation and internationalisation of Chinese enterprises has contributed to the country's economic growth.

Session 1: Economy and Trade of China under Current Global Recession

China: Corresponding Measures to the Financial Crisis and Current Economic Situation

Chen Xiao Hong

(Director, Enterprise Research Institute, DRC)

Chen Xiao Hong

The capital market of mainland China remains largely closed to outsiders, which had the positive effect of shielding the Chinese financial sector from the direct impact of the subprime loan problem. Nonetheless, the global financial crisis has dealt a significant blow to Chinese exports. In 2008, China's overall exports logged a sharp year-on-year decline of 8.5%. But conditions differ from one industry to another. For instance, while machinery exports have dropped sharply, exports of labor-intensive goods such as clothes have managed to continue on

their upward trend. In addition to these external shocks, the Chinese economy is now going through a period of adjustment after overheating from 2004 to 2006.

In response to the financial crisis, the Chinese government has channeled loans on an unprecedented scale and committed to expenditures of 4 trillion yuan over the next two years primarily to support low-income people, improve the livelihood of people living in rural areas, develop infrastructure, and introduce new environmental measures. In addition, the government has also implemented structural tax reductions to shave 500 billion yuan from the annual tax burden, and formulated an industrial adjustment and revitalization plan designed to promote innovation and foster the competitiveness of Chinese enterprises in 10 key industries, including steel and automobiles.

Although the Chinese economy is showing signs of recovery, the prospects for exports and corporate earnings remain uncertain and warrant continued attention to the future course of the economy. The presenter's view is that China will be able to achieve its goal of 8% growth in gross domestic product (GDP) in 2009 because it is expected that: (1) Ongoing urbanization will generate enormous demand for housing and infrastructure in urban areas; and (2) Household consumption will increase following the establishment of a new and more extensive social security system that Chinese government leaders have attached great importance to.

Global Recession and Trade Linkage between China and Japan

Ryuhei Wakasugi

(Research Counselor and Faculty Fellow, RIETI / Professor, Institute of Economic Research, Kyoto University)

Following the outbreak of the financial crisis U.S. imports fell steeply, which affected countries across the world to varying degrees. Japan has been among the hardest hit, suffering a particularly large drop in its exports to the U.S. One big factor behind this is a profound decrease in U.S. automobile imports, which account for a significant portion of Japanese exports to the U.S. The negative U.S. demand

Ryuhei Wakasugi

shock to the automobile industry, which is Japan's leading export industry with a broad range of supporting industries, has had an extensive impact on the nation's industrial activity as a whole.

An observation of changes in Japanese exports to the U.S., in terms of the number of export items and the value per item, reveals that while the number of export items has been on a declining trend, the value per item has been increasing. This suggests that Japanese exports to the U.S. have become increasingly concentrated in a limited number of high value-added items. This tendency may have backfired when U.S. demand trended downward following the financial crisis, thereby amplifying the negative impact of the U.S. demand shock.

Japan-China trade, while being different from Japan-U.S. trade in its comparative advantage, is characterized by expanding vertical intra-industry trade. It is conceivable that the negative U.S. demand shock may be affecting Japan-China trade by way of such intra-industry trade. Japan-China trade is highly integrated at the individual company level.

Behind the financial crisis and its ensuing shock waves that have pounded global trade lie cumulative current-account deficits and under-saving in the U.S., current-account surpluses in China, and income surpluses in Japan. With a sizeable middle class expected to emerge from East Asia in the coming years, the region will transform itself from the factory of the world to the consumer market of the world. Although Japan needs to pay due attention to its trade balance that has recently turned to a deficit, correcting the

global macro imbalances is imperative in preventing the destabilization of world trade.

Japan and China should be playing key roles in providing capital, technology, and markets for growth throughout the entire region of East Asia. There are a number of potential research topics in the areas of trade and investment between the two countries, which are experiencing economic integration at the micro-economic level.

Session 2:
Growth of Chinese Industries

Innovation of Chinese Firms: Mechanism, performance, and strategy
Chen Xiao Hong

After the launch of enterprise reform in 1978, private enterprises became a driving force behind innovation in China. In addition to the national innovation system and policy, innovation efforts are now being undertaken by individual entrepreneurs and enterprise managers on their own initiative due to the demand and competitive pressure in the market. However, the market environment surrounding innovation differs significantly from sector to sector, and the level of innovative capability varies widely among leading Chinese enterprises. For instance, in the steel industry, the Baogang Group boasts strong capabilities in technology development, but Chinese enterprises in the information technology sector remain underdeveloped in terms of innovative capability. Lack of financial resources often constrains innovation in industries where innovative activities would require enormous investment.

Chinese enterprises continue to lag behind foreign companies in innovative capabilities. Spending on research and development (R&D) by leading Chinese enterprises is lower than that for their foreign counterparts, both in absolute terms and as a percentage of sales. Until the late 1990s, Chinese enterprises' innovative activities had been geared primarily toward product development with very few basic research activities carried out. However, from then onward Chinese enterprises have been building R&D capacity, prompting many enterprises to conduct applied research and expand their innovation networks overseas. In 2006, the Chinese government introduced a policy to promote market-oriented innovation led by individual enterprises. The policy, which is modeled after one implemented in Japan, calls for large-scale investments over the next several years.

Chinese enterprises' innovation strategies are primarily directed toward integration- and improvement-type innovation. A market-oriented approach, the commitment of top management, and effective governance are the keys to successful innovation strategies.

Introduction of Chinese Enterprises' R&D activity
Xu Zhaoyuan

(Assistant Research Fellow, Enterprise Research Institute, DRC)


Xu Zhaoyuan

R&D investments by Chinese enterprises have been increasing 20% per year over the past several years, and it is expected that their contribution to the economic growth of China will further increase in the coming years. As of 2006, China's R&D expenditures stood at 1.4% of GDP, which is lower than the member countries of the Organization for Economic Cooperation and Development (OECD) but higher than the three other BRICs countries, namely, Brazil, Russia and India. Large- and medium-sized private-sector enterprises account for 57% of total R&D expenditures in China. Recent years have witnessed a marked increase not only in R&D investments, but also in expenditures for technology innovation and absorption accompanying such investments.

Both of the datasets used for this joint research with RIETI were collected and aggregated by the National Bureau of Statistics of China. One dataset covers state-owned and non-state-owned large- and medium-sized enterprises

with sales of five million yuan or more (i.e., statistics of "above-scale" industrial enterprises in China). The statistics represent only about 20% of the total number of enterprises, but account for nearly 90% of China's industrial production and almost 70% of employment in the industrial sector. The other dataset provides data on science and technology activities—R&D investments, technology purchases, etc. —by large- and medium-sized enterprises classified into 39 different industries, 31 geographic regions, and different types of ownership structure with the number of observations totaling nearly 2,500 per year. The statistics show that R&D investments by foreign-funded enterprises are generally around the same level, in terms of a percentage of sales, as those of domestic enterprises.

How do Chinese Industries Benefit from Knowledge Spillovers?

Naomitsu Yashiro
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Banri Ito
(Fellow, RIETI / Lecturer, School of Economics, Senshu University)


Naomitsu Yashiro

R&D investments have been expanding rapidly in China in recent years. Although about 70% of such investments are made by domestic enterprises, the proportion attributed to foreign companies has been rising sharply. This joint research is intended to measure the extent to which the R&D investments of Chinese enterprises have been contributing to the economic development of China and what spillover effects foreign companies' R&D activities have had on Chinese industry, thereby helping China formulate policies vis-à-vis foreign direct investment and R&D.

The spillover effects of foreign companies in China have been subject to many studies. But very few have taken into account the significant presence of "foreign" companies from Hong Kong, Macau and Taiwan, a characteristic unique to the Chinese economy, or differences in spillover effects between Chinese-foreign joint ventures and wholly foreign-owned enterprises. In addition to considering these factors, this research has divided foreign companies' activities into two categories—R&D and production—and examined spillover effects with respect to each type of activity to discern which types of spillover effects are derived from which activities of foreign companies.


Banri Ito

Estimation results show that R&D activities of Chinese-foreign joint ventures, particularly those affiliated with Hong Kong, Taiwan and Macau companies, have spillover effects on the productivity of the domestic industry. Foreign companies from other regions (primarily OECD countries) have been intensifying their R&D investment in China in recent years. However, in terms of these companies' spillover effects on domestic industry in China, production activities have been found to be more important than R&D activities.

Discussion

Enthusiastic discussions took place on the following topics:

- The current state of the labor market and income disparities in China, and the government's policy responses thereto;
- Japanese industrial cooperation for the development of the Chinese economy;
- The actual state of technology absorption by Chinese enterprises through the acquisition of foreign companies;
- Medium- to long-term potential for spillovers from the R&D activities of foreign companies from OECD countries; and
- Problems arising from macro imbalances between China, the U.S. and Japan.