**The 3rd Innovation and Global Industrial Development Forum & 2016 International Symposium on “New Incentives· New Model· New Economy”**

**Main Session：9:30-11:30**

**Chinese OFDI In EUROPE --Determinants and new challenges**

Jean-Louis MUCCHIELLI

University of Paris 1 Panthéon Sorbonne (France)

**Abstract**：The first wave of this new era of Chinese capital has already begun and it is increasingly impacting Europe: Foreign Direct Investment   (OFDI) by Chinese companies now exceeds $100 billion per year and has shifted from natural resources in developing countries to technology, brands, real estate and other assets in advanced economies. For most of the past, Chinese companies have been dismissed as low-tech firms with little innovative potential. However, the new reality is that Chinese firms are now at the cutting edge of innovation in several industries, and that the shift to a new growth model that emphasizes innovation and IPR protection will further accelerate this process. Chinese firms are already significant contributors to local R&D spending in Europe. Huawei has set up more than 30 R&D sites and innovation centers across Europe in Belgium, Finland, France, Germany, Ireland, Italy, Sweden and the UK with its R&D headquarters in Munich.

The problem then is to know what sort of competitive advantages they have. And how they transfer it abroad from China to the host countries? Nowadays we have not only to speak in term of global value added chain, but also in term of cluster. No more innovation can be done outside the cluster, so MNEs must be cluster -seeking.  Integrating a cluster is something more important (and difficult) than all other location determinants. So how can act the Chinese MNEs and in what term they can adopt agglomeration strategies? Their success will depends of that ability to cooperate inside clusters.

**Models and Principles of Knowledge Creation and Justification**

Yoshiteru Nakamori

Japan Advanced Institute of Science and Technology (Japan)

**Abstract：**This lecture first introduces a newly emerged academic discipline ‘Knowledge Science’ from several viewpoints, including the mission of knowledge science, the characteristics of knowledge that this discipline deals with, and differences from information science. After considering two historical approaches to knowledge creation and verification, the lecture introduces a third approach that triggered to establish the School of Knowledge Science at Japan Advanced Institute of Science and Technology. The audience will be asked to draw their own knowledge creation process after learning some models based on this third approach. Then, the lecture proceeds to the problem of knowledge verification and justification. Here, it introduces some historical approaches to knowledge verification, and then proposes new principles of knowledge justification, distinguishing the difference between verification and justification. The audience will learn why justification is important in knowledge science, and they will be asked to consider how they will justify their own research. The final topic of this lecture is the theory of knowledge construction systems, which this lecturer has been developing recently. In this lecture, this theory will be introduced briefly, using the case that a Japanese chess master creates and validates his new tactics, new knowledge. Finally, the lecture will discuss the way of knowledge synthesis, using the idea of the Western dialectic and the Chinese yin-yang thought.

**Experiencing modern management techniques for organizations changes in a disrupted global economy. A global approach for multicultural SMEs**

Didier Delevla

Bordeaux Business School (France)

**Abstract：**Experiencing modern management techniques for organisations changes in a disrupted global economy. A global approach for multicultural Small and Medium Enterprises (SMEs). **This presentation analyses how the global enterprises strategies are jeopardised by a disrupted economy.It focuses on the new available business models, which challenge the status quo.It emphasises the importance of emerging new SME in cross-cultural global business and their development through collective learning.**

**Session of [Industrial](http://dict.youdao.com/w/industrial/" \l "keyfrom=E2Ctranslation)** [**Economy**](http://dict.youdao.com/w/economy/#keyfrom=E2Ctranslation)**：13:00-16:40**

**Momentum is Really Short-term Momentum**

Liu Qianqiu

University of Hawaii (USA)

**Abstract：**We demonstrate the estimation biases that arise when stock returns from 12 month prior and 2 month prior are included within intermediate and recent past momentum profits. These biases lead to an overestimation of intermediate past momentum but an underestimation of recent past momentum in the US market. There is no significant difference between the predictability of stock performance in the intermediate past and the recent past once we exclude these two months from the construction of momentum strategies in the US and each of the 26 major international markets.

**Urbanization should slow down**

Ma Chunsheng

Wichita State University (USA)

**Abstract：**In the short run, the biggest advantages of accelerating the development of urbanization seems to maintain or increase GDP rate, but it has greater negative impacts in the long run. For instance, it will lead to a series of social problems, including food and clothing problems for more than half of agricultural population, the stability of society, the source of national defense troops, etc. Meanwhile, as a result of industrial changes in urban area, the increasing unemployment will put migrant workers return their hometown. Without the land as production factors, it will be more difficult for the farmers to maintain the basic living needs, which will deepen the social conflicts. So, to sum up, urbanization should slow down.

**Financial Constraints, Director Networks and Cross-border Mergers and Acquisitions: Evidence from China**

WEI Ping, MAO Xiaodan

Central South University (China)

**Abstract：** As cross-border mergers and acquisitions (M&A) usually require a large amount of fund, firms’ M&A decisions are heavily influenced by their financial constraints. In the meanwhile, recent studies have stated that informal institution, such as social capital, may play a role in dealing with issues of financial constraints. Using a large sample of cross-border M&A transactions initiated by 2438 Shanghai and Shenzhen A-share listed companies in China between 2005-2014, we firstly investigate relations between financial constraints and cross-border M&A transactions. Secondly, we examine the moderating role of direct networks, including political connections, financial connections and overseas connections, in mitigating financing constraints faced by cross-border M&A transactions. Our empirical studies found that, (1) sample firms’ ability of taking on cross-border M&A is impeded by their financial constraints. For firms facing high financing constraints, the effect is more severe. Ceteris paribus, for each additional unit of financing constraints, the possibility of cross-border M&A in high financial constraint groups is lower than low groups by 1.937%. Furthermore, the negative effect of financial constraints for cross-border M&A is significant for private firms, but not for state-owned enterprises. (2) Directors’ political connections and overseas connections significantly increase likelihood of cross-border M&A transactions, but it does not alleviate issues of financial constraints. Only directors’ financial connections will help ease financial constraints. All those findings have contributed new and direct evidences to understanding the role of social networks in international businesses.

**Mechanism Design with Interdependent Valuations and Semi-exclusive Information**

Xiao Mingjun

Wuhan University (China)

**Abstract:** This paper approaches the classic implementation problem with interdependent valuations in a new way. Instead of exploring conditions on preferences, we introduce a semi-exclusive information structure that can help implement efficient or inefficient social choice rule in generic environments. Semi-exclusive information allows agents to observe noisy information about their opponents' payoff types. This piece of information can provide a tool for the designer to verify other agents' private information. Thanks to this tool, we could restore the implementation of efficiency that would not have been possible following the routine method of finding global or local sorting conditions. We study generic environments that include settings with preferences not satisfying “single crossing conditions”, or other similar sorting conditions. The role of semi-exclusive information is targeted to align the incentive constraints. We explore the implementability of efficient rule and other properly specified rules both when this information structure is static and when it is dynamic. While both setups can implement general allocation rules, the static setting sheds light on Cremer and McLean (1985,1988)'s utilization of correlation and the dynamic setting steps away from Cremer and McLean's world and explores the correlation after the allocation decisions.

**New economy driven by internet technologies: transformation in infrastructure, factors of production and social division of labor**

Liu Pingfeng

Wuhan University of Technology (China)

**Abstract:** The economy has been transformed fundamentally by Internet technologies. The far-reaching significance of the transformation is rooted in three perspectives, namely infrastructure, factors of production and social division of labor. Information infrastructure has evolved into an ecosystem composed of cloud, network and ends. Data has become the most important factor of production. Social division of labor has been expanded to an ever-larger scale. This report will elaborate the transformation in those three perspectives in terms of economic development.

**Does National System of Innovation Spurs Economic Growth in BRICS Economies? Evidence from Panel Data**

Sesay Brima and Zhao Yulin

Wuhan University of Technology (China)

**Abstract:** The question as to whether national innovation system plays a significant positive role in influencing economic growth has been intensely debated by academics as well as policy analysts. The main controversy, however, is the fact that the ongoing empirical evidences on the relationship between innovation and economic growth are still mixed. The aim of this paper is therefore, to provide further evidence on the relationship between national system of innovation and economic growth using consistent and reliable data from a sample of emerging economies(Brazil, Russia, India, China & South Africa). The study employs a dynamic panel estimation technique with a view in evaluating the relative impact of national innovation system on economic growth in BRICS. The results reveal that national innovation system as a whole has a positive effect on economic growth in BRICS economies. An important policy implication emerging from this study is that, extra efforts are needed by emerging economies to promote the development of a national innovation system so as to explore the potential growth-inducing effects of a well-functioning NIS. Consequently, findings from this study have offered some persuading indicators for BRICS economies to explore the development of a national system of innovation as potential opportunity to speed up their economic growth.

**Challenges underlying service sector development in China’s innovation driven growth**

Taurai Muvunza

Wuhan University of Technology (China)

**Abstract：**This paper starts by briefly pointing out China’s economic evolution for the past three decades and discusses the importance of service sector in economic growth. The year on year trade deficit on services in China’s balance of payment indicates the existence of challenges within the sector in contrast to comparable countries like India and most middle income countries. We underscore China’s economic transition from manufacturing and export oriented growth to innovation and consumption led growth, and the effects of the latter growth model on service sector development. We discuss theoretic evidence obstructing growth and competitiveness in China’s service sector, and further argue that the development of China’s service sector has a direct influence on the secondary sector such that the adjustment of service sector without careful consideration of the manufacturing sector can do more harm than good to the economy. We also put forward that despite the government and private sector’s huge investment in research and development to stimulate service sector growth, the country’s service sector contributed only 47.9 percent in 2014, and currently falls below 50 percent which signifies a challenge for the government. Conversely, innovation driven economy, government reform coupled by enabling policies are a lynchpin towards a more sustainable service sector growth. In conclusion, we exposit strategies and recommendations to bolster development in the service sector. The analysis presented in this paper is useful for decision making and future research to understand the impact of service sector’s industries individually as classified in GATS on trade and sustainable economic development.

**Spatial Effect of the Convergence between Manufacturing and Information Industry in China**

Pan Maomao

Wuhan University of Technology (China)

**Abstract：**‘Made in China 2025’ puts forward that China's manufacturing industry should be improved substantially and the convergence between industry and information should be further deepened. Coverging with information industry is an important way to transform and upgrade manufacturing. Industry convergence gradually become a new way to industry development and a new power to economic growth. This article analysizes the influence of technical innovation, government regulation, consumption structure and cultivation of complex talents on the industry convergence. Then establishing a panel data regression and a spatial econometric model to quantitativey analyze the factors and spatial effects of industry convergence.

**Session of [Financial](http://dict.youdao.com/w/financial/" \l "keyfrom=E2Ctranslation)**[**Innovation**](http://dict.youdao.com/w/innovation/#keyfrom=E2Ctranslation)**： 13:00-17:05**

**Managing Yield Curve Risk for Banks and Insurers**

Robert R. Reitano

Brandeis University (USA)

**Abstract：**Professor Reitano will discuss interest rate risk associated with banks and insurance companies issuing liabilities with interest rate guarantees, and funding these guarantees with diversified bond portfolios. In such cases, changes to the shape of the underlying yield curve can create as much or more risk than changes in the levels of interest rates. Using “partial durations,” a risk measurement framework developed in research papers of Prof. Reitano, yield curve risks between fixed income portfolios and liabilities can be accurately measured. This framework can then be used to evaluate hedging strategies involving trades in the bond portfolio, or using financial derivatives such as interest rate swaps.

**Did FDI Really Cause Chinese Economic Growth? A Meta-analysis**

Philip Gunby, Jin Yinghua, W. Robert Reed

University of Canterbury, Zhongnan University of Economics and Law (China), University of Canterbury（NEW ZEALAND）

**Abstract：**This study performs a meta-analysis of research that estimates the relationship between FDI and Chinese economic growth. Our sample includes 37 studies and a total of 280 estimates. We include both English- and Chinese-language studies. Our initial “raw” finding is that FDI has had a substantial, positive impact on Chinese economic growth. Furthermore, our results suggest that the effect is not inflated by endogeneity, nor impacted by publication bias. However, the positive effect is found to be smaller for more recent and better designed studies. When we adjust for preferred study and sample characteristics, we find that the estimated economic effect of FDI on Chinese economic growth is much smaller than indicated by the overall literature, and statistically insignificant. This suggests that the cause(s) of the Chinese “economic miracle” likely lie elsewhere.

**Option game analysis for R&D investment and cooperation of enterprises based on risk dominance**

Yu Qian

Wuhan University of Technology (China)

**Abstract：**The optimal investment time and cooperation strategy of R&D investment under uncertainty are important issues for the R&D enterprises. This paper proposed an option game model for the two symmetrical R&D investment enterprises which will interact with the competitor on continuous time by investing and cooperating. We also analyzed the risk dominance equilibrium of the game based on the method of backward induction and discussed the investment strategies of R&D enterprises and the conditions of R&D cooperation. The results shown that investing and cooperating will be the risk dominance equilibrium strategy for the R&D investment enterprises. Under uncertainty, the investment strategy of R&D enterprises will depend on the factors of market fluctuation, R&D cost, opportunity benefit of free riding and the externality of cooperation. If the opportunity benefit of free riding less than the threshold value, two enterprises will invest as early as possible and cooperate with the competitor, otherwise the cooperation will depend on the R&D cost, market profit and the externality of cooperation that means enterprises will cooperate when the benefit of cooperation is large enough.

**A New Hybrid Statistical Approach for Stock Market Forecasting: A case study on Colombo Stock Exchange**

R.M.Kapila T.R.

Wuhan University of Technology (China)

**Abstract：**The main purpose of this study is to propose a new hybrid statistical approach for stock market forecasting to assist investors as well as stock brokers to predict the future behaviors. The results are implemented on Colombo stock exchange (CSE), Sri Lanka over the six year period from June 2009 to November 2015.

The methodology of this study is running under the two main phases as follows. The first phase developed a new hybrid forecasting methodology based on autoregressive integrated moving average (ARIMA) and feed forward back propagation neural network (ANN-ARIMA) to handle incomplete, noise and uncertain data. In the second stage, Artificial Neural Network with Geometric Brownian Motion (ANN-GBM) implemented successfully for forecasting long term predictions. Furthermore, very first time in CSE, nonlinear Grey Bernoulli model (NGBM) is applied to forecast short term predictions with limited sample observations.

The MAE, MAPE and MAD model comparisons clearly suggested that, the newly proposed ANN-GBM is more appropriate than traditional ARIMA, GBM methods to forecast stock price indices under the non-stationary conditions. Additionally, the NGBM is better both in model building and ex-post testing stagers under the s-distributed data patterns with limited data forecasting.

In Sri Lankan context, very few studies can be seen based on the forecasting and portfolio selection. Therefore, this study intends to fill the gap by examining the new hybrid forecasting approach in CSE. Finally, I strongly believed that the methodology we introduced in this study will create a significant contribution to domestic and internationals policy makers as well as government to open up a new direction to develop investments in the future.

**China’ carbon reduction initiatives: A new driving force for growth**

Pan An

Wuhan University of Technology (China)

**Abstract：**Since the reform and opening up, China has witnessed fast growth of CO2 emissions along with the economic and trade growth. China surpassed United States to be the largest carbon emission country in 2006. However, China has nationally determined and announced the two stages of carbon reduction targets by 2020 and 2030. Although CO2 emissions per unit of GDP in 2014 were 33.80 percent lower than in 2005, China still has to implement carbon reduction actions to achieve above carbon reduction targets. Originating from pollution reduction policies in 1978-2005, nowadays China has increasingly paid attention to carbon reduction policies, including adjusting industrial structure, enhancing support in terms of science and technology, improving energy efficiency and etc., which are going to be new drives of the economy. According to result of structural decomposition analysis (SDA), this study finds that composition effect had the positive to the growth of embodied carbon emission in export, which means the industrial or trade structure has negative effect on carbon reduction in China. Besides, the technique effect turned to be the negative effect than expected. Combining the above SDA results and the three characteristics of “New Normal”, this study finally propose that China’s carbon reduction initiatives ought to target at high quality or green growth with the double negative effects from both composition effect and technique effect.

**How should an industrial transformation suit us?**

Tong Bo

Boston University(USA)

**Abstract：**It’s quite trendy nowadays for our domestic economists to push forward the idea of an industrial transformation and to relentlessly stress its urgency.

The reasoning comes from pretty much every aspect. Theoretically, we need a more healthy and sustainable way of development to avoid the notorious middle income trap. Many of our BRICS friends have found themselves trapped in such a corner and suffered severe social and political disturbances as economy deteriorated.

Internationally, many developed countries, especially US are considering a so-called “reindustrialization”, in order to bring jobs back. Although I personally doubt its feasibility, but due to its popularity among workers, many politicians have taken it as their newest catch phrase.

Also a well-organized industrial system will protect the economy in case of political or diplomatic disturbances. This idea developed itself from the recent troubles of Russia and Saudi Arabia. Both countries have been doing pretty well for the last decades, but billions of dollars evaporated within months due to the changes in oil price. As a result a gas station couldn’t be regarded as a successful economy, nor could an assembly line.

But the really problem is that how should we do it? I personally consider this topic too general to deal with, so instead I ask a more detailed question: how should a decent industry look like?

First, who should be the big boss in this future economy? It would be really bad if we lost our advantage in manufacturing. Two major industrial centers in the history, U.K. and U.S. have both transferred much of their industrial power oversea in favor of the more lucrative industries like finance. But the real problem came when unemployment cased upheavals, like the turbulent 70s in U.K. and the ghost towns of nowadays Detroit.

Second, how should we treat technology? Technology brings great improvement in productivity, but they shouldn’t be treat like elixir. U.S. has always been an advocator of new energy, but its current DRP nominee Hillary Clint received strong protest from former coal miners in West Virginia. It is also true in China during the 90s that large lay-offs in governmental companies caused serious social problem.

Third, how should we keep our industry attractive? We have benefited a lot from global market for the last 3 decades and we’re going thrive under it for the coming years for sure. But competitions are now coming from all places. India and south-eastern Asian countries all want to be the next China, and their labor cost is lower than ours. But there’re still a lot we could do to keep the investors to stay in China, like more proficient workers, a complete logistic system, easier investment environment, etc.

**An Empirical Study On Relative price Change and Technology of New Energy Industry**

Song Yiru

Wuhan University of Technology (China)

**Abstract**: Industrial technology and market factors have dissimilar way to influence the development of new energy industry (NEI). Using stock prices of NEI, this paper investigates the dependent structures and synergies between these factors' stock data and NEI’s via Copula-GARCH model. Besides, it compares the heterogeneous structures between Chinese and global NEI, so as to provide suggestions for China’s NEI development. Result slows that industrial technology plays the leading role to the development of global NEI, followed by the relative cost advantage bought by traditional energy; the carbon market is proved to have limited incentive effect due to policy impact. However, weak correlation is discovered between industrial technology, market factors and China’s NEI owing to the lack of transmission mechanism. The key restriction factors to the China’s NEI development turn out to be the low match of technology, the lack of pricing system in domestic energy department and the low participation in the carbon market.

**Regional comparison study on measurement of National High-Tech Zone's innovation efficiency in China—from a perspective on innovation value chain**

Yu Pei, Cheng Yang

Wuhan University of Technology (China)

**Abstract:** Based on theory of innovation value chain, at first, this research innovatively divides the industry innovation process into three stages, namely technology research and development, product development and product sales. And then it builds a theoretical model on these three stages. We test this model by adopting molecular weighting factor method, in order to calculate innovation efficiency of China's 115 national hi-tech zones. The results show that the innovation efficiencies of all the three stages are very low in the sample zones and the regional difference is obvious. Followed by these calculated results, we classify the zones into four categories by using two-dimension matrix. And at last, we put forward suggestions on upgrading of innovation efficiency in each category.