J

anuary 2016 started off with yet another very successful and well-attended spring session of the Weimer School. This year’s session had over 40 participants, which included 12 Faculty members and five Hoyt Fellows. The session ran full steam ahead following safe cover precautions due to an unusual tornado warning that was issued before the lunch break on Saturday!

Friday’s session featured presentations by three of the nine fellow candidates. Dr. Paul Willen (Federal Reserve Bank of Boston) led off the session with his presentation entitled "Passthrough in the Mortgage Market: From TBA to YSP." Dr. Andy Naranjo (University of Florida) presented before lunch with his presentation, "Cloud Computing Meets Real Estate: Spot Pricing Dynamics, Latency, and Limits to Arbitrage." Dr. Paul Carrillo (The George Washington University) was the final fellow candidate presenter on Friday with his presentation, "The Repeat Time-on-the Market Index." Weimer School Faculty Member, Dr. John Clapp finished the session on Friday with his presentation on "Housing Booms and the Return to Salient Fundamentals."

Saturday’s session began with fellow candidate Dr. Andra Ghent (University of Wisconsin-Madison), presenting "Security Design and Trading Mortgage-Backed Securities." Following were fellow candidates Dr. Sheridan Titman (University of Texas-Austin) with his presentation based on two papers "Swimming Upstream: Struggling Firms in Corrupt Cities," and "The Geography of Financial Misconduct," and Dr. Christian Hilber (London School of Economics) presenting "The Housing Market Impacts of Banning Second Home Investments." After a break for lunch, the 2016 Halbert C. Smith Honorary Fellow, Mr. Alain Bertaud, gave his presentation on "China's City Clusters: A New Form of Labor and Land Markets." The Saturday session concluded with fellow candidate, Dr. David Albouy (University of Michigan), presenting "Housing Demand, Cost-of-Living Inequality, and the Affordability Crisis."

On Sunday, the last two of the nine fellow candidates gave their presentations. Dr. Henry Munneke (University of Georgia) presented "Valuing the Option to Redevelop," followed by the 2016 International Fellow, Dr. Wenlan Qian (National University of Singapore), with her presentation entitled "Access to Home Equity and Consumption: Evidence from a Policy Experiment." Summaries of the Weimer School presentations can be found on pages 3-5 of this newsletter.

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ALAIN BERTAUD is the 2016 Halbert C. Smith Honorary Fellow. Currently working as a senior research scholar at the New York University’s Stern Urbanization Project, he is an urbanist and his wife, Marie-Agnès, collaborates with him on his research. Their research aims to bridge the gap between operational urban planning and urban economics. Prior to working with NYU Stern, Alain was an independent consultant after years of working as the principal urban planner at the World Bank. At the World Bank, he worked in many cities around the world in the role of resident urban planner, including Bangkok, Thailand, San Salvador (El Salvador), Port au Prince (Haiti) and Chandigarh (India).

"China’s City Clusters: A New Form of Labor and Land Markets Dependent on New Modes of Urban Transport"

by Alain Bertaud

NYU Stern Urbanization Project

Cities are primarily labor markets. The larger they are the more productive and innovative they become. However, the size of a city labor force is only indicative of a potential productivity. The full potential of a large labor market is achieved only when any job from any part of a city can be reached in less than one hour. Mobility is the enabler of productivity. Congestion, resulting in the slow movement of people and goods acts as a tax on urban productivity. A city economy is likely to stagnate when this marginal tax becomes higher than the marginal productivity made possible by increased labor size.

Is there a limit on the size of cities and therefore on their marginal productivity? The ability of urban transport systems to handle large movement of people and goods at increasing speed seems to establish this upper limit. The Chinese government recent decision to concentrate infrastructure investments on identified city clusters rather than on individual municipalities will test this limit.

City clusters development have appeared spontaneously in the past in several areas of the developed world. The Randstad in Holland, Silicon Valley, are examples of urban clusters. Chinese clusters, however, are different by their size from known clusters. The Randstad’s 7 million people and Silicon Valley’ 6 million, both spread over a distance of about 80 kilometers are dwarfs compared to the current Chinese clusters ranging from 30 to 100 million people spread on distance of up to 300 kilometers. These clusters already exist; they act as the complex supply chains of China industrial economy. But are they large integrated labor markets or just fragmented contiguous labor markets? The Chinese government thinks that with well targeted infrastructure investments these potential giant labor markets could become integrated and therefore will allow leapfrogging urban productivity toward heights that have never been achieved so far anywhere else in the world.

To meet this challenge the Chinese government cannot just expand at a larger scale existing transport networks consisting of metro, buses and highways. The transport system of a city of 10 million people cannot be just scaled up for a cluster of 100 million people. Urban transport has to be redesigned entirely to cater to the demand for a network of dense new routes with multiple origins and multiple destinations over longer distances at faster speed than those common in traditional urban transit.

The change required will not be limited to innovative modes of transport but will also encompass reforms of current urban planning practices where central planning “design” will have to allow urban shapes more reflective of emerging market forces. The way land is priced, including as yet undeveloped land, will have also to be more reflective of market forces.

If the Chinese government is able to carry these reforms together with creative new ideas about urban transport, Chinese large urban clusters could reach level of productivity and creativity unknown to this day in other parts of the world.
High debt growth among low-income households plays a central role in many explanations of the early 2000s housing boom. We show that debt growth among higher-income households was equally large. As a result, the distribution of debt with respect to income changed little over the course of the boom. Moreover, because high-income borrowers always account for a disproportionately large share of outstanding mortgage debt, uniform rates of debt growth imply that high-income borrowers took out far more debt in dollar terms: the richest quintile of U.S. ZIP codes accounts for about $1.5 trillion of new mortgage debt from 2001 to 2006, as compared with about $320 billion for the lowest quintile. The equality of debt growth rates across income groups is consistent with subsequent foreclosures, as defaults across income categories rose in rough proportion as well. Previous research purporting to show that the distribution of debt shifted toward low-income borrowers was based on data on the flow of new mortgage originations alone, so this research could not detect the offsetting shifts in mortgage terminations that left the distribution of debt constant over time.

Our study examines cloud computing spot pricing dynamics and the influence of latency on those pricing dynamics. We show that location matters. Using the Amazon Elastic Compute Cloud U.S. East and West market spot instance pricing and latency intraday data from April 9, 2010, to May 22, 2011, we find considerable time variation in spot instance prices, and prices are often persistently higher in the West. Bivariate vector autoregressive model results show that within-market autoregressive pricing effects are larger than across-market effects. Our regression results further show that East–West latency differentials have a significantly positive effect on East–West pricing differentials. Latency creates a dynamic pricing wedge that widens or narrows conditional on the latency differentials. Our results are robust to numerous specification and identification tests, including well-identified two-stage least squares and dynamic error correction models.

We propose two new indices that measure the evolution of housing market liquidity. The key features of both indices are a) their ability to control for unobserved heterogeneity exploiting repeat listings, b) their use of censored durations, and c) their computational simplicity. The first index computes proportional displacements in the home sale baseline hazard rate. The second estimates the relative change in median marketing time. The indices are computed using about 1.8 million listings in 15 US urban areas. Results suggest that both accounting for censoring and controlling for unobserved heterogeneity are key to measure housing market liquidity.

Previous literature (Genesove and Mayer, 2001) has established that the first price of a repeat pair is a salient reference price. We show that local fundamentals at the date of the first sale (implicit rents divided by user costs of housing) are salient also. A salient market gap is the difference between change in market value and change in local fundamental value over the time between any two sales. This quantity is potentially different for each second sale. Our model of the log of the second sales price generalizes GM (2001) by introducing the salient market gap interacted with loss and gain, and redefines a common diagnostic tool, the ratio of house prices to fundamentals. Connecticut data allow detailed spatial controls for unobserved heterogeneity; town-year fixed effects are strongly correlated with local public services and taxes. There is substantial identifying variation across town-years in the salient gap. Results show that sales with gains are discounted by .17 on average in log terms relative to losses in the presence of a positive salient gap, suggesting that those with gains rationally move the market towards fundamentals.
Salience is supported when we compare to a counterfactual gap based on a fixed seven year holding period. Results are robust to variation in the holding period, to sub periods around the global financial crisis, and to differences across towns in proxies for elasticity of housing supply and demand. We develop a new model to control sample selection based on persistent unobserved quality and we find that second sales with losses are between 50% and 80% higher quality than those with gains. In the presence a negative gap, the .06 discount on gains relative to losses becomes .012 to .030, an amount plausibly related to psychological and financial constraints of sellers with losses.

"Security Design and Trading Mortgage-Backed Securities"

Andra Ghent
University of Wisconsin-Madison

We analyze the entry of new credit rating agencies into structured finance products. Our setting is unique as we study a period in which the incumbents’ reputation was extremely poor and the benefit of more fee income from inflating ratings was low. We find entrants cater to issuers by issuing higher ratings than incumbents, particularly for interest-only (IO) tranches. Using measures of market share that are exogenous to incumbent ratings, we further find that incumbent rating levels become more generous as entrant market share in a product type increases. We also exploit a feature of structured finance that identifies undisclosed rating shopping and find that incumbent ratings increase in shopping.

"Housing Demand, Cost-of-Living Inequality and the Affordability Crisis"

David Albouy
University of Illinois

David examines how since 1970, housing’s relative price, share of expenditure, and “unaffordability” have all grown. He estimates how housing demand depends on income and both housing and non-housing prices over space and time, testing restrictions imposed by demand theory and household mobility. He finds that demand is both income and price inelastic, and has exhibited a secular increase over time. An ideal cost-of-living index based on the estimates demonstrates how the poor are impacted disproportionately in high-rent cities, and how rising rents have amplified increases in real income inequality. Rising rents and inequality both help explain the affordability crisis.
"Valuing the Option to Redevelop"

Henry J. Munneke
University of Georgia

Henry presented a study which integrates classic theories from the redevelopment, real option, and urban spatial growth literatures within an empirical examination of urban land values. More specifically, the paper estimates the capitalized value of the option to redevelop housing by incorporating the likelihood of exercising the redevelopment option (the probability of redevelopment) within a spatial hedonic model of housing value. The study’s results provide evidence of substantial spatial variation and clustering in both the redevelopment probability and the resulting option values. These results reveal location is a major determinant of redevelopment and real option value. Furthermore, the study provides evidence supporting theoretical models of urban growth, where properties purchased for immediate redevelopment are valued only for the underlying land.

"Access to Home Equity and Consumption: Evidence from a Policy Experiment"

Wenlan Qian
National University of Singapore

To provide insights into the regulatory goal to thwart deceptive trade practices by financial intermediaries, we use a comprehensive range of customer complaints about insurance companies, including claim delays, reduced settlement offers, and misconduct. Exploiting differential incentives for deceptive trade practices among financial intermediaries, we find that stock insurers receive 21% more customer complaints than their mutual insurance peers, while exhibiting similar complaint loss rates. Following random, state-level disasters, we find a substantial increase in customer complaints in the unaffected states by stock-based intermediaries. More surprisingly, we document even greater complaint differential in states with strong regulatory oversight. Consistent with blind spots due to multiple regulatory objectives, the stock-mutual complaint wedge widens when financial intermediaries approach capital requirement thresholds or face stringent price regulation. Within state increases in the stock-mutual complaint wedge are followed by substantial increases in personal bankruptcies. Overall, our findings suggest that consumers suffer severe problems and call for further improvement in regulatory supervision.

Preview of the 2016 Hoyt Fellows Meeting Program
Thursday, May 12, 2016
The Hoyt Center / 760 US Highway 1, Ste. 300 / North Palm Beach, FL 33408

Jeffrey Havsy at CBRE and Beth Mace of NIC have put together an agenda for the Hoyt Fellows session that includes presentations concerning Macroeconomic Risk, Geo/Political Risk, Capital Markets, Metros and Technological Change. Weimer School Faculty, Fellows and Postdoctoral Honorees are also invited to attend. Please contact Bobbi Bernardini at (561) 694-7621, if you have not received your registration materials.

Thursday, May 12, 2016 - Hoyt Fellows Meeting

** Breakfast buffet at 8:30 a.m. **  ** Session commences at 9:00 a.m. **

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
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<tr>
<td>9:00 a.m.</td>
<td>&quot;Macroeconomic Risk&quot;</td>
<td>Scott Livermore</td>
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<td>(Oxford Economics)</td>
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<td>9:45 a.m.</td>
<td>&quot;Geo/Political Risk&quot;</td>
<td>Scott Livermore</td>
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<td>(Oxford Economics)</td>
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- Continued on page 6 -
Preview of the 2016 Hoyt Fellows Meeting Program

Thursday, May 12, 2016 - Continued -

10:45 a.m.  "Capital Markets"  Jeanette Rice
            (CBRE)
11:30 a.m.  "Metros"  Jay Denton
            (Axiometrics)
12:15 p.m.  *** Lunch ***
1:15 p.m.  "Technological Change"  TBD

Roundtable Discussion
Is the real estate market peaking?
How will driverless cars impact real estate?
Will the election results impact real estate?
Other hot topics?

2:30 p.m.  Jeff Fisher, Moderator with
            Hoyt Fellows and Weimer
            School Fellows attending

3:30 p.m.  Business Meeting - Hoyt Fellows

** Reception - 5:00 p.m. - Hilton Singer Island Resort Island Boardroom - Suite #800**
** Hoyt Fellows Dinner - 6:30 p.m. (Hoyt Fellows only)**

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The May session of the Weimer School program is chaired by David Geltner (MIT) and this year's theme is "Innovation & Disruption in Commercial Real Estate." Postdoctoral Honorees will present on Sunday. Please contact Bobbi Bernardini at (561) 694-7621, if you have not received your registration materials.

All Hoyt Fellows are invited to participate.

Thursday, May 12, 2016
*** 5:00 pm - Welcome Reception ***
*** Hilton Singer Island Oceanfront Resort - Island Boardroom (Suite #800) ***
** participants, spouses & guests **

Friday, May 13, 2016
Weimer School Session Convenes

Program Agenda:
"Innovation & Disruption in Commercial Real Estate"

*** 8:15 am - Breakfast buffet - Weimer School participants (includes Hoyt Fellows) ***
*** Session commences at 9:00 a.m. ***

Session Chair, Dr. David Geltner (MIT)

9:00 a.m.  "Disruptive Technologies in Real Estate"  Dr. Kent Larson
            (MIT Media Lab)
10:15 a.m.  "MIT's Commercial Property Data Lab & Real Estate Product Innovation"  Dr. Andrea Chegut
            (MIT Center for Real Estate)
11:15 a.m.  "New Frontiers in Real Estate Price Indexing Methodology"  Dr. Alexander van de Minne
            (MIT Center for Real Estate)

12:15 p.m.  *** Lunch ***

- Continued on page 7 -
May 2016 Weimer School Session - Friday, May 13th - Continued -
“Innovation & Disruption in Commercial Real Estate”

1:00 p.m.  
"Innovations in Integrating Real Time Data and Machine Learning Systems into Property Pricing Processes"  
Dr. Kevin Karty, Ph.D.  
(Altisource Labs)

2:15 p.m.  
Brainstorming Session  
(All speakers & attendees included)

*** 6:00 pm - Reception - Hilton Singer Island Resort Island Boardroom - Suite #800 ***
**All participants, spouses and guests**
**7:30 pm - 9:30 pm - Dinner at Grand Asian Crazy Buffet (optional) **
**Participants, spouses and guests welcome**

Saturday, May 14, 2016

All Hoyt Fellows are invited to participate.

***8:30 am - Breakfast buffet - Weimer School participants (includes Hoyt Fellows)***
***Session commences at 9:00 a.m.***

9:00 a.m.  
"Using Social Media & Crowd Sourcing to Analyze Cities"  
Dr. Sarah Williams  
(MIT)

10:00 a.m.  
"New Frontiers in Real Estate Price Index Derivatives"  
Dr. Kelly Haughton  
(Global Index Group)

11:00 a.m.  
"Stock Market Based Indexes for Real Estate Derivatives"  
Dr. Brad Case  
(NAREIT)

12:00 p.m.  
*** Lunch ***

1:00 p.m.  
"Depreciation & Capital Consumption in Commercial Real Estate"  
Dr. David Geltner  
(MIT)

2:00 p.m.  
"Brainstorming Session - Innovation & Disruption in Commercial Real Estate"  
(All speakers & attendees included)

**6:00 pm - Reception - Hilton Singer Island Resort Island Boardroom - Suite #800**
**All participants, spouses and guests**  
**Dinner on own**

Sunday, May 15, 2016

All Hoyt Fellows are invited to participate.

***8:30 am - Breakfast buffet - Weimer School participants (includes Hoyt Fellows)***
***Session commences at 9:00 a.m.***

Weimer School Postdoctoral Honoree Research Presentations

9:00 a.m.  
"TBD"  
Dr. Andrea Chegut  
(MIT)

10:15 a.m.  
"TBD"  
Dr. Moussa Diop  
(University of Wisconsin-Madison)

*** Lunch ***

11:30 a.m.  
All participants, spouses & guests welcome

*** Adjournment ***
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<th>MAY</th>
<th>JUNE</th>
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<td><strong>Homer Hoyt Institute</strong></td>
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<td><strong>AsRES (Asian Real Estate Society)</strong></td>
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<tr>
<td>Hoyt Fellows Meeting /</td>
<td>The 44th annual National Conference</td>
<td>21st Annual Conference</td>
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<td>May 12-15, 2016</td>
<td>Park Hyatt Hotel</td>
<td>Indian Institute of Management</td>
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<td>Hoyt Center</td>
<td>1201 24th St NW</td>
<td>Bangalore, India</td>
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<tr>
<td>760 US Highway 1, Suite 300</td>
<td>Washington, DC</td>
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<td>North Palm Beach, FL</td>
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<td>and Westgate Las Vegas Hotel</td>
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