

Summaries

**A Study on the Economic Development of Inland Regions
from the Perspective of Land Transportation Competitiveness:
Analysis of the measurement of trade costs along the “New Silk Road”**

Yiliang Wu, Takaaki Maeno

This work examines the competitiveness of land transportation along the New Silk Road as part of a study on the economic development of inland regions. This analysis incorporates terms for the non-homogeneity of land transportation conditions into its economic model, measuring the cost of trade between five Chinese provinces and five countries along the New Silk Road. The maximum distance for land transportation of cargo eastbound is from the Netherlands to Xinjiang, China, and from Jiangsu Province, China to Belarus for westbound cargo. Regarding land transportation infrastructure, while improvement from the Chinese side is clear, distances between sections are not sufficient. This constitutes an impediment to improving the competitiveness of land transportation within the Eurasian inland region.

**International Division of Labor and Economic Development of Inland Regions
in Heilongjiang Province from Trade Data:
An Analysis of Changes in the Structure of Trade in Terms of Trade Components**

Takaaki Maeno, Yiliang Wu

As part of a study on the economic development potential of inland border regions, this work analyzes the characteristics of the trade structure of Heilongjiang Province, located in Northeast China, with neighboring. The analysis draws on tariff line-level data on Heilongjiang's foreign trade for the years 2008 and 2018 to examine changes in its trade structure by industry and production use with four neighboring countries (Russia, Japan, South Korea, and North Korea), and to decompose its trade structure by component to determine which are responsible for changes in trade structure. From the trade statistics, Heilongjiang Province is highly dependent on the Russian market, and this trend is particularly conspicuous in the trade in mineral resources. The structure of its trade with South Korea and Japan displays different characteristics; however, with imports showing a trade structure similar to that of the East Asian region, with new items in machinery-related industries (extensive margin of trade) and an increase in imports of existing items (intensive margin of trade), while despite relatively similar trade structures between Korea and Japan, exports exhibit a different export trade structure. These results suggest that the effects of production networks in East Asia, such as internationally dispersed location of production bases owing to changes in trade barriers as a result of market globalization and the formation of agglomerations due to companies' overseas expansion, is spreading to inland border regions.

Formation of New Growth Centers and Trade Structure Transformation in China's Northeast Border Regions

Yugun Riku, Tomoe Yasuda

This paper aims to elucidate the impact of trade structure transformation on the emergence of growth centers within the border regions, focusing on the Northeast Asian economic zone connected to the Eurasian landlocked regions. The study focuses on the provinces of Heilongjiang, Jilin and Liaoning. Northeast China has an industrial structure skewed toward heavy and large industries, a legacy of the Maoist era's strategy of developing heavy industries; furthermore, the proportion of state-owned enterprises is high. Therefore, it is appropriate for the Chinese government to introduce free trade-oriented policies to transform the industrial structure of the region and promote new growth engines. The research questions are: What benefits does border trade bring to the regional economy and how can economic disparities be reduced while attaining sustainable growth?

This study captures the flow of the formation of growth centers starting from trade, presents a four-factor model of growth center formation, and through verification using trade data, the following research results are obtained.

First, the study identified two trade patterns within the Northeast region: primary goods trade in the Heilongjiang and Jilin provinces and manufactured goods trade in the Liaoning province, and confirmed that trade drove their economic growth.

Second, this study found that border trade brings division of labour benefits, and that the expansion of trade associated with the "opening up" of border regions has the effect of generating an economy of urbanisation through the process of endogenous agglomeration, with economic activity being concentrated in specific locations and forming growth centers.

Lastly, this study has analysed how the interaction between the upgrading of trade structure and the expansion of foreign direct investment has led to the location of more firms specialising in the production of manufactured goods in the region, thus generating a cyclical process of agglomeration, transforming the region from a trade staging post into a new growth center. It also analyses how the transformation of the trade structure will reduce economic disparities and enable sustainable growth. The analysis shows that the transformation of the trade structure will enable the elimination of economic disparities and the realisation of sustainable growth.

**Changes in Trade Structure in Mekong River Basin Countries:
Analysis of Competitiveness by Region and Industry**

Tomoe Yasuda, Yugun Riku

As part of a study on cross-border regional development, we analyze the trade structure of five countries and two regions (Myanmar, Laos, Vietnam, Cambodia, Thailand, and China's Yunnan Province and Guangxi Zhuang Autonomous Region) within the Mekong River Basin by region and by industry (2 HS digits) to capture changes in trade structure across the region based on its competitive strength.

The three main findings are as follows:

First, although Yunnan and Guangxi occupy only a small share of domestic Chinese trade, the scale of their trade is growing year by year, indicating that they share close economic ties with the Mekong Basin countries, especially neighboring Vietnam.

Second, the dominant industries of Yunnan, Guangxi, and the Mekong River Basin countries have interdependent relationships. Of the five countries and two regions included in this analysis, Myanmar, Laos, and Cambodia, which comparatively lag behind in economic development, are competitive in primary products, while Yunnan, Guangxi, and Thailand are competitive in machinery, electric appliances and transportation, and precision equipment, each dominant industry complementing the others.

Third, industrial competitiveness between Yunnan and Guangxi and the Mekong Basin countries has changed over time, with some industries shifting to competitive relationships, indicating a shift toward a horizontal division of labor.

The results reveal that Guangxi, Thailand, Yunnan, and Vietnam are catching up and integrating into the East Asian production network, while Myanmar, Laos, and Vietnam, which are adjacent to Yunnan and Guangxi, are growing more competitive, with some industries increasing their competitiveness.

Spatial Economic Networks in China during the COVID-19 Pandemic

Sho Haneda

Following the shift to the reform and the opening up policy in 1978, China's economy has continuously experienced high growth. However, the driving force behind this was the growth of its coastal regions. The three northeastern provinces and many inland regions were left behind economically.

In 2020, the spread of coronavirus disease 2019 (COVID-19) inflicted enormous damage in many countries. As a result, restrictions on the domestic and international movement of people and goods were introduced. These shocks may change the spatial economic networks in China, and their impacts may differ among provinces.

This study aims to quantify the spatial economic networks before and after the COVID-19 pandemic, as well as to explore the impact of the pandemic on these networks, especially in landlocked provinces.

The results of social network analysis indicate that eastern provinces play a key role in spatial economic networks in China, whereas other regions tend to be separated from the center of the network. In addition, the impact of the COVID-19 pandemic on spatial economic networks in China appears to be limited. This indicates that China may still experience unbalanced regional development. China requires economic policies to address this issue. Therefore, the Chinese government should reconsider its regional policies to solve these problems and enhance economic growth.

**Industrial Network and Cluster:
Restructuring Post-Pandemic Production Chains Based on Specialization
and Division of Labor**

Li Ke

The aftermath of the 2020 pandemic has ushered in a remarkably transformed global landscape, especially when it comes to the global production chains and supply chains. This paper presents a general equilibrium model, incorporating endogenous industrial cluster and endogenous industrial network of division of labor to formalize and explore the interrelationships and rules of industrial cluster, industrial network of division of labor, and economies of specialization and agglomeration under the new era of post-pandemic global economic paradigm. The model discerns that institutional efficiency characterized by mutual trust, coupled with competition among countries and industries, will facilitate pivotal circular effects, thereby propelling and shaping the configuration and allocation of industrial cluster, their position within the supply chain, and consequently the status of economic growth. In particular, improvements in the institutional efficiency of mutual trust over economic and technology systems will stimulate the demand for transactions and network size, which in turn will influence the development of cluster and network scope, as well as their positions within the network.

Keywords: industrial network, industrial cluster, specialization, division of labor, infra-marginal analysis, institutional efficiency of mutual trust

Transition from a Low Interest Rate Environment in Developed Economies and Japanese Fiscal and Monetary Policy

Hidetoshi Hashimoto

The low interest rate environment that had persisted since the start of the century, especially since the 2008 financial crisis, changed dramatically with the COVID-19 pandemic in 2020 and the Russian invasion of Ukraine. While the United States and European countries have shifted to tight monetary policy and continued to raise policy rates to control high inflation, Japan has maintained its policy of quantitative easing with yield curve control (YCC), and the future direction of monetary policy is attracting attention.

Against this background, this study identifies matters of concern involving the international economic and financial environment during the transition from a low interest rate environment and discusses the future of Japanese fiscal and monetary policy.

Chapter 2 summarizes the Secular Stagnation debate between Lawrence H. Summers and Ben S. Bernanke in the 2010s regarding the background of the long-term low interest rate environment in the United States and other developed economies. Additionally, we confirm Summers' and Bernanke's respective arguments that the Secular Stagnation theory is applicable to Japan, and that expansionary fiscal policy is not unconditionally supported when government debt is high.

Chapter 3 summarizes the interest rate environments and monetary policies of developed economies and identifies three issues of concern during the transition from a low interest rate environment: the risk of debt crisis, especially in emerging market economies, to consistent economic policy, including in developed economies, and of financial instability.

Chapter 4 discusses the future of fiscal and monetary policy in Japan, which has continued its policy of large-scale monetary easing. As a result, while the efficacy of expansionary fiscal policy was recognized, in its operation, priority should be given to price controls during periods of sustained inflation, and focused and "effective" fiscal policy should be instituted before the current account balance becomes fundamentally in deficit. At the same time, the top priority for Japan's monetary policy should be price control, and the continuation of rigid monetary easing policy risks delaying the resolution of structural problems in the Japanese economy that need to be solved.

**A Macrodynamic Model of Growth with Wage Inequality:
Cyclical Changes in Labor Share and Fiscal and Monetary Stabilization Policies**

Masahiro Ouchi

Although the income distribution gap between the rich and the poor had been shrinking in most developed countries by the middle of the 20th century, it began to widen around the 1980s, even in high-income countries. In this paper, we study the dynamic properties of an economy with wage inequality using an analytical framework of the high-dimensional dynamic Keynesian model. In this model, the state of wage inequality directly affects the determination of aggregate effective demand, labor productivity growth rates, and the nominal interest rates. Incidentally, the “countercyclical” of the labor share is a well-recognized feature of the Japanese labor market. In this paper, we introduce cyclical changes in labor share into the model. The characteristics of the “procyclical” and “countercyclical” labor share are shown to be one of the important factors determining the dynamic properties of our wage inequality economic model. The “countercyclical” labor share contributes to the stabilization of the system under the assumptions related to fiscal and monetary policies and the magnitude of the key parameters. This indicates that the stabilizing mechanism is similar to the “downward rigidity” of nominal wages during recessions. When the labor share becomes “procyclical”, we underscore the importance of an aggressive fiscal policy for dynamic stabilization. Our analysis also shows that there are persistent cyclical fluctuations around the long-term equilibrium solution. We also present an economic interpretation of each proposition with respect to the economic stabilization policy applied to the “liquidity trap” or “effective lower bound” (ELB) when the elasticity of the nominal interest rate is set to zero.

Trend Analysis of the Nikkei Stock Average under Japan's Low Interest Rate Policy

Hidetoshi Mitsui

This study uses the Markov-Switching Autoregressive Moving Average GARCH (MS-ARMA-GARCH) model to analyze the trend characteristics of the Nikkei Stock Average (Nikkei 225) during Japan's low interest rate period extending from Friday, February 12, 1999, when a zero interest rate policy was implemented, to Saturday, April 8, 2023, when Bank of Japan Governor Haruhiko Kuroda stepped down. During this period, the Bank of Japan's monetary policy can be described as follows: a zero interest rate policy from February 1999 to August 2000, from February 2001 to July 2006, and from October 2010 to April 2013; quantitative easing from March 2001 to March 2006; inflation targeting from January 2013 to the present; and quantitative and qualitative monetary easing policy from April 2013 to the present.

The model is estimated using the maximum likelihood method. During the low interest rate period under study, 69% of the days were in a bull market with high expected returns and low volatility, while 31% were in a bear market with low expected returns and high volatility. The average duration of the bull phase was approximately 9 days, while that of the bear phase was approximately 4 days. Results of the study make clear that the MS-ARMA-GARCH model is effective in analyzing the bull and bear markets of the Nikkei Stock Average. It was also found that the trend of the Nikkei Stock Average has been a long-term bull market after the financial crisis in 2008, the Great East Japan Earthquake in March 2011, and the big crash at the time of the Corona Shock in February 2020.

**Concentration in the U.S. Grocery Retail Market
and Leading Firms' Investment Activities**

Norie Yokoi

The growing concentration trends in the industry are driving aggressive investments by leading firms, making them progressively more competitive. At the same time, proactive investments by top-tier firms will result in the development of the industry as investments in innovative activities hold the potentials to strengthen competitiveness.

Grocery retailers have been building and expanding their networks through large-scale investments, mergers, and acquisitions, with aims to augment their corporate scales. The approach to network development and expansion has been changing as the ratio of online sales in total sales increases.

This study focuses on the U.S. market, a global leader in online grocery sales, to categorize the omni-channelization of grocery retailers and the strategies espoused by them to expand their networks. The study delves into their investment behaviors in the top-centralized environment, and examines how the outcomes differ depending on these approaches.

Market structure and policy issues in the coastal shipping market in Japan

Koichiro Tezuka

In this paper, we focus on the contemporary market structure and policies surrounding Japan's coastal shipping market. Coastal shipping (hereafter CS) in Japan is responsible for domestic sea transportation, and forms a domestic shipping network. According to the CS Industry Act of Japan, domestic shipping means the transportation of goods by sea, where both the port of loading and the port of discharge are within Japan. Compared to transportation by rail and road, maritime transportation carries the distinctive advantage of being able to transport large quantities of cargo to long distances.

What are the policy issues impacting the market structure of CS in recent years? What kind of policy responses can be considered and are actually being implemented to address these issues? How can these policies be evaluated? In view of this, we focus on the market structure and investments in the CS market, and offer few comments from the point of view of economic efficiency.

The CS industry consists of shipowners who own ships, operators who rent and operate ships, and shippers who contract with operators, forming a vertical relationship. The number of shipowners is large but the scale of operations is small, and so the bargaining power of shipowners is quite limited. Moreover, shipbuilding requires a large amount of capital, and shipowners face a high degree of risk. In response to these challenges, the government has been protecting the CS industry and shipowners by imposing economic regulations since the 1960s. The government then implemented a major regulatory reform and amended the CS Industry Act, known as the CS Industry Reform Act of 2005. The regulatory reform abolished the supply and demand adjustment regulations (capacity regulations), with the aim to promote competition and market restructuring as well as improve market performance.

Following the reform, the government espoused various measures without resorting to economic regulations in order to support shipowners and strengthen their bargaining power. The ship management company (hereafter SMC) scheme is one such initiative. From the point of view of market performance, the scheme would prove to be effective as long as SMCs are able to enjoy merits of scale.

Rising Markups among Japanese Listed Firms

Hyeog Ug Kwon

This study examined the evolution of markups within Japanese listed firms by utilizing firm-level panel data extracted from the DBJ Database, spanning the period from 1970 to 2018. The main findings from the analysis are as follows.

- (1) Markups among Japanese listed firms have been on the rise since 1993.
- (2) The rise of markups can be mostly attributed to TFP.

Keywords: Markups, TFP

JEL classification: L1

Network Effects and Conjectures in Duopoly

Shinji Kobayashi

This paper studies competition and conjectures in a differentiated product duopoly with network effects. We analyze a game in which duopolistic firms undertake Cournot competition in a differentiated product industry where there are network externalities. We show that there exists an equilibrium with consistent conjectural variations for the game and that the equilibrium outcome with consistent conjectures is more competitive than the Nash equilibrium outcome. We also present some comparative statics results.