The 4th International Workshop on

Regional, Urban and Spatial Economics in China

**China’s New Urbanization and Housing Market**

**Program Book**

**Organizers**

Hang Lung Center for Real Estate, Tsinghua University

*Journal of Housing Economics*

**Co-organizers**

*Journal of Regional Science*

*Papers in Regional Science*

*Annals of Regional Science*

*Growth and Change*

*Letters in Spatial and Resource Sciences*

**June 6-7, 2015**

**Tsinghua University, Beijing, China**

**Contents**

[**Welcome Message 1**](#_Toc420864339)

[**Keynote Speakers 2**](#_Toc420864340)

[**Scientific Committee 4**](#_Toc420864341)

[**Conference Timetable 5**](#_Toc420864342)

[**Abstracts 19**](#_Toc420864343)

[**Useful Information 47**](#_Toc420864344)

# Welcome Message

It’s our great pleasure to welcome all of you to Tsinghua and join us for the 4th Workshop on Regional, Urban, and Spatial Economics in China. This Workshop, under the theme of “China’s New Urbanization and Housing Market”, is jointly organized by Tsinghua University’s Hang Lung Center for Real Estate and *Journal of Housing Economics*. The Center is a university level research body, jointly developed by the School of Civil Engineering, the School of Economics and Management and the School of Architecture of Tsinghua, to promote excellence in real estate education and research.

The objective of this workshop is to further increase the visibility of regional science, urban economics and spatial economics in China and to develop a stronger research network for top-level China-focused scholars. We would like to thank our honorable guests for their time, some of whom have travelled thousands of miles from other parts of China and around the world to come here. We are also sincerely grateful to you for sharing your innovative thoughts with us during the exciting two days.

We are pleased to report that since the first call for papers, the workshop has received overwhelming feedback. We received more than 135 abstracts and the committees have chosen about 60 papers, which cover topics on the frontiers in urban and regional development, labor market and firms, housing price dynamics, land use and urban growth, agglomeration economies, urban environment, homeownership and housing market policies. We are very grateful to the 4 distinguished keynote speakers: Prof. Albert Saiz, Prof. Li-An Zhou, Prof. Edward Coulson and Prof. Andrés Rodríguez-Pose. We would also like to extend our great appreciation to all session chairs, presenters and discussants for your contribution to this workshop. We are confident that you will find this workshop rewarding and your future research will benefit from your experience here.

We would like to express our sincere gratitude to the Scientific Committee members, who have devoted lots of time in selecting papers, evaluating the paper submissions to the Young Scholar Paper Competition, and will discuss those papers during our Workshop. We would also like to thank the organizing committee members for their great support. Without their dedication and hard work, the success of this workshop would not have been possible.

Prof. Siqi Zheng, Ph. D.

Director, Hang Lung Center for Real Estate, Tsinghua University

Co-Chair, the 4th RUSE Workshop

Prof. Albert Saiz, Ph. D.

Director, Center for Real Estate, Massachusetts Institute of Technology

Co-Chair, the 4th RUSE Workshop

June 6, 2015

# Keynote Speakers

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|  | **Professor Albert Saiz**  **Massachusetts Institute of Technology** |
| Albert Saiz is the Director of MIT’s Center for Real Estate. He also direct the Urban Economics Lab in MIT, which focuses on urban and real estate economics. He serves as the Editor of the Journal of Housing Economics. Professor Saiz pursues research interests in local public finance, real estate economics and urban economic development, with an emphasis on immigration and immigrant location choices, and the impact of skills on earnings and city growth. His work in progress, valuing urban amenities and building design, promises to open broad areas of collaboration between economists, urban designers and urban developers. |

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| http://www.gsm.pku.edu.cn/resource/uploadfiles/images/20141222/201412220840584547.png | **Professor Li-An Zhou**  **Peking University** |
| Li-An Zhou is Professor and Chair of Department of Applied Economics, Guanghua School of Management, Peking University. He also serves as the Vice Director of Morris Economic Policy Institute, Peking University. Professor Zhou’s research interest is in political economics, industrial organization theory, economic transformation and growth theory. Professor Zhou has published more than 30 papers in the field of economics and management on both top international and Chinese journals. |

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| N. Edward Coulson | **Professor Edward Coulson**  **University of Nevada, Las Vegas** |
| Edward Coulson is Professor and Director of Lied Center for Real Estate at University of Nevada, Las Vegas. He is also the Professor Emeritus of Economics at Penn State University. He now serves as the Vice Chair of the American Real Estate and Urban Economic Association. Professor Coulson is also the Editor of Journal of Regional Science and editorial board member of Journal of Urban Economics, Regional Science and Urban Economics and Journal of Housing Economics. Professor Coulson’s research interests include the housing economics, urban economics, regional economics, econometrics and public economics. Ha has published many famous papers on AER, JUE, RSUE and REE. |

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|  | **Professor** **Andrés Rodríguez-Pose**  **London School of Economics and Political Science** |
| Andrés Rodríguez-Pose is Professor of Geographical Economics and Director of Spatial Economics Research Center in London School of Economics and Political Science. He is also Chair of The Regional Science Association International, Executive Editor of *Environment and Planning C: Government and Policy,* Editor of *Economic Geography* and editorial board member of 25 journals. Professor Rodríguez-Pose has made contribution in regional growth and imbalance, fiscal decentralization, regional innovation and policy, and his research has played an important role in the public policy decisions. |

# The Scientific Committee

**Roberta Capello,** Politecnico of Milan, Italy (and Editor-in-Chief, *Papers in Regional Science*)

**Anping Chen,** Jinan University, China

**Zhao Chen,** Fudan University, China

**Edward Coulson,** University of Nevada, Las Vegas, USA (and Editor of *Real Estate Economics*)

**Jouke Van Dijk,** Groningen University, Netherlands (and Editor of *Springer Regional Science Book Series Advance of Spatial Science*)

**Alessandra Faggian,** Ohio State University, USA (and Editor of *Papers in Regional Science*)

**Henk Folmer,** Groningen University, Netherlands (and Managing Editor of *Letters in Spatial and Resource Sciences*)

**Canfei He,** Peking University-Lincoln Institute Center for Urban Development and Land Policy, China

**Janet Kohlhase**, University of Houston, USA (and Editor of *Annals of Regional Science*)

**Hongyu Liu,** Tsinghua University, China

**Ming Lu,** Shanghai Jiaotong University, China

**Mark Partridge,** Ohio State University, USA (and Managing Editor of *Journal of Regional Science*)

**Dan Rickman,** Oklahoma State University, USA (and Editor of *Growth and Change*)

**Andrés Rodríguez-Pose**, London School of Economics and Political Science, UK (and Editor of *Environment and Planning C: Government and Policy* )

**Albert Saiz,** Massachusetts Institute of Technology, USA (and Editor of *Journal of Housing Economics*)

**Xinyue Ye,** Kent State University, USA

**Siqi Zheng,** Tsinghua University, China

# Conference Timetable

**Program at a Glance**

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| --- | --- | --- | --- | --- |
| **Friday, 5 June 2015** | **Afternoon** | | | |
| **4:00 – 8:00 PM** | **Registration, 1st floor, School of Public Policy and Management (SPPM) Building, Tsinghua University** | | | |
| **Saturday, 6 June 2015** | **Morning** | | | |
| **7:30 AM – 12:30 PM** | **Registration, 1st floor, School of Public Policy and Management (SPPM) Building, Tsinghua University** | | | |
| **Plenary Session** | **Auditorium, SPPM** | | | |
| **8:30 AM - 10:00 AM** | **Opening Remarks，Keynote Speech I，Keynote Speech II** | | | |
| **10:00 AM - 10:30 AM** | **Tea Break** | | | |
| **Parallel Sessions** | **SD 418** | **WL 401** | **WL 335** | **WL 336** |
| **10:30 AM - 12:30 PM** | **1.** **Frontiers in Urban and Regional Development I** | **2. Labor Market and Firms I (JHEC Session)** | **3. Labor Market and Firms II (YSC Session)** | **4. Housing Price Dynamics I** |
| **12:30 PM - 1:30 PM** | **Lunch: Shunde Building, School of Economics and Management (SEM), Tsinghua University** | | | |

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| **Saturday, 6 June 2015** | | **Afternoon** | | | | | | |
| **Parallel Sessions** | | **SD 418** | **WL 401** | | **WL 335** | | **WL 336** | |
| **1:30 PM - 3:30 PM** | | **5. Land and Growth**  **(JHEC Session)** | **6. Agglomeration Economies**  **(YSC Session)** | | **7. Urban Environment**  **(YSC Session)** | | **8.** **Homeownership** | |
| **3:30 PM - 3:45 PM** | | **Tea Break** | | | | | | |
| **3:45 PM - 5:45 PM** | | **9. Housing Market and Policy (JHEC Session)** | **10. Housing Price Dynamics II**  **(YSC Session)** | | **11. Housing Demand and Supply** | | **12. Firms and Workers** | |
| **6:30 PM - 8:30 PM** | | **Dinner: *Jin Chun Yuan Restaurant*, Tsinghua University** | | | | | | |
| **Sunday, 7 June 2015** | **Morning** | | | | | | | |
| **Plenary Session** | **Auditorium, SPPM** | | | | | | | |
| **8:30 AM - 9:30 AM** | **Keynote Speech III，Keynote Speech IV** | | | | | | | |
| **9:30 AM - 10:00 AM** | **Tea Break** | | | | | | | |
| **Parallel Sessions** | **SD 418** | | | **WL 401** | | **WL 335** | | **WL 336** |
| **10:00 AM - 12:30 PM** | **13. Frontiers in Urban and Regional Development II** | | | **14. Urban Form**  **(JHEC Session)** | | **15. Housing Market and Household Behavior** | | **16. Urban Development and Dynamics** |
| **12:30 PM - 1:30 PM** | **Lunch: Shunde Building, School of Economics and Management (SEM), Tsinghua University** | | | | | | | |

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| **Sunday, 7 June 2015** | **Afternoon** | | | |
| **Parallel Sessions** | **SD 418** | **WL 401** | **WL 335** | **WL 336** |
| **1:30 PM - 3:30 PM** | **17. Land Use and Transportation** | **18. Regional Development** | **19. Public Policy and Urban Development** | **20. Local Politics and Urban Growth** |
| **3:30 PM - 3:45 PM** | **Tea Break** | | | |
| **3:45 PM - 4:30 PM** | **Closing Remarks: Shunde Building 418, School of Economics and Management (SEM), Tsinghua University** | | | |
| **4:45 PM - 5:45 PM** | **Seminar “How to Publish in International Journals”**  **Shunde Building 418, School of Economics and Management (SEM), Tsinghua University** | | | |
| **6:30 PM - 8:30 PM** | **Dinner: TBD** | | | |

**Note: Each paper has 40 minutes altogether – 25 minutes for presentation, 5-10 minutes for discussant’s comments, and 5-10 minutes for open discussion.**

***Abbreviations***

SEM: School of Economics and Management SPPM: School of Public Policy and Management

WL: Weilun Building, SEM SD: Shunde Building, SEM

JHEC: Journal of Housing Economics YSC: Young Scholar Competition

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| Time | Event | Location | Topic and Speaker | |
| 6/5 (Friday) Afternoon | | |  | |
| 4:00 PM -  8:00 PM | Registration | 1st floor, SPPM |  | |
| 6/6 (Saturday) Morning | | |  | |
| 7:30 AM -  10:00 AM | Registration | 1st floor, SPPM |  | |
| 8:30 AM - 10:00 AM | Opening Remarks | Auditorium, SPPM | Weihe Xie | Vice President, Tsinghua University |
| Keynote Speech I | Albert Saiz | Professor and Director, Center for Real Estate, MIT;  Editor, *Journal of Housing Economics* |
| Keynote Speech II | Li-An Zhou | Professor and Department Chair, Department of Applied Economics  Guanghua School of Management, Peking University |
| 10:00 AM - 10:30 AM | Tea Break | | | |
| ***Parallel Sessions: 10:30 AM - 12:30 PM*** | | |  | |
| **Session 1**  ***Frontiers in Urban and Regional Development I*** | | **SD 418** | **Chair: Dan Rickman**   * Causes and Effects of Regional Housing Price Growth: A Spatial Equilibrium Growth Model Perspective   Presenter: Dan Rickman, Hongbo Wang  Discussant: Canfei He   * The Impact of the Internet on Urban Vitality: Does Closeness in Cyber-Space Substitute for Urban Space?   Presenter: Janet Kohlhase  Discussant: Dan Rickman   * Regional Industrial Evolution in China: Path Dependence or Path Creation?   Presenter: Canfei He  Discussant: Janet Kohlhase | |
| **Session 2**  ***Labor Market and Firms I (JHEC Session)*** | | **WL 401** | **Chair: Albert Saiz**   * Housing Wealth Effect and Labor Force Participation: Evidence from China Household Finance Survey   Presenter: Yu Liao  Discussant: Guojun He   * Are Skilled Workers More Mobile than the Unskilled in Response to Local Demand Shifts In China?   Presenter: Chunbing Xing  Discussant: Anping Chen   * Housing Price Appreciation, Investment Opportunity and Firm Innovation: Evidence from China   Presenter: Zhao Rong  Discussant: Zhao Chen | |
| **Session 3**  ***Labor Market and Firms II***  ***(YSC Session)*** | | **WL 335** | **Chair: Jing Cao**   * Local Effects of Housing Price Appreciation on Industrial Investment: Firm-Level Evidence for China   Presenter: Yan Wu  Discussant: Mark Partridge   * Tracking Cultural Ties and Human Mobility through Social Media From China   Presenter: Jianghao Wang  Discussant: Henk Folmer   * What Determines the Settlement Intention of Rural Migrants in China? Economic Incentives Versus Sociocultural Conditions   Presenter: Shaowei Chen  Discussant: Jouke van Dijk | |
| **Session 4**  ***Housing Price Dynamics I*** | | **WL 336** | **Chair: Jing Wu**   * Heterogeneous Convergence of Regional House Prices and the Complexity in China   Presenter: Rui Lin  Discussant: Xinyue Ye   * Plausible Theories and Measures of Real Estate Bubbles: Evidences from the Urban Real Estate Market in China during 1980-2010   Presenter: Guoqiang Shen  Discussant: Jichang Dong   * Spatiotemporal Data Mining of Housing Prices in China: a Big Data Perspective   Presenter: Xinyue Ye  Discussant: Guoqiang Shen | |
| 6/6 (Saturday) Noon | | |  | |
| 12:30 PM - 1:30 PM | Lunch | SD 418 |  | |
| 6/6 (Saturday) Afternoon | | |  | |
| ***Parallel Sessions: 1:30 PM - 3:30 PM*** | | |  | |
| **Session 5**  ***Land and Growth***  ***(JHEC Session)*** | | **SD 418** | **Chair: Albert Saiz**   * Housing Price Threatens Competitiveness: How Does China's Land Policy Favoring Inland Raise Its Wage?   Presenter: Wenquan Liang  Discussant: Jing Wu   * Geographical Constraints and Housing Markets in China   Presenter: Yilin Dong  Discussant: Albert Saiz   * Fiscal Reform, Land Expansion And Urban Growth In China   Presenter: Yongzheng Liu  Discussant: Canfei He | |
| **Session 6**  ***Agglomeration Economics***  ***(YSC Session)*** | | **WL 401** | **Chair: Zhao Chen**   * The Birth of New Private Firms in an Environment of State-Owned Enterprises: Evidence from Agglomeration Economics   Presenter: Liang Zheng  Discussant: Janet Kohlhase   * Inter-Industry Relatedness and Industrial-Policy Efficiency: Evidence from China's Export Processing Zones   Presenter: Ruixiang Xiong  Discussant: Roberta Capello   * Does City-County Merger in China Promote Local Economic Growth?   Presenter: Wei Tang  Discussant: Andrés Rodríguez-Pose | |
| **Session 7**  ***Urban Environment***  ***（YSC Session）*** | | **WL 335** | **Chair: Jing Cao**   * The Effect of Air Pollution on Mortality in China: Evidence from The 2008 Beijing Olympic Games   Presenter: Guojun He  Discussant: Henk Folmer   * The Effect of Daily Air Pollution on Traffic Congestion: Evidence from Beijing   Presenter: Quanyun Song  Discussant: Jouke van Dijk   * Influence of Information Insufficiency on Residents’ Willingness-to-pay for Green Housing in China   Presenter: Li Zhang  Discussant: Mark Partridge | |
| **Session 8**  ***Homeownership*** | | **WL 336** | **Chair: Hong Zhang**   * Does Homeownership Crowd Out Investment in Risky Assets?: Evidence from Chinese Urban Households   Presenter: Sanbai Sun  Discussant: Gang-Zhi Fan   * The Impact of China's Housing Provident Fund on Homeownership and Consumption: Evidence from Two Surveys   Presenter: Mingzhe Tang  Discussant: Sanbai Sun   * Household Homeownership and Social Insurance in China   Presenter: Gang-Zhi Fan  Discussant: Mingzhe Tang | |
| 3:30 PM -  3:45 PM | Tea Break | | | |

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| ***Parallel Sessions: 3:45 PM - 5:45 PM*** | | |  |
| **Session 9**  ***Housing Market and Policy***  ***(JHEC Session)*** | | **SD 418** | **Chair: Albert Saiz**   * The Heterogeneity of Crowding Effect of Public Housing on Market Housing: Empirical Evidence from Non-Linear Threshold Panel Data Models in China   Presenter: Jie Chen  Discussant: Shihe Fu   * A Micro-simulation of Property Tax Policy in China   Presenter: Jing Cao  Discussant: Liang Zheng   * Housing Affordability and Housing Vacancy in China: The Role Of Income Inequality   Presenter: Chuanchuan Zhang  Discussant: Zan Yang |
| **Session 10**  ***Housing Price Dynamics II***  ***(YSC Session)*** | | **WL 401** | **Chair: Anping Chen**   * Scale and Spatial Dynamics of Housing Price in China: A Study Based on Wavelet Decomposition And Coherency   Presenter: Ying Fan  Discussant: Dan Rickman   * Household Tenure Choice and Housing Price Volatility under a Binding Home-purchase Limit Policy Constraint   Presenter: Yang Zhang  Discussant: Edward Coulson   * Different Types of Monetary Policy Instruments and Regional Housing Prices: a Comparative Study on the Influences of Regulation in China   Presenter: Gang Yang  Discussant: Anping Chen |
| **Session 11**  ***Housing Demand and Supply*** | | **WL 335** | **Chair: Jing Wu**   * To Build above the Limit? Implementation of Land use Regulations in Urban China   Presenter: Qinghua Zhang  Discussant: David Broadstock   * Disentangling Demand and Supply Shocks in the Chinese Housing Market   Presenter: David Broadstock  Discussant: Jia He   * Can Developers Predict Future House Price? Evidence from Land Auctions in Urban China   Presenter: Jia He  Discussant: Qinghua Zhang |
| **Session 12**  ***Firms and Workers*** | | **WL 336** | **Chair: Canfei He**   * Hollowing Out of the Real Economy: Evidence from China's Listed Firms   Presenter: Xiang Shao  Discussant: Pengyu Zhu   * Residential Segregation and Entrepreneurial Success of Rural Migrant Workers in China   Presenter: Pengyu Zhu  Discussant: Xiang Shao |
| 6/6 (Saturday) Evening | | |  |
| 6:30 PM -  8:30 PM | Dinner | *Jin Chun Yuan* Restaurant, Tsinghua University  Please gather at the lobby of Shunde Building, 6:00PM and go to the restaurant together | |

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| 6/7 (Sunday) Morning | | |  | |
| 8:30 AM -  9:30 AM | Keynote Speech III | Auditorium, SPPM | Edward Coulson | Professor of Economics  Director, Lied Institute for Real Estate Studies |
| Keynote Speech IV | Andrés Rodríguez-Pose | Professor of Economic Geography  President of the Regional Science Association International  European Research Council Advanced Grant Holder |
| 9:30 AM - 10:00 AM | Tea Break | | | |
| ***Parallel Sessions: 10:00 AM-12:30 PM*** | | |  | |
| **Session 13**  ***Frontiers in Urban***  ***and Regional Development II*** | | **SD 418** | **Chair: Henk Folmer**   * Air Pollution and Perception-based Averting Behavior in the Jinchuan Mining Area, China: A Structural Equation Modeling Approach   Presenter: Henk Folmer  Discussant: Nicolaas Groenewold   * Static vs. Dynamic Agglomeration Economies: Spatial Context and Structural Evolution behind Urban Growth   Presenter: Roberta Capello  Discussant: Hendrik Folmer   * An Increase in the Retirement Age in China: The Regional Economic Effects   Presenter: Nicolaas Groenewold  Discussant: Roberta Capello | |
| **Session 14**  ***Urban Form (JHEC Session)*** | | **WL 401** | **Chair: Albert Saiz**   * Neighborhood Land-Use Patterns and Housing Prices In Beijing   Presenter: Yourong Wang  Discussant: Siqi Zheng   * Transit Development, Consumer Amenities and Home Values: Evidence from Beijing's Subway Neighborhoods   Presenter: Yangfei Xu  Discussant: Jie Chen | |
| **Session 15**  ***Housing Market and***  ***Household Behavior*** | | **WL 335** | **Chair: Qinghua Zhang**   * Housing Conditions and Life Satisfaction in Urban China   Presenter: Chuanyong Zhang  Discussant: Weida Kuang   * Loss Aversion, Learning and Price Cutting Behavior   Presenter: Xiaolong Liu  Discussant: Chuanyong Zhang   * Housing Prices and Household Savings in Urban China   Presenter: Weida Kuang  Discussant: Xiaolong Liu | |
| **Session 16**  ***Urban Development*** | | **WL 336** | **Chair: Hong Zhang**   * The Impact of Beijing High School Location on Surrounding Residential Price   Presenter: XueZhen Dai  Discussant: Yiming Wang   * What Raises More Rental Value for Cheap versus Expensive Residential Properties? Evidence from Shanghai based on a Quantile Spatial Hedonic Model   Presenter: Yiming Wang  Discussant: XueZhen Dai | |
| 6/7 (Sunday) Noon | | |  | |
| 12:30 PM -  1:30 PM | Lunch | SD 418 |  | |
| 6/7 (Sunday) Afternoon | | |  | |
| ***Parallel Sessions: 1:30 PM - 3:30 PM*** | | |  | |
| **Session 17**  ***Land Use and Transportation*** | | **SD 418** | **Chair: Zan Yang**   * Wheels of Fortune: Subway Expansion and Property Values in Beijing   Presenter: Jun Yang  Discussant: Cong Sun   * The Value Impact of Accessibility on Urban Housing Price: the Case of Xiamen, China   Presenter: Guoqiang Shen  Discussant: Jun Yang   * Subway Network Effect and Its Capitalization in Housing Prices in Beijing   Presenter: Cong Sun  Discussant: Guoqiang Shen | |

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| **Session 18**  ***Regional Development*** | **WL 401** | **Chair: Lei Shao**   * Impacts of Transportation Characteristics on the Economies of Cities in China   Presenter: Yang Chen  Discussant: Dezhi Li   * Assessing Investment Value of Privately-owned PRH Projects with Multiple Options   Presenter: Dezhi Li  Discussant: Yang Chen   * How Does Transport Accessibility Affect Growth and Agglomeration? Evidence from 88 Counties in Guizhou Province   Presenter: Di Zou  Discussant: Albert Saiz |
| **Session 19**  ***Public Policy***  ***and Urban Development*** | **WL 335** | **Chair: Hongyu Liu**   * Housing Purchase Restriction and Housing Market: Evidence from Chengdu   Presenter: Yaoguo Wu  Discussant: Peng Li   * Provincial Returns to Human Capital in Urban China, Inter-regional Inequality and the Implicit Value of a Guangdong hukou   Presenter: Jeffrey S. Zax  Discussant: Yaoguo Wu   * China’s Urban Development Policies and Urban System Dynamics   Presenter: Peng Li  Discussant: Jeffrey S. Zax |

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| **Session 20**  ***Local Politics and Urban Growth*** | | **WL 336** | **Chair: Qinghua Zhang**   * The Impact of Local Government Structure on Public Service Disparity across Chinese Cities   Presenter: Huiping Li  Discussant: Shuiqing Li   * Secrets of Ghost Towns: Career Incentives and Politically Driven Urbanization in China   Presenter: Shuo Chen  Discussant: Huiping Li   * Land Provision, Fiscal Boom and Political Mobility: Evidence from Chinese Cities   Presenter: Shuiqing Li  Discussant: Shuo Chen |
| 3:30 PM -  3:45 PM | Tea Break | | |
| 3:45 PM -  4:30 PM | Closing Remarks | SD 418 | Announcement of Young Scholar Competition Winners |
| 4:45 PM -  5:45 PM | Seminar | SD 418 | How to Publish in International Journals?  Journal editors will give short talks at the seminar. |
| 6/7 (Sunday) Evening | | |  |
| 6:30 PM -  8:30 PM | Dinner | *TianChuMiaoXiang* Restaurant, Tsinghua Scientific Park  Please gather at the lobby of Shunde Building, 6:00PM and go to the restaurant together | |

# Abstracts

***6/6 (Saturday) Morning***

***10:30 AM - 12:30 PM***

***Session 1 Frontiers in Urban and Regional Development I chair：Dan Rickman***

**Regional Housing Supply Elasticity in Spatial Equilibrium Growth Analysis**

*Dan S. Rickman，Hongbo Wang*

**ABSTRACT**

The spatial equilibrium growth model of Glaeser and Tobio (2008) is built upon the traditional static Rosen-Roback spatial equilibrium model. A distinguishing feature is the addition of varying elasticity of housing supply, which was found empirically for the U.S. in a number of studies. Applications of the framework have been limited. But it is sufficiently flexible to be used in a wide variety of settings. Numerous policies and site characteristics of areas have the potential to simultaneously influence household amenity demand, firm productivity and elasticity of housing supply. The spatial equilibrium growth model not only ascertains the growth effects of policies and site characteristics, but it also assesses the channels through which they affect regional growth.

**The Impact of the Internet on Urban Vitality: Does Closeness in Cyber-Space Substitute for Urban Space?**

*Steven G. Craiga，Edward Hoangb，Janet E. Kohlhasec*

**ABSTRACT**

The rapid growth of the internet poses an interesting challenge for understanding how cities will grow in the future. Particularly, the advantage of the internet is that groups can be close, in terms of interactions, without being close in physical space. Thus the internet may substitute for urban areas, where people tolerate the increased congestion costs because of the advantages of proximity in physical space. On the other hand, it is equally possible that the internet merely increases the extent and scope of interactions, and that it is not yet capable of substituting for physical closeness. This paper compares the two possibilities, and then using data from US states shows empirically that urban areas increase the demand for internet access, suggesting the two are complements. Our work also suggests the complementarity may come more from the consumer side than the producer side.

**Regional Industrial Evolution in China: Path Dependence or Path Creation?**

*Canfei He，David Rigby*

**ABSTRACT**

The evolutionary economic geography considers regions to evolve through technologically related diversification, indicating that regional industrial development is path dependent. The path dependence approach however ignores the external factors, which may create new paths of regional development. Moreover, it does not pay much attention to the role of institutions. Both external factors and institutions are crucial to understand the regional industrial evolution in China. Based on firm level data of Chinese industries during 1998-2008, this study examined the industrial evolution through the lens of entry and exit of four digit industries at the Chinese prefectures. Using a measure of co-occurrence based technological relatedness, we apply a logit model to regress industry entry and exit on technological relatedness. We do find significant evidence that regions branch into new industries which are technologically related to the existing industries and related industries are less likely to exit. We also confirm that related globalization encourages the entry of new related industries and deters the exit of related industries. Further analysis reveals that economic transition does create conditions to allow a larger role of technological relatedness. In fiscally healthy regions and economically liberalized regions, technological relatedness plays a more significant role in industry dynamics. However, economic transition also generates opportunities for Chinese regions to create new paths of industrial development. Statistical results suggest that new industries are more likely to enter regions which are globalized, liberalized and fiscally independent.Conducive institutions are keys to path creation in transitional economies.

***Session 2 Labor Market and Firms I (JHEC Session) Chair: Albert Saiz***

**Housing Wealth Effect and Labor Force Participation: Evidence from China Household Finance Survey**

*Yu Liao，Shihe Fu，Junfu Zhang*

**ABSTRACT**

Whether an increase in housing wealth has a causal, positive effect on leisure or negative effect on labor supply is inconclusive in the literature. This paper uses the 2011 China Household Finance Survey data to estimate the effect of a household’s housing wealth change on household’s labor force participation. Using the average housing capital gain of other households residing in the same community as the instrumental variable for the housing capital gain of an individual household, we find that a 100 thousand RMB increase in housing wealth leads to a 1.4 percentage points decrease in female’s probability of participating labor force and a 3.1 percentage points increase in females’ probability of becoming housewives. We find little effect on males’ labor force participation.

**Are skilled workers more mobile than the unskilled in response to local demand shifts in China?**

*Dongdong Luo，Chunbing Xing*

**ABSTRACT**

In this paper, we use two nationally representative census data for 2000 and 2005 to examine the population adjustment of different demographic groups in response to regional demand shifts. Results from OLS regressions show that the population adjustment of the less educated groups are more associated with changes in total city working hours than that of the educated groups. This explains the increases in the skill premia in coastal regions after China's entry into the WTO. These results, however, do not mean that the former groups are more responsive to demand shocks, because changes in city working hours also reflect other forces such as exogenous supply shocks. Using an IV strategy, we find that educated workers are more responsive to demand shocks than the less educated. In addition, experienced subgroups are particularly inert in responding to demand shocks. Our results also suggest that China's household registration (Hukou) system prevents the mobility of urban residents more than it does for rural residents. This finding deepens our understanding of the role of Hukou system in restricting labor mobility. It indicates that Hukou reform should not only focus on abolishing the agricultural vs. non-agricultural division, but also on the decentralized feature (local vs. non-local).

**Housing Price Appreciation, Investment Opportunity and Firm Innovation: Evidence from China**

*Zhao Rong，Qiang Gong*

**ABSTRACT**

The impact of housing price appreciation on firm innovation may be negative. Housing price appreciation generates real estate investment opportunities with high returns, making manufacturing firms more likely to diversify into the real estate industry; with limited funds, once these firms invest in real estate development, they would invest less in innovation. By examining manufacturing firms in China for the period 1999-2007, we provide evidence by finding that housing price appreciation negatively influenced manufacturing firms’ innovation propensities. Additionally, we further explore the underlying mechanism by examining the likelihood of listed firms’ diversification into the real estate industry, and how the diversification influenced their patenting. Consistent with the investment opportunity hypothesis, we find that (1) housing price appreciation stimulated firms to enter the real estate industry, and a firm's diversification to the real estate industry negatively influenced its invention patenting; (2) the negative diversification effect was stronger when housing price growth rates were higher.

***Session 3 Labor Market and Firms II (YSC Session) Chair: Jing Cao***

**Local effects of housing price appreciation on industrial investment: firm‐level evidence of China**

*Yan WU，Nico Heerink，Linhui YU*

**ABSTRACT**

The empirical literature provides conflicting assessments about whether and how housing prices impact industrial firms’ investment. We examine the effect of booming housing price in China on manufacturing investment using a combined firm- and city- level panel data set for the period 2003‐2007. Our results show that there was a significant negative association between local housing prices and the investment ratio of manufacturing firms in the corresponding cities. The effect is robust in controlling for heterogeneities at firm, sector, and city levels, and in dealing with the potential endogeneity of housing price. The negative relationship is strongest for firms which are small, labor intensive, non-state owned, and have few linkages with real estate sectors.

**Tracking Cultural Ties and Human Mobility through Social Media from China**

*Wenjie Wu，Jianghao Wang，Tianshi Dai*

**ABSTRACT**

A ubiquitous and largely unexplored big data application in public administration studies is how cultural ties affect human mobility patterns. This paper exploits China’s dialect diversity as a persistent cultural barrier to contribute to our understanding of this question. We code linguistic micro-data from a unique atlas of dialects census conducted in about 328 Chinese cities. To identify real-time human mobility patterns, we propose a social media data strategy based on the aggregation of hundreds of millions of individuals’ space-time trajectories. On top of its important policy implications, this paper applies spatial gravity models to document that dialect differences can foster temporary human mobility flows, conditional upon commuting costs and geographical distances. These findings present evidence in support of a non-pecuniary economic geography channel at work that people have intentions for traveling to culturally unfamiliar cities and regions for fun, leisure, business and social interactions. Apart from innovative big data methods, we established new insights into the importance of optimizing the allocation of policy programs and public resources such as infrastructure fundamentals in facilitating the structure and dynamics of travel flows between metropolitan regions and periphery regions.

**What Determines the Settlement Intention of Rural Migrants in China? Economic Incentives Versus Sociocultural Conditions**

*Shaowei Chen，Zhilin Liu*

**ABSTRACT**

Large-scale rural-urban migration in China has sparked a considerable interest in the settlement patterns of migrants from both scholars and policy makers. In the international migration literature, two competing theories have dominated the debate over determinants of migrant settlement intention and outcomes, though scholars have yet to reach a consensus over which factors are more important. An earlier theory, derived from the neoclassical economics, emphasizes the economic incentives in host and origin countries and depicts the settlement decision as a process to maximize the value of migrants’ human capital. The other theory, rooted in sociology, stresses the sociocultural conditions and asserts that social attachment and integration are of crucial importance to migrants’ settlement decisions. The bulk of literature in China’s rural-to-urban migrants has put their emphasis on formal institutions such as the *hukou* system, or argue the “settlement vs. return” decision is part of a family strategy of migrants to maximize economic opportunities while mitigating the *hukou*-based constraints.

This paper seeks to identify the factors that influence the settlement intention of rural migrants in urban China. More specifically, we investigate 1) what factors – economic incentives or sociocultural conditions – determines the settlement intention of rural migrants in urban China? 2) Does the determinants differ between different age cohorts, i.e. between the so-called 1st and 2nd generation migrants? Based on the data derived from a twelve-city migrant survey conducted in 2009, statistical analysis revealed that 1) both social-cultural and economic incentive factors matter in deciding settlement intention of rural migrants in China, while the relative importance differ between the 1st and 2nd generation migrants and 2) relative to 1st generation, the 2nd generation migrants’ settlement decision is more influenced by economic incentive factors.

We believe that this research not only contributes to the scholarly understanding of rural-to-urban migration in China, but also sheds lights to current policy making that promote urban integration of migrant populations in urban societies in wave of people-oriented urbanization in China.

***Session 4 Housing Price Dynamics I* *Chair: Jing Wu***

**Heterogeneous convergence of regional house prices and the complexity in China**

*Rui Lin，Xin Zhanga，Xiuting Lia，Jichang Dong*

**ABSTRACT**

This paper analyzes the convergence of regional house prices and its complexity in China. Our results have provided evidences for the existence of some degree of segmentation in China’s housing market, and that the conventional definitions of economic regions may not be appropriate to analyze house price segregation in China. By further dynamic analysis of the convergence, we have found that important housing policies from Chinese central government can significantly alter the housing market but with a time lag of 4 to 5 months, and that quite different behaviors exist between the new house market and the second-hand house market in China, which provides the evidence for the complexity of housing market in China. Multiple factors together are the driving forces for the regional house price convergence. Among the seven indicators selected, urban residents’ income, house price expectation, economic fluctuation level and urban population could effectively explain regional house prices in club 1; urban residents’ income, house price expectation, economic fluctuation, land supply and credit scale could predict regional house price in club 2 effectively; house price expectation, urban population and credit scale of real estate development could interpret regional house price in club 3 effectively.

**Plausible Theories and Measures of Real Estate Bubbles: Evidences from the Urban Real Estate Market in China during 1980-2010**

*Guoqiang Shen*

**ABSTRACT**

China has experienced dramatic transformations in its urban real estate market. For example, social welfare-based urban housing construction and allocation have been replaced by market-driven housing supply and demand. Mortgage services, real estate brokerages, bid-based land transactions have all been established. However, along with these regulatory, financial, and institutional shifts is wide-spread real estate speculation in various forms. This study explores plausible theories and measures of real estate bubbles for urban housing in China for the period of 1980-2010, with a focus on urban land and housing speculation by major players such as developers, regulators, and customers.

It is not a trivial task to theorize and measure real estate bubbles. Some even believe that it is not possible to identify a bubble until it bursts. Others say that real estate investors simply cannot fully take advantage of mispricing in a market, hence, the existence of a bubble. Nobel prize laureate economist Robert Shiller lists the factors contributing to a bubble in real estate as: (1) sharp increases in the real estate price, (2) great public excitements about said increases, (3) an accompanying media frenzy, (4) stories of people earning a lot of money, causing envy among people who aren’t, (5) growing interests in real estate among the general public, (6) new theories to justify unprecedented price increases, and (7) a decline in lending standards.

Utilizing and extending these factors, this study examines the felt-but-yet-to-burst real estate bubbles in the Chinese urban real estate market by developing a theoretical framework anchored upon dominant real estate pricing theories and testing several important speculation measures such as: (1) income vs. price, (2) rent vs. price, (3) vacancy, (4) investment in real estate vs. total capital investment, (5) real estate price change vs. GDP change, (6) real estate asset value vs. GDP value, (7) capitalization rate vs. mortgage rate, (8) urbanization rate vs. price change, (9) CPI vs. price and rent change, (10) international income-price elasticity comparisons (Japan, U.S., and China). The above measures will be calculated for (a) urban land, and (b) urban commercial real estate, and (c) urban housing real estate for a set of selected large, medium, and small Chinese cities. These measures will also be calculated for historical periods in which the real estate markets indeed ruptured as in the 1980’s in Japan, the 1990’s in Southern China, and the 2010’s in the U.S. All these measures are compared and contrasted to provide plausible insights to the real estate bubbles in the Chinese urban real estate market. Some spatial and temporal phenomenon of housing bubbles in urban China will also be reported.

**Spatiotemporal Data Mining of Housing Prices in China: a Big Data Perspective**

*Xinyue Ye，Shengwen Li，Junfang Gong，Jay Lee*

**ABSTRACT**

Due to the rapid economic growth and urbanization, China's real estate industry has been undergoing a fast-paced development in recent decades. However, the spatial imbalance between urban and rural areas and among different regions that were resulted from the excessive growth and fluctuations of house prices had quickly caught public's attention and had become the focus of urban and regional economic researches. Efficient and accurate prediction of housing price remains a disputable topic. Currently, based on the trends and changes in the financial market, population migration and urbanization processes, numerous case studies have been developed to evaluate the mechanism of real estate’s price fluctuations. However, few studies have been conducted to examine the space-time dynamics of how housing prices fluctuated from a big data perspective. Using data from China’s leading online real estate platform {sofang.com}, this paper aims to investigate the spatiotemporal trends of the fluctuations of housing prices in the context of big data. First, we discuss the processes for the acquisition, cleansing and rectification of a large volume of real estate data. Rasterization of real estate data based on discrete cosine transformation is presented next. Results from analysis are discussed to describe spatial inequality of the housing prices across cities. Finally, space-time patterns of housing prices are deliberated to demonstrate the utility and means of big data.

***6/6 (Saturday) Afternoon***

***1:30 PM - 3:30 PM***

***Session 5 Land and Growth (JHEC Session)*** ***Chair: Albert Saiz***

**Housing Price Threatens Competitiveness: How Does China’s Land Policy Favoring Inland Raise Its Wage?**

*Wenquan Liang，Hang ZHANG，Ming LU*

**ABSTRACT**

China is experiencing rapid rise of labor cost. Since 2003, the central government has provided more land use quotas to the central and western regions to support their development. As a result, the relative decline in land supply in the east has raised housing prices and consequently increased wages, which finally has damaged the competitiveness of Chinese economy. On the basis of citylevel panel data from 2001 to 2010, we use per capita land supply as the instrument variable of housing price and analyze the sub-samples on the border between the central and the east regions. We find land supply policy after 2003 has led to the fast growth of housing price and raised the wages in the east region, but the effect did not exist before 2003 or in the central and western regions. This study indicates that land supply policy regardless of the geographical advantage of the east region has a negative impact on efficiency and competitiveness of Chinese economy.

**Geographical Constraints and Housing Markets in China**

*Yilin Dong*

**ABSTRACT**

Housing prices have increased dramatically in China after housing reform was instituted in 1998. In this paper, I focus on the role that housing supply has played in explaining differences in housing price. Using a sample of 35 cities in China from 2000 to 2012, I find that price gains are higher in cities where housing supply is more inelastic. Natural and man-made constraints are linked to larger increases in housing prices, but I find that the role of geographical constraints has changed over time. Geographical constraints are found to be fundamental factors affecting housing price before 2005, but geographical influences tend to be weaker post-2005 when the growth rate of housing prices increased.

**Fiscal Reform, Land Expansion, and Urban Growth in China**

*Yongzheng Liu，James Alm*

**ABSTRACT**

The central government of the People’s Republic of China enacted a fiscal reform known as the “Province-Managing-County” (PMC) reform in the early 2000s. This reform eliminated the prefecture city government as the intermediate layer between the province and the county. We apply a difference-in-difference method using a panel data set of 263 cities nationwide over the period of 1999-2011 to examine how the introduction of the PMC reform affects the economic growth of the cities. Our results show that on average implementing the PMC reform moderately increases city growth by 0.8 percent. We argue that this unexpected positive growth effect of the reform is induced by the expansion of land supply of the reformed cities, which in the postreform period have faced the need to look for revenues outside the budget system, mainly extrabudgetary funds in the form of leasing land. Our analysis provides evidence on this argument, and reveals that the reformed cities tend to expand land leasing at a speed that is 14 percent higher than the non-reformed cities. Furthermore, we show that the impacts of the reform tend to be strengthened over time following the introduction of the reform. Our results are quite robust across several robustness checks.

***Session 6 Agglomeration Economics (YSC Session)*** ***Chair: Zhao Chen***

**The Births of New Private Firms in an Environment of State-owned Enterprises: Evidence from Agglomeration Economics**

*Zhong Zhao，Liang Zheng*

**ABSTRACT**

This paper analyzes the impact of the incumbent State-owned enterprise (SOEs) on the births of new private firms in China. We apply agglomeration theories to distinguish the linkages between SOEs and private firms. Using 2008 economic census, 2007 Input-Output Table and 2005 population census, we measure the formation of the new private firms at city-industry level, agglomeration forces of distance proximity to inputs, outputs, and labor, i.e. we measure the extent to which local SOEs provide relevant inputs, consume outputs, require similar inputs, produce similar outputs, and employ similar labor. Our findings indicate that overall the incumbent SOEs hinder the formations of new private firms. For manufacturing, the entry of new private firm is significantly lower in the places where concentrate more SOEs that employ similar labor. For services, the entry of new private firm is significantly lower in the places where concentrate more upstream SOEs and SOEs that employ similar labor. However, the agglomeration effect from the incumbent private firm is significantly positive.

**Inter-industry relatedness and industrial-policy efficiency: Evidence from China’s Export Processing**

*Zhao Chen，Sandra Poncet，Ruixiang Xiong*

**ABSTRACT**

In this paper, we evaluate whether the efficiency of industrial policies depends on the consistency of their focus with the local productive structure. We use sector-level data from Chinese manufacturing surveys over the 1998-2007 period to show that the effectiveness of the export-promoting policies implemented in Export Processing Zones depends on whether they target activities for which the necessary capabilities and resources are available. We find no unconditional export benefits from the EPZ policy, but do identify greater positive export repercussions the denser the links between the targeted sector and the local productive structure. Our results suggest that industrial policy effectiveness is magnified by pre-existing productive knowledge.

**Does City-county Merger in China Promote Local Economic Growth?**

*Tang Wei，Geoffrey Hewings*

**ABSTRACT**

Municipal amalgamations have become a prevalent way for local governments around the world to exploit economies of scale in the past few decades. While most empirical research about municipal merger has focused on efficiency of local public goods provision, it is rare in the literature to explore how merger promote economic growth in a developing country context. This research investigates the policy experiment of city-county merger in China between 2000 and 2004 and identifies its effects on local economic growth. Based on a panel data that covers all Chinese prefecture-level cities before and after merger, we found that merger significantly increased local GDP growth rate; and the results are robust to many alternative specifications. We have further explored the potential channels through which merger promote economic growth, arguing that improved market integration and urban agglomeration economies are major contributors. The findings have some important implications for Chinese government’s urbanization strategy and other developing countries facing similar needs of rapid urbanization.

***Session 7 Urban Environment（YSC Session） Chair: Jing Cao***

**The Effect of Air Pollution on Mortality in China: Evidence from the 2008 Beijing Olympic Games**

*Guojun He，Maoyong Fan，Maigeng Zhou*

**ABSTRACT**

By exploiting exogenous variation in air quality during the 2008 Beijing Olympic Games, we estimate the effect of air pollution on mortality in China. We find that a 10- (roughly 10%) decrease in PM10 concentrations reduces monthly standardized all-cause mortality by 6.63%. The mortality reduction during the Olympics is mainly driven by fewer cardio-cerebrovascular and respiratory deaths. Extrapolating our results to all urban areas in China, we estimate that the economic benefits from averted pre-mature deaths would range from 380 billion to 6 trillion Yuan annually if PM10 concentrations were reduced to the WHO guideline level of 20.

**The Effect of Daily Air Pollution on Traffic Congestion: Evidence from Beijing**

*Quanyun Song，Shihe Fu*

**ABSTRACT**

Air pollution can affect traffic congestion in a few ways: decreases visibility; increases driving in a car to avoid exposure to outdoor air pollution, increases drivers’ anxiety; and increases road accidents. This paper tests the effect of air pollution on traffic congestion in Beijing. Air pollution is measured by daily air pollution index ranging between 0 and 500; and congestion is measured by the daily average traffic performance index (TPI). Based on daily workday data from October 2009 to April 2011 in Beijing, causal effect is identified from time-series variation in air quality and intra-day variation in daily average traffic performance. To deal with the endogeneity of air pollution due to traffic congestion, we use the daily air pollution index and visibility in Tianjin (a city nearby Beijing) as the instrument variables of the air pollution level and visibility in Beijing. And the 2SLS regressions produce robust results. Our study indicates that air pollution has a positive effect on traffic congestion and this provides empirical evidence for policy makers to assess the appropriateness of local traffic management strategies and air pollution emission control policies.

**The Role of Public Knowledge in Increasing Homebuyers’ Willingness-to-pay for Green Housing: Evidence from Beijing**

*Li ZHANG，Siqi ZHENG，Hongyu LIU*

**ABSTRACT**

Although green buildings are documented to bring about substantial benefits, far outweighing their incremental costs, the diffusion of green buildings is slow. Lack of reliable and accurate information is regarded as a crucial factor in explaining this “energy paradox”, yet there is little concrete evidence for the role information plays in promoting the investment in green buildings. Based on a survey conducted in three typical green and three comparable non-green residential complexes in Beijing, we found that the majority of residents were still ignorant of green building certifications, and the lack of knowledge about green buildings dominated the reasons for underinvestment in green apartments. We observed the responses of residents before and after providing the comparison of indoor environmental indicators of green and non-green apartments based on our test. Residents living in green apartments presented a significantly higher WTP for greenness, but this difference narrowed after all the respondents were provided the information of our test results, because the information exerted a significantly positive influence on the green price premium that non-green residents are willing to pay but had no effect on the green residents’ decision, implying that the benefits of green apartments were already acquired by green residents through their living experience and taken into account when they answered the pre-information WTP. This study highlights the importance of information in Chinese green housing market. The government and developers should effectively convey information about green housing to residents so as to increase their WTP and promote the development of green housing.

***Session 8 Homeownership Chair: Hong Zhang***

**Does Homeownership Crowd Out Investment in Risky Assets?:Evidence from Chinese Urban Households**

*Sanbai SUN，Chunhua WANG*

**ABSTRACT**

In this paper, we ask whether homeownership crowds out investments in risky financial assets. We examine this question by estimating data samples from two large-scale surveys in Chinese cities. The first is the Chinese General Social Survey conducted in 2010. The second is two waves of surveys (2010 and 2012) for Chinese Family Panel Study. Both have rich information on socioeconomic backgrounds for representative households in urban China. The units of observation are individual people and household. We also have supplementary data from various statistical books. Our IV estimator suggests that, on average, homeownership did not crowd out investments in risky financial assets by individuals or households in urban China in the long term. Instead, house ownership significantly increased the probability of participating in the market of risky assets. This implies a “diversification effect” of homeownership in the long term. We also find that buying a house recently (within 3 years) significantly reduced households’ total amount and the share of risky financial asset. This suggests a “substitution effect” in the short term for households. We also do heterogeneity analysis to understand whether the effects of house ownership vary across types of homeownerships and levels of income. The findings are qualitatively the same.

**The impact of China’s Housing Provident Fund on Homeownership and Consumption: Evidence from two surveys**

*Mingzhe Tang，N. Edward Coulson*

**ABSTRACT**

In the absence of well-functioning credit and mortgage markets, the Chinese government has implemented several reforms to encourage home purchases. Among the most prominent of these is the Housing Provident Fund, which requires employers and employee contributions to a pool which is later used to make mortgage loans to participants. We use the 2011 Chinese Household Finance survey and a smaller survey from Jinan, Shandong province to examine the extent to which the Fund encourages the acquisition of owner-occupied housing. We find that fund participants, depending on the size of the contributions and length of time in the program, display a very modest increase in homeownership. Fund utilizers also purchase smaller properties than they otherwise might have, due to the down payment restrictions on mortgage loans. The HPF actually seems to encourage investment in real estate more than owner-occupation, *per se.*

**Household Homeownership and Social Insurance in China**

*Yanhua Dai，Gang-Zhi Fan，Dayong Zhang*

**ABSTRACT**

The recent data of China Household Finance Survey (CHFS) shows that household homeownership rate has reached the very high level of 87% in this country. This paper therefore attempts to explore why households have such high homeownership rate in this country from a new perspective, because we think that the higher homeownership might be driven by the precautionary motive of household self-insurance. We utilize the household-level data of CHFS to investigate the relationship between household homeownership and social security. Our results show that a household’s homeownership is significantly and negatively associated with its level of social security. This suggests that a better level of social security might decrease the overheated demand for homes in this country, while a lower level of social security can drive up the likelihood of a household purchasing housing. These findings shed new light on why about 87% of households possess homes in this country and many households even own more than a home.

***6/6 (Saturday) Afternoon***

***3:45 PM - 5:45 PM***

***Session 9 Housing Market and Policy (JHEC Session) Chair: Albert Saiz***

**The Heterogeneity of Crowding Effect of Public Housing on Market Housing: Empirical evidence from non-linear threshold panel data models in China**

*Jie Chen，Huifu Nong*

**ABSTRACT**

This paper empirically examines how public housing provision affects the supply of market-based housing in urban China. It is based on a panel of provincial data for the period of 1999-2010 and special attention has been given to the potential nonlinear pattern of the crowding effects. Our empirical results shows: (1) the supply of public housing crowded-out the supply of market housing but its degree was generally moderate; (2) the crowding-out effect varied substantially under different scenarios; (3) the degree of crowd-out effect changed over time but its sign was consistent in the sample period. These findings have important implications to help improving the design of public housing programs in general.

**A Micro-simulation of Property Tax Policy in China**

*Jing Cao，Wenhao Hu*

**ABSTRACT**

China is exploring possible property tax reform to stabilize the booming housing market and provide a sustainable revenue source for the local government. In this paper we first set up a theoretical model of property tax reform, and then decompose the potential impacts using this framework. Next we used the China Family Panel Survey (CFPS) data to conduct a microsimulation model to examine the potential impacts and incidences of alternative property tax regimes in China. Our analyses suggest that a uniform property tax policy would bring big heterogeneous impacts on different income groups as well as regions, which mainly led by the differences on income distribution, housing price and the degree of the Housing Demolition program. The property tax is more likely to be regressive tax than progressive in our simulation. Using the property tax revenue on the poor’s public housing subsidy would mitigate the regressivity and in some case even increases the overall social welfare. Finally, we use the cross-sectional information in CFPS data to simulate for optimal tax scenarios for each region. Our microsimulation results provide some initial quantitative analysis to shed some light on future property tax reform in China.

**Housing Affordability and Housing Vacancy in China: The Role Of Income Inequality**

*Chuanchuan Zhang，Shen Jia，Rudai Yang*

**ABSTRACT**

The housing price in China’s urban areas increases very fast during the past decade, surpassing the income growth and showing a trend of bubbles. Closely associated with the increase in housing price is the growing number of empty apartments. This paper argues that the income inequality is one important cause of the increases of both the housing price relative to income and the housing vacancy rate. Using data from China’s Urban Household Survey, this paper examines empirically the effects of income inequality on housing price-to-income ratio and housing vacancy rate within each city, and finds that the income GINI coefficient is significantly positively related to either the housing price-to-income ratio or the housing vacancy rate. In particular, one percentage higher GINI coefficient increases housing price-to-income ratio and housing vacancy rate by 0.026 points and 0.166 percentage points, respectively. During 2002 to 2009, approximately 6% of the increase in housing price-to-income ratio and 10% of the increase in housing vacancy rate can be attributed to the increase of GINI coefficient. Further studies show that the development of capital market and housing rental market are both helpful in mitigating the impacts of income inequality on housing price-to-income ratio and housing vacancy rate.

***Session 10 Housing Price Dynamics II (YSC Session) Chair: Anping Chen***

**Temporal and Spatial Dynamics of Housing Prices in China: A Study Based on Wavelet Decomposition and Coherency**

*Ying Fan，Zan Yang，Robert D. Campbell*

**ABSTRACT**

House price changes are fundamentally non-linear, and are highly sensitive to a number of cyclical effects. These characteristics present challenges to scholars attempting to define the dynamics of house price changes, and the co-movement of house prices across regional boundaries. The developing technology of Wavelet Decomposition offers a potentially valuable tool in mitigating many of these difficulties. This paper uses wavelet decomposition methods to analyze the temporal scale and spatial variability of housing price fluctuations in four typical cities of China. We examine regional differences in housing prices over short and long run terms. We also use wavelet technology to analyze spatial variability and the co-movement of prices across regions. We discuss implications of our results for the development of risk efficient investment strategies in real estate.

**Household tenure choice and housing price volatility under a binding home-purchase limit policy constraint**

*Hong Zhang，Yang Zhang，Michael J. Seiler*

**ABSTRACT**

In response to China’s home-purchase limit policy, this study establishes a dynamic search-matching model with the home ownership market and rental markets unified within a single framework. We analyze dynamic responses of household tenure choice, housing prices and market liquidity to a demographic shock. The results show that rents are more sensitive than home prices in response to a demographic shock. Although home price growth can be muted in the current period, the exogenous shock causes rents to spike. Accordingly, this mandatory administrative policy which artificially caps current demand should be replaced by more market-oriented economic methods.

**Different Types of Monetary Policy Instruments and Regional Housing Prices: a Comparative Study on the Influences of Regulation in China**

*Gang Yang, Hongwei Wang*

**ABSTRACT**

By using System Clustering method to group China’s provinces into 3 new groups according to their housing prices, then establishing a State-space model and applying the Calman Filter calculation, this paper made a comparative analysis of the influences of different types of monetary policy instruments towards different regional housing prices. The empirical results show that both the quantitative instruments represented by M2 and the pricing instruments represented by real interest rate, have increasing influences to different regional housing prices, but the former influence is much stronger than the latter; The influential differences of quantitative instruments to regional housing prices are much greater, which means the higher the regional housing price is, the greater the influence will become. Therefore, the central bank shall optimize the combination of monetary policy instruments according to the above characteristics of different types of monetary policy instruments, so that to achieve the regulatory target of real estate market.

***Session 11 Housing Demand and Supply chair：Jing Wu***

**To Build above the Limit? Implementation of Land use Regulations in Urban China**

*Hongbin Cai，Zhi Wang，Qinghua Zhang*

**ABSTRACT**

This paper studies the implementation of land use regulations in urban China. In particular, we investigate compliance of the floor-to-area ratio (FAR) regulations by rational land developers, using a unique data set of residential land matched with the nearby residential development projects from 30 major Chinese cities. In our sample, developers in more than 20% of cases build above the regulatory FAR limits when they bought the land. Our analysis finds that attractive land location attributes tend to induce an upward adjustment of FAR. Moreover, developers who are more likely to have special relationships with government officials are more likely to build above the limit. We also present evidence that regulatory FAR limits in urban China are much lower than FAR levels maximizing land value, especially for land parcels in relatively more attractive locations. Thus, FAR regulations have imposed a really restrictive constraint on the development of urban land in China.

**Disentangling Demand and Supply Shocks in the Chinese Housing Market**

*David C. Broadstock，Dayong Zhang*

**ABSTRACT**

Understanding the dynamics of China's housing price is currently an important research question that matters to both policy makers and investors. Enlightened by a recent study (Killian, 2009), this paper estimates the dynamic effects of different types of shocks on the real housing prices in China. Using a structural VAR model, this empirical study decomposes the real housing prices into demand and supply components. This methodology also takes into consideration the bi-directional causalities between macroeconomic shocks and housing prices, and thus can avoid typical problems of endogeneity. The main focus of this paper is that the impacts of demand and supply shocks on the housing market can be distinctively different from each other. Our results shed light on the causes of recent housing price dynamics. Changes in the composition of shocks over time can be used to comment on the effectiveness and appropriateness of policy interventions adopted by the Chinese government.

**Can Developers Predict Future House Price? Evidence from Land Auctions in Urban China**

*Jia He，Jing Wu*

**ABSTRACT**

In existing housing literatures, developers are always perceived as experienced and informed market participants, which are able to correctly understand the available information and hence at least partially predict the future house price trend. In this paper, this consensus is challenged by the evidences from developers’ land purchasing behaviors in China. Based on a unique dataset on listed firms’ land auctions in 35 major Chinese cities between 2005 and 2010, the empirical results suggest that developers are just positive feedback traders, and tend to bid significantly higher prices for land parcels if house price was increasing during the previous quarters, controlling for other factors. By contrast, they cannot be aware of the existing mispricing in the housing market, or the potential market correction following. In addition, the breakpoint analysis indicates that developers cannot predict the forthcoming government intervention events either. We also examine stock market's reaction to developers' such irrational behavior. Results show that stock market is completely indifferent when developers overbid for land parcels, as evidenced by insignificant accumulative abnormal return (CAR) accompanied with the land transaction events. We believe developers’ such behavior is one important factor fueling the house price surge in China during the previous decade.

***Session 12 Firms and Workers chair：Canfei He***

**Hollowing Out of the Real Economy: Evidence from China's Listed Firms**

*Xu Li，Xiang Shao，Zhigang Tao*

**ABSTRACT**

The paper studies an often-observed phenomenon of diversification of manufacturing firms into real estate development in East Asian economies. Utilizing a sudden change in China’s accounting standards that requires firms to disclose information about their real estate holdings for investment purpose (or investment property), we examine both the impact of such diversification on firms’ investment in their original business and the stock market response to such diversification. Our results confirm there exists underinvestment in original business (or hollowing out of the real economy) for firms diversifying into real estate, and that there is a lack of investor response to such diversification, in both short-run and long-run. Our study calls for further study on the role of real estate development in the long-run competitiveness of developing economies.

**Residential Segregation and Entrepreneurial Success of Rural Migrant Workers in China**

*Pengyu Zhu，Hui Wang*

**ABSTRACT**

In China, many rural migrants live in urbanizing villages that are usually located at the peripheral areas of cities. Although this residential segregation is related to some policies (e.g. hukou system), it is largely by choice. Living in these urbanizing villages could incur both negative spatial mismatch effects and positive spillover effects. The purpose of this research is to examine how the residential segregation in urbanizing villages affects the entrepreneurial success of rural migrant workers. More specifically, we study how residential segregation impacts the likelihood of becoming self-employed and the self-employment income. Through a survey across four mega-regions in China that are currently experiencing the most rapid urbanization, we collect some unique information on rural migrant workers’ attitudes towards living in urbanizing villages, and therefore are able to address the self-selection bias that has broadly existed in most previous studies on residential segregation and spatial mismatch. The models show that the net effect of residential segregation in urbanizing villages on migrant workers’ self-employment outcomes (both self-employment propensity and self-employment income) appears to be positive, suggesting the spillover effects override the spatial mismatch effects. Current policy proposals by government officials to demolish urbanizing villages should be accompanied by alternative policies to assist with housing migrant workers in appropriate locations that not only reduce spatial mismatch effects but also maintain positive spillover effects.

***Session 13 Frontiers in Urban and Regional Development II chair：Henk Folmer***

**Air Pollution and Perception-based Averting Behavior in the Jinchuan Mining Area, China: A Structural Equation Modeling Approach**

*Zhengtao Li，Henk Folmer，Jianhong Xue*

**ABSTRACT**

We present a simultaneous equations, perception-based averting behaviour model of health risks caused by air pollution, with application to the Jinchuan mining area, China. We distinguish three types of averting behaviour: investment in purifying equipment and plants, purchase of preventive or curing medication or food, and adjustment in daily activities; and two types of perceived health risk: (i) caused by the intensity of exposure and (ii) the hazardousness of the pollutants. The estimations show that a perceived increase of intensity of exposure by one day a week leads to a restriction of outdoor activities by 45 minutes per week. Annual expenditure on air filters, foods and medicines increase by 40 CNY for a one level increase of the four indicators of hazardousness of pollutants. The total willingness to pay for air quality is two percent of annual household income; hence, improving air quality substantially decreases health risk averting cost. Another policy recommendation is daily disclosure of air quality to assist residents to take the right kind and level of risk reducing actions. We show that a simultaneous equation model with latent variables outperforms conventional averting behaviour approaches econometrically and in terms of provision of relevant policy information.

**Static vs. Dynamic Agglomeration Economies: Spatial Context and Structural Evolution behind Urban Growth**

*Roberto Camagni，Roberta Capello，Andrea Caragliu*

**ABSTRACT**

Critically assessing and integrating the existing literature on static agglomeration economies, this paper overcomes the agglomeration-growth shortcut actually present in the literature by underlying the role of dynamic agglomeration economies and by empirically identifying their determinants. These latter consist in the quality of the activities hosted, the quality of production factors, the density of external linkages and cooperation networks, and the characteristics of the overall urban system in which the city is located. These factors are expected to increase productivity and long-term ‘structural dynamics’ processes of urban transformation. Theoretical expectations are validated through an econometric analysis on 136 European LUZ.

**An Increase in the Retirement Age in China: The Regional Economic Effects**

*Anping Chen，Nicolaas Groenewold*

**ABSTRACT**

China’s pension system is in need of comprehensive reform in that it is fragmented in its coverage and significantly under-funded. Attempts to improve the coverage will likely exacerbate the financial strains. Thus it is urgent to improve the financial sustainability of the system and one policy which has been proposed is to increase the retirement age. There have been similar proposals in many other countries and they are in line with improved health and life-expectancy. In China’s case the partial coverage of the system is related to industry structure with much the best coverage being for government and SOE employees. Since this structure differs considerably across the regions in China, it is likely that a change in retirement age will have significantly different effects across China’s regions. Inter-regional disparities are already very substantial in China and it will be important to know whether changes in pension arrangements will widen or narrow these disparities. It is the object of the research reported in this paper to throw light on this question.

To do this we construct a small theoretical model having some Chinese characteristics. The model has two regions (coast and interior), two sectors (formal and informal) two types of labour (skilled and unskilled), two levels of government (central and regional) and captures some features of the Chinese tax-expenditure system. Pension coverage is limited to skilled workers in the formal sector and pensions are assumed to be paid by regional governments. We linearise the model and solve it numerically using parameter values derived from average Chinese data for the period 2008-2013.

We run two experiments, both involving a shocks designed to mimic an increase in the retirement age from 60 to 61. The first assumes that the regional governments use the extra net revenue resulting which results from the increase in retirement age for the provision of a government-provided consumption good while in the second case it is assumed that the government uses the revenue to reduce pension premia (or increase pension payments).

In both cases the increase in retirement age increases the supply of skilled workers and depresses the relative skilled wage in both regions but by more in the interior than in the coast. Output of each good increases in each region but formal-sector output increases by more (since only the formal sector uses skilled labour); the income of skilled households falls but that of unskilled households rises; welfare increases in both regions for both household types but by more for unskilled than skilled and by more in the interior than in the coast. In addition, the welfare disparity between the coast and the interior is reduced. The results are similar in sign across the two experiments but the magnitude of the effects is generally larger in the second, i.e., where the regional governments use the additional net revenue to increase pension payments or reduce pension premia rather than simply producing more government output.

***Session 14 Urban Form (JHEC Session) chair：Albert Saiz***

**Neighborhood Land-Use Patterns and Housing Prices In Beijing**

*Yourong Wang，Yong Tu，Wenbin Li*

**ABSTRACT**

The existing literature revealed inconsistent evidence about effects of neighborhood land-use patterns on housing prices and failed to provide explanation of the effects. Matching land supply data during around two decades with housing transaction data between 2006 and 2011 in Beijing, the present paper finds that (1) comparing to the neighborhoods with mixed functions, people are willing to pay more for a home in a neighborhood with single function ; (2) the shares of commercial, industrial and public service land supply over the past five years in the neighborhood have positive effects on housing prices; (3) in the mixed functional neighborhood, housing prices increase with the shares of commercial land supply, but decrease with the share of industrial land supply, and there are no significant relationship between housing prices and the share of public services land supply. Although, these findings are sensitive to subsamples stratified by the regions and alternative geographic definitions of neighborhood, in general, they are very robust across model specifications. It is suggested that neighborhood land-use patterns including neighborhood types and changing characteristics of neighborhood land uses affect people's perception of the prospect of the neighborhood associated with job opportunities and amenities, thus willingness to pay for a home. This study is of great significance in several ways, especially for the construction of housing price index.

**Transit Development, Consumer Amenities and Home Values: Evidence from Beijing's Subway Neighborhoods**

*Siqi Zheng，Yangfei Xu，Xiaonan Zhang，Rui Wang*

**ABSTRACT**

While numerous studies have shown that rail transit investment increases property value close to stations, little has been said on the subway-induced indirect changes in neighborhood amenities and their role in property market’s response to transit investment. The rapid expansion of Beijing’s subway system over the last decade provides a precious opportunity to research the transit – retail amenities – property value connection. This paper joins a small empirical literature to study how local consumer amenities react to urban rail transit development and subsequently reflect in consumers’ willingness to pay. Using multiyear subway construction history, station neighborhoods’ restaurant activities and rental housing transactions in Beijing, we find a new subway station positively contributes to the quantity and diversity of nearby restaurants. And the changes in neighborhood restaurant activities capture 10-15% of the home value appreciation following the construction of a subway station. Our findings support the “multiplier effect” of neighborhood retail amenities in rail transit’s capitalization in local home value, suggesting that the public investment in transit and the private market responses complement each other and both contribute toward urban quality of life, as revealed by the appreciation in local property values.

***Session 15 Housing Market and Household Behavior chair：Qinghua Zhang***

**Housing Conditions and Life Satisfaction in Urban China**

*Fang Zhang，Chuanyong Zhang，Wenbin Li*

**ABSTRACT**

This paper aims to investigate how housing conditions affect individual’s life satisfaction or subjective wellbeing in urban China, especially on housing satisfaction and overall happiness, by using the 2006 Chinese General Social Survey dataset. Holding the housing satisfaction or overall happiness as dependent variables, the explanatory variables regarding to housing conditions include homeownership, house size, number of bedrooms, having living rooms/bathrooms and house type. Through the Ordered Probit Model, the empirical results suggest all the house-related characteristics used have positive significant effects on people’s housing satisfaction; however, only homeownership and house size play an important role in overall happiness. Further, using housing satisfaction as one of explanatory variables, the housing satisfaction and homeownership are only two significant factors for overall happiness. In addition, this paper divides the full sample into two different categories: youngers and elders, low-income people and high-income people and gets some distinct empirical results.

**Loss Aversion, Learning and Price Cutting Behavior**

*Xiaolong Liu，Arno van der Vlist*

**ABSTRACT**

Loss aversion, or the psychological bias of homeowners to not selling for less than the original purchase price, affects list price setting. In this paper, we investigate whether loss-averse property sellers exhibit active learning such that these sellers actively change their reservation prices, proxied by list prices, during the property listing process. Using a comprehensive property transaction dataset from the Randstad area of The Netherlands, we show that loss-averse sellers tend to learn from the market such that they are more likely to revise their list prices downwards, but still set higher final list prices than sellers not incurring potential loss upon sale at the market entry. We interpret these findings as evidence of a partial learning effect of loss-averse sellers since, despite the revealed learning during the property listing stage, loss-aversion is still present in final property list prices. Finally, seller’s motivation is found to be an important underlying driver of the revealed learning among loss-averse sellers. These results are robust with respect to market boom and bust.

**Housing Prices and Household Savings in Urban China**

*Weida Kuang，Tao Li，Jingjian Xiao*

**ABSTRACT**

By combining life cycle hypothesis, liquidity constraints theory and precautionary saving theory, this paper contributes to develop a three-period consumption model to demonstrate the relationship between housing prices and household savings. The theoretical model illustrates that the expected housing price appreciation in a household’s middle age leads to household savings increases in a young age. Second, household savings in a young age is positively associated with both expected educational and medical expenditures in middle age and pension expenditures in old age. Third, the expected housing price is negatively associated with educational and medical expenditures in middle age. Using the macro datasets of China’s 31 provinces over 1996-2011, we find that the expected housing price positively interacts with the current household savings. However, the influence of the expected housing price on the current household savings is greater than the influence of the current household savings on the expected housing price. In addition, the expected education, medical care and pension expenditures are positively associated with the current household savings. Meanwhile, the housing price has salient crowding-out effects in education expenditure, medical care expenditure and pension expenditure. Finally, employing the micro datasets of China Family Panel Studies (CFPS) in years 2010 and 2012, we also find that the interaction of rental price and household head age has significant and positive effects in household saving. Accordingly, to prevent a housing bubble and promote household consumption, policy makers should curb housing price inflation by enacting appropriate countercyclical housing policies.

***Session 16 Urban Development chair：Fenjie Long***

**The Impact of Beijing High School Location on Surrounding Residential Price**

*Xuezhen Dai，Jing Yan，Changchun Feng*

**ABSTRACT**

The limited supply and rigid demand lead to a high level of rents for residences surrounding key high schools and second-hand housing prices, which strongly suggests the capitalization of education. In this paper, we present an empirical study and a comparative analysis of the capitalization of Beijing high school using the Hedonic model, which is relatively mature both at home and abroad. Specifically, the paper explores how the surrounding residences are influenced by the quantity and quality of high schools and the distance between them. We refine the evaluation index system and investigate the overall and regional leasing markets and second-hand markets. The results support the capitalization of school quality and quantity in both sorts of markets but the capitalization of distance only in the leasing market, while the capitalization level of leasing markets is higher than that of second-hand housing markets. We show that the influence area over the overall leasing market and second-hand market have the same radius.

**What Raises More Rental Value for Cheap versus Expensive Residential Properties? Evidence from Shanghai based on a Quantile Spatial Hedonic Model**

*Yiming Wang*

**ABSTRACT**

Urban infrastructure’s positive externalities on residential property value are well recognized in the literature. However, hedonic regression treating property price as dependent variable involves a generic simultaneity issue, in the sense that, if housing is considered a capital asset instead of consumption good, the observed property price and the unobserved opportunity cost of homeownership are mutually dependent (Poterba 1984; 1992). To circumvent this simultaneity problem, this paper analyzes the per square meter average asking rents of a sample of 2,575 residential communities (xiaoqu) observed in Shanghai, China, between December 2012 and January 2013. A quantile spatial hedonic regression test is devised and conducted, based on the IVQR (Instrumental Variable Quantile Regression) algorithm per Chernozukov and Hansen (2006). The model results suggest that the geographical proximity to different types of urban infrastructure, namely hospitals, metro stations, parks and public schools, though all raising the average rental value significantly, have varying impacts on communities at different rental price levels. Among others, the nearness to hospital is found to raise the value of expensive rental communities more quickly, while adjacency to public school and park, ceteris paribus, tends to lift more marginal rental value for cheaper xiaoqu. Policy implications are discussed regarding the distributional effect of urban infrastructure provision and the complexity of value capture intervention.

***Session 17 Land Use and Transportation chair：Zan Yang***

**Wheels of Fortune: Subway Expansion and Property Values in Beijing**

*Shanjun Li，Jun Yang，Ping Qin，Shun Chonabayashi*

**ABSTRACT**

China is experiencing rapid urbanization. Its capital city, Beijing, experienced a 53 percent increase in population from 2001 to 2013. To address traffic congestion and air pollution, two of the most pressing urban challenges, Beijing has been investing heavily in transportation infrastructure. In particular, the subway system added 15 new subway lines with a total length of 410 kilometers of over the 12 year period. We quantify the capitalization of large-scale subway construction into property values in a first-differenced hedonic price framework while controlling for confounding factors and reverse causality. Our analysis finds a positive and significant impact of subway proximity on property values: a reduction in the distance to a subway station by one kilometer increases the value of properties within 3km of the station by 14 percent, and by 3.9 percent for properties within 3 to 5km. Our analysis shows that the increase in property values can more than cover the capital cost of subway construction.

**The Value Impact of Accessibility on Urban Housing Price: the Case of Xiamen, China**

*Guoqiang Shen*

**ABSTRACT**

The most well-known slogan in real estate is “location, location, and location”. Both theory and practice have shown that a good location adds positive impacts (i.e., value, convenience, safety) to a property, may it be commercial, residential, or industrial. However, what exactly are the impacts of location on the property and how can we actually measure them are not trivial and in fact are not well studied in the real estate literature. This paper takes on the accessibility lens to examine the impact issue for properties. More specifically, this paper studies the value impact of accessibility on urban housing price in Xiamen, China, by using a GIS-based Huff model together with a Hedonic price model.

The paper starts with a concise literature review of research related to accessibility, housing price, value impact on residential properties, and relevant GIS and spatial analysis methods. Then, the paper develops a spatial analysis framework anchored on (1) a set of common public facilities which provide necessary services for basic residential living, such as desirable\* facilities like schools, supermarkets, offices, parks, bus stations, ocean fronts and undesirable\*\* facilities like waste processing plants, railroads, highways; (2) a facility attribute-based (i.e., store size, school enrollment, bus frequency) accessibility measure (i.e., probability and distance) for all housing units to all facilities; (3) a unified GIS database containing layers of housing, facility, transportation, recreation, shopping, education and so on, and finally (4) a Hedonic price model using observed housing price as dependent variable and housing attributes (i.e., size, neighborhood quality) and calculated accessibility attributes (i.e., the distances and probabilities for selected facilities) from the Huff model as independent variables.

The results show that facility attribute-based accessibility measure is a good proxy of housing location and is a good and significant predictor for housing price. In general, larger positive value impacts exist for housing units with closer accessibilities to desirable facilities and bigger negative value impacts apply to housing units with closer accessibilities to undesirable facilities. More specifically, closer to schools, bus stations, and shopping centers adds more values to homes than closer to offices and parks does. Similarly, closer to a railroad or a waste plant drops more housing values than closer to a highway street. The paper concludes with some policy suggestions for better urban planning and location, especially for urban residential housing planning, development, and choice.

**Subway Network Effect and Its Capitalization in Housing Prices in Beijing**

*Cong Sun*

**ABSTRACT**

Subway enhances urbanites’ spatial accessibility. With the increasing number of subway lines, urban subway network becomes complicated, especially in megacities like Beijing. The subway network makes commute, shopping, and recreational trips convenient. Urban residents living near each station (no matter old or new) would benefit from a new subway line, since accessible opportunities become richer.

A large number of previous studies have examined people’s willingness to pay for the locations with better access to subway lines. But two related “network effects” have received little attention. Firstly, different subway stops may have different local effects due to different locations in the subway network. For instance, passengers could take subway to many shopping malls or parks from a station in the central area within half an hour, but ones might be able to travel to few destinations from a suburban station in the same amount of time. That is, accessibility has to be evaluated at the network level with an underlying heterogeneous urban space.

Secondly, a new station will not only affect its local neighbourhood, but also areas around existing stations. People who live around an old subway station often enjoy the benefit of a new subway line indirectly, meaning there is a willingness to way associated with such accessibility improvement.

From the perspective of spatial equilibrium, this paper goes a step further to explain what the heterogeneous accessibilities of urban subway network in different locations are and how a newly-built subway line influences the accessibility of the whole subway network, especially the old subway stations. In the basic framework, urbanites enjoy more urban amenities by living (including social interaction) around stations (in the utility function). The quantity of urban amenities is different at each station. A passenger’s utility at each station will increase under the introduction of newly-built subway lines, for the home-to-amenity travel distance/time decreases (like iceberg cost). People’s willingness to pay for the housing units around a subway station depends on the urban amenities around other stations in the subway network and the travel distance/time to those stations.

As the capital city of China, Beijing has opened 14 newly-built subway lines with more than 200 new subway stations in the past decade. The transaction of housing units has been frequent during the same period. It provides us good opportunities to examine the “network effect” empirically. In this paper, we firstly construct a new index to reflect the accessibility of a subway station. Then we portray the spatial heterogeneity of subway stations’ accessibility. Based on the mirco housing transaction data, we further employ pseudo repeat sales model to investigate people’s willingness to pay for heterogeneous spatial accessibility changes in the process of subway network expansion.

***Session 18 Land Use and Transportation chair：Jing Wu***

**Impacts of Transportation Characteristics on the Economies of Cities in China**

*Bismark R.D.K. Agbelie1，Yang Chen，Nimesh Salike*

**ABSTRACT**

Chinese government prioritized transportation infrastructure since the eighth five-year plan (1991-1995) with the realization of significant role transport plays in the economic development. Transportation infrastructure has been an essential part of China’s regional development policy since then. The public investments in inter-city connections and intra-city links have increased over the years amounting to 6.8% of local aggregate public expenditure in 2012. A small number of papers have examined the contribution of the aggregate infrastructure to the productive performance and the spatial spillover effects of transport infrastructure using Chinese provincial level data. However, there is no study that had attempted to investigate the heterogeneous output effects across varied-sized prefecture-level Chinese cities of both inter-city and the intra-city transport network within the period from 2000-2012.

A random-parameters model is adopted to account for possible unobserved heterogeneity across cities to better understand the effect of transportation-related characteristics (including transportation freight and passenger volumes, public transportation, highway congestion) on a city’s economy in China. We thus answer the question to what degree transport infrastructure and which type of transport infrastructure matters for which specific city in China over time.

The estimation results revealed significant variability across cities, with the impact of transportation-related characteristics (highway and railway freight volumes, highway passenger volumes, public transportation output, area of paved roads, highway congestion rate) varying greatly across cities and the reliance of specific economic sectors on transportation in each city. As an example, assessments of elasticities indicate that a 1% increase in a city’s highway freight volume would result in an increase in the gross city product per capita from 0.0001% to 0.0972%, while a 1% increase in railway freight volume would increase gross city product per capita from 0.0001% to 0.0254% across cities in China. Also, a 1% increase in paved road area in a city would increase the city’s gross product per capita by an average of 0.007%, and this impact varies significantly from 0.0000%1 to 0.0233% across the selected 237 cities in China. The results indicate the influences transportation-related characteristics have on the economies of 34 cities in China.

**Assessing Investment Value of Privately-owned PRH Projects with Multiple Options**

*Li Dezhi，Guo Kai，You Jia，Eddie Chi-Man Hui*

**ABSTRACT**

With the rapid urbanization and stubbornly high price of commercial flats, public rental housing (PRH) has been officially designed as the mainstream of China’s affordable housing. Although the demand of PRH exceeds its supply nationwide and many private developers are frantically hunting for investment opportunities, very few private developers treats PRH as an ideal investment target, since its investment value seems too low on the basis of traditional valuation method, like the Net Present Value (NPV) method. Thus, the normal role of a private developer in the supply of PRH is an agent, where the private developer builds PRH projects for local governments to earn tiny but stable agent fee, disregarding for financial and operational issues of PRH projects. Consequently, governments must take on almost all financial and operational responsibilities of PRH projects, which are too heavy to be sustainable. To improve this situation, a privately-owned PRH provision mode Building-Own-Operation-Concession (BOOC) is suggested, where the private developer is in charge of the life cycle management of PRH projects through a concession from the government, including the fund-raising, construction, operation, transfer, expansion and even demolition. Without doubt, the concessionary developer must comply with all PRH-relevant regulations, not only benefits but also constraints. Moreover, the private developer should have multiple options, possessing the rights to abandon, transfer and expand of targeted PRH project. Based on the NPV method and Real Option Pricing Model, a methodology for assessing the investment value of a privately-owned PRH project with multiple options is proposed. Then, the proposed methodology is exemplified in a hypothetical privately-owned PRH project in Nanjing city, whose all data are authentic except the ownership, since all PRH projects in Nanjing belong to the local government for the time being. Furthermore, the significance of multiple options is examined, and cost-effective measures to enhance the investment value of PRH projects are explored. The proposed provision mode BOOC and valuation methodology are expected to show a new perspective for accelerating the sustainable development of PRH in China.

**How does transport accessibility affect growth and Agglomeration?——Evidence from 88 counties in Guizhou Province**

*Fenjie Long，Di Zou，Xueqin Wang，Jue Wang*

**ABSTRACT**

Transportation infrastructure are considered playing a significant role in economic development and agglomeration, particularly in regions where urbanization rate is relatively low. Original theories proposed by Perroux (1950) presume that the forming of growth pole is driven by propulsive industry as the core economic force, geographical effects and the strength of linkages connecting growth pole with its surrounding. However, in regions with rapid development of urbanization, it can be observed that the forming of growth pole also has a close relationship with comprehensive transport accessibility. This paper attempts to reveal if transport accessibility affects growth and agglomeration, and how it works.

***Session 19 Public Policy and Urban Development chair：Hongyu Liu***

**Housing Purchase Restriction and Housing Market: Evidence from Chengdu**

*Yaoguo Wu*

**ABSTRACT**

As an unconventional regulation policy, the implementation of housing purchasing restrictions policy caused extensive attention of scholars. The existing literatures basically used macro data to study the effect of restriction policy, but few of literatures using housing market transaction data to answer micro mechanism. Based on the DID model, this paper choose reasonable treatment group and control group, and use the full transaction data of these two groups to estimate the effect of the restriction policy on housing market. We investigate that housing purchase restrictions policy have been significant negative effect on housing price, make the price drop 6.5%~6.8%, but this effect changed over time, and eventually decay. In addition, this policy have different negative effect extent on housing price to different area housing, also makes people tend to buy bigger apartment than before.

**Provincial Returns to Human Capital in Urban China, Inter-regional Inequality and the Implicit Value of a Guangdong hukou**

*Jeffrey S. Zax*

**ABSTRACT**

This paper estimates province-specific regressions for urban earnings as functions of human capital characteristics in China for 1988, 1995 and 2002. These regressions differ dramatically across provinces within year for all three years. This demonstrates that the market mechanisms that would ordinarily equate returns to human capital across regions have been ineffective in urban China. Moreover, the persistent differences in returns to human capital across provinces have been responsible for reduced levels of earnings, elevated levels of inter-personal inequality and elevated levels of inter-provincial inequality. If all workers received the maximum of their predicted earnings across all provinces, rather than their predicted earnings in their home province, average earnings would approximately double, interpersonal inequality would decline by 40-50% and inter-provincial inequality would essentially vanish. Throughout this period, returns to human capital in Guangdong province have generally been greater than in any other province. However, returns in Beijing increased over this period, to the point where, in 2002, they were greater than those in Guangdong for a noteworthy minority of workers.

**China’s Urban Development Policies and Urban System Dynamics**

*Li Fang，Peng Li，Shunfeng Song*

**ABSTRACT**

This paper links China’s urban development policies to its urban system dynamics. Since the establishment of the People’s Republic of China (PRC) in 1949, China’s urban development policies have experienced dramatic changes, from anti-urbanization before the reform, to anti-large city-development during 1978-1999, and coordinated urbanization in 2000-2012. Using city-level data from 1949 to 2012, this paper examines whether the dynamics of China’s urban system are affected by those policies, via the Zipf and Gibrat laws. Evidenced by the Zipf coefficient, we find that Chinese city sizes became more evenly distributed before 2000, although this pattern was reversed after 2000. The results of the Gibrat law conclude that city growth was converging more rapidly before 2000, especially during 1991-2000, but that this convergence trend has either slowed or disappeared after 2000. The DID analysis shows that large cities’ growth rates have significantly increased, compared with small and medium-sized cities, after the growth control on large cities was relaxed in 1998. Findings based on both the Zipf and Gibrat laws suggest that China’s urban system is strongly affected by China’s shifting urban development strategies.

***Session 20 Local Politics and Urban Growth chair：Qinghua Zhang***

**The Impact of Local Government Structure on Public Service Disparity across Chinese Cities**

*Huiping Li，Qingfang Wang*

**ABSTRACT**

Chinese cities growth has been associated with fiscal decentralization and public expenditure increase. Existing literature has well documented that fiscal decentralization facilitates economic growth across Chinese cities. The effect of fiscal decentralization and government fragmentation on public services has not been sufficiently addressed. Public choice theory argues that households with heterogeneous preferences of tax and public services would vote by their feet to choose the jurisdictions with their favorable package of public services and taxes. Therefore, disparities in public service accessibility are benign, and fragmented local governments could be efficient for public service providing and generate higher satisfaction. In contrast, some other perspectives, such as the social stratification‐government inequality thesis, are mainly concerned with the equity issues. In particular, fragmented governance can institutionalize the hierarchical nature of residential structure by promoting and protecting unequal distribution of public resources. Since these perspectives are mainly based on experiences of “free” housing markets and unrestricted mobility of residents under western democratic systems, they do not speak directly to a transitional‐socialist economy with very unique and complicated political and household registration systems like China. Under this theoretical background, this study attempts to examine the relationship between public service provision and local government structure. Using data from China cities statistics from 2000 to 2009, this study examines public services is contingent on government structure and socioeconomic characteristics. Multilevel Modeling are employed in the study. The results will reveal the extent to which market forces, government fragmentation and decentralization, and other social economic factors have transformed public service provision among Chinese cities. The findings will advance our understanding of government fragmentation and fiscal decentralization in efficient provision of public services in fasting growing Chinese cities.

**Secrets of Ghost Towns: Career Incentives and Politically Driven Urbanization in China**

*Shuo Chen，Yiran Li*

**ABSTRACT**

China has experienced urbanization on an unprecedented scale, with important implications for both domestic and global economic development. However, few researchers have explored the underlying reasons for the imbalance between the spatial expansion of China’s cities and the growth of its urban population. This paper aims to fill this gap in the literature from the political economic perspective by examining the effects of political career incentives on China’s urbanization. Based on the panel data from 2000 to 2011 of prefecture-level municipalities in China and using the personnel changes of 17th local party congresses as a quasi-natural experiment, we employ difference-in-differences method to overcome omitted variable problems. Empirical analysis reveals that the growth rate of built-up area in cities with new party secretaries was 13.77% higher than that in cities with second-term party secretaries. In addition, housing prices increased 21.91% more rapidly in the cities with new leaders, and the corresponding decrease in arable land happened approximately 1.9% more quickly. We attribute this variation to the reduced likelihood of promotion of party secretaries in their second term. Our findings show the career incentives explain 33% of the expansion of China’s urban areas, and market-related factors such as economic growth explain 16% of this expansion. However, there is no evidence that promotion incentives increase urban residency, the income of urban residents or government expenditure on public goods.

**Land Provision, Fiscal Boom and Political Mobility: Evidence from Chinese Cities**

*Shuiqing Li，Chuanhao Tian*

**ABSTRACT**

China’s contemporary urbanization largely depends on competition in investment attracting. It is widely recognized that such kind of development mode takes root in the special land policy which give rise to the separation of cheap land for industrial use and expensive land for commercial and residential use (CR\_land). Using the balanced data of land provision and fiscal revenue from 277Chinese prefectural level cities for the period of 2009-2012, matching the mobility information of local cadres, this paper finds that the motivations to move up have been the vital incentives of disparity of land provision structure. The more industrial sites granted, the more fiscal income there will be, pushed up by investment promotion. On the contrary, for the overflow effect of labor migration, shortage in the provision of CR\_land will significantly bring in skyrocketing government revenue under the condition that land supply short of demand. Finally local cadres can benefit from the boosted budgetary income to get a better political arrangement, i.e. promote from current position rather than demote prematurely or lateral, which indicates a financial maximization strategy by manipulating resource allocation all the more while facing political turnover.

# Useful Information

**Workshop Staffs and Mobile Phone Numbers**

|  |  |
| --- | --- |
| Xia Liu | (86)13810103755  [hanglung\_cre@tsinghua.edu.cn](mailto:hanglung_cre@tsinghua.edu.cn) |
| Bo Zhang | (86)15001394930  [zhangb\_abc@mail.tsinghua.edu.cn](mailto:zhangb_abc@mail.tsinghua.edu.cn) |
| Yingjie Zhang | (86)13266715853  [zhang-yj06@mails.tsinghua.edu.cn](mailto:zhang-yj06@mails.tsinghua.edu.cn) |
| Yangfei Xu | (86)15120001196  [thuxuyf@126.com](mailto:thuxuyf@126.com) |
| Cong Sun | (86)13466541686  [sunc13@mails.tsinghua.edu.cn](mailto:sunc13@mails.tsinghua.edu.cn) |

**Hotel Information**

WenJin Hotel

Add: South Gate of Tsinghua University, Chengfu Road, Haidian District, Beijing, China

Tel: (8610)62525566

文津国际酒店

地址：中国北京海淀区成府路清华大学南门

电话：(8610)62525566

QingHuaYuan Hotel

Add: No. 45-1, Chengfu Road, Haidian District, Beijing, China

Tel: (8610)62573355

清华园宾馆

地址：中国北京海淀区成府路45-1号

电话：(8610)62573355

LanTingHui Hotel

Add: No. 35, Chengfu Road, Haidian District, Beijing, China

Tel: (8610)62619296

兰亭汇快捷酒店

地址：中国北京市海淀区成府路35号（城铁13号线五道口站西北角）

电话：(8610)62619296

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