



**Abstracts**

## **W04- Housing Economics**

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## **Distance to CBD, transportation accessibility and residential housing prices in Shanghai** **Jie Chen**<sup>1</sup> // jie.chen@ibf.uu.se, **Qianjin Hao**<sup>2</sup>

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The importance of location value to housing price is well-recognized by the public but it has not been empirically evaluated in Chinese literature yet. In a hedonic price analysis framework, this paper assesses the impacts of distance-to-CBD, rail-accessibility, and public transit-accessibility on the levels of residential housing prices in Shanghai. The econometric regression results suggest that, all these factors are having significant effects on residential housing prices. Meanwhile, these impacts vary considerably across different submarkets.

## **The social renting sector as an institutional crossroad for housing choice**

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In Europe, the social rented sectors developed in different directions. The housing policies in the Anglosaxon countries, in the new Eastern countries and in Southern Europe acted more in favour of ownership acquisition, while Central Europe and the Nordic countries continued with a more tenure-neutral approach. But even in these regions of Europe social renting took completely different routes, ranging from a strong position in the Netherlands and Austria to the dissolution of the German non-profit sector.

This paper is a study about the role of the social rented sector at the crossroads of housing choice in the life-cycle. The main objective is to discuss the role that social renting and non-profit renting in particular may assume in the future. The evidence is drawn from Austria, but some of the tendencies can be observed in a number of countries.

The methodological framework is a novel use of the concepts of tenure sequence and tenure diffusion. The argument is based on an econometric analysis of the probabilities at which different age groups were found in ownership, social and private renting from 1991 to 2001 in Austria. From the longer-run predictions it can be seen what parts of society likely move between the tenures, depending on age, income, location and demographics. It is well understood that a social mix of tenants favours life-cycle welfare and job opportunities. That process is supported by the Austrian housing assistance scheme as it aims at rent stability through tenure-neutral disbursements. Therefore, to escape from the threat of pauperisation in social renting, the non-profit sector can provide flexible access for a middle class that is increasingly exposed to income uncertainty.

## **Housing demand and financial regulations in the Netherlands**

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Changes in the system of financial regulations in the housing market are a recurring topic in discussions in the Netherlands, but actual changes have been small. We investigate the expected effects of changes in the system of regulations. Therefore we constructed a model that explains the behaviour of households, and in particular the effect of prices and income on the tenure choice and on the levels of housing consumption. We analyse the effects that may be expected of (1) a conversion of (implicit) subsidised rents to market rent levels, (2) restrictions on the mortgage interest relief for owner-occupiers, and (3) a switch from the currently existing fiscal system for owner-occupiers to a general tax reduction. Results indicate that the initial effects on the costs of housing services may be large. Taking into account the reaction of households to the changing regime and the expected changes of price levels, the long-run effects are generally small, even though they may be substantial for individual

households. These findings indicate that implementation of such policy changes may be possible without destructive effects for the economy in the Netherlands. Of course, successful implementation requires cautious operation and good transitional arrangements.

### **Economic modelling of public housing estate renewal**

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Public housing provision is an urban policy area where economic modelling is becoming prominent. The paper will explore the application of cost benefit analysis modelling in the assessment of public housing policy in New South Wales, Australia. The paper will discuss the identification, measurement and valuation of costs and benefits associated with public housing estate renewal. These include:

1. Direct Costs and Benefits such as asset opportunity costs, benefits from asset sale, capital and operational expenditure.
2. Indirect Cost and Benefits such as changes to social support networks for those tenants who move off the estate, reduced housing opportunities for future tenants if stock numbers are decreased, benefits (or costs) for the wider neighbourhood, including amenity, changes in society wide social dysfunction ' crime, health, employment, education.

Previous attempts to evaluate estate renewal have quantified direct variables (as listed in 1). This paper will discuss the challenges of measuring and quantifying the indirect costs and benefits listed in (1), include isolating additionality over and above other policy interventions and establishing a nexus between public housing estate renewal interventions and changes in indirect variables. The paper will conclude by setting out a research agenda for addressing these challenges.

The paper will have wider implications for the application of economic evaluation methodologies to spatial urban policy questions.

### **Current issues in Chinese housing research: An overview**

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This paper reviews articles about the housing market in China. These articles originate entirely from Chinese core journals in the fields of real estate and relevant economic disciplines during the time period 2000-2006. We classify the approximately 200 articles into six main groups: land, institutions, price, finance, policy, market.

The first group of articles mainly deals with issues such as the nexus between the value of real estate assets and national wealth, the land reserve system, and the implications for land policies for the housing market.

The articles treated in the second group concern institutions: housing allocation from in-kind provision to monetary measures, economically affordable housing, public housing system, housing security, housing subsidies, and housing ownership reform.

The issues explored in the third group are related to prices: fluctuation mechanism of housing price, the relation between housing price and land price, proper price-to-income ratio of housing, and housing price factors.

The fourth group of articles is about finance: mortgage loan risk, bubbles in real estate market, financial risks in real estate, and housing finance system, and those in the fifth group about policy: policies in recent years, housing tax, monetary policies, the effect of housing policies, and main macro-control policies.

Finally, the sixth group covers the functioning of the market are described: malfunction of real estate market versus governmental economic roles, the circle of the real estate market, housing demand and supply, and the vacancy rate of housing. In addition, several case studies are discussed, concerned with Beijing, Shanghai and the like.

Availability of data, applied methodologies and conclusions are examples of the characteristics presented for each of the six groups. The material surveyed is very rich and probably useful to the western researchers analysing housing markets.

### **Looking from the inside out or from the outside in: Differences and associations between neighbourhood push and pull**

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In this paper a model for the joint effect of neighbourhood push and pull on housing demand is presented and tested, using data from the distribution of social rented dwellings in the Rotterdam housing market. As was the case in earlier models on residential mobility, survey scores on residential satisfaction, the quality of life as experienced firsthand by the inhabitants, will be used to model the effect of neighbourhood push. The main idea, which is elaborated upon in section 2, is that residential satisfaction has a counterpart in the reputation of the area, which is the shared view that outsiders maintain on the quality of life in the neighbourhood. The pull that the neighbourhood reputation excites, is made operational in the model through the area effect in the assessment of house values. The link between these two concepts of neighbourhood quality is investigated further in section three, using the diverging development in two Rotterdam neighbourhoods, the Beverwaard en Schiemond, as a touchstone. The results of the empirical analysis will be presented in section 4, showing quite clearly that both neighbourhood push and pull influence housing demand, although they work on different spatial scales.

### **A three dimensional model of the Finnish Housing Allowance System and empirical analysis**

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This paper analyses the impact of the Finnish housing allowance (HA) system on housing consumption of tenant households. The paper builds a theoretical model of the incentive structure created by the allowance system and tests empirically some of its implications. The theoretical model considers the effect of being eligible for HA on households' budget constraint in a three commodity, housing space, housing quality, and other goods, framework. An accurate model of the incentive structure created by the HA scheme requires a three-dimensional framework since there is an upper limit to housing space and rent per square meter. If these ceilings are exceeded, the compensation is based on the ceiling value instead of the actual rent. Thus, the amount of HA depends, not only on rent paid, but also on space-quality combination provided by the dwelling. The empirical part of the paper tests whether the eligible households' moving probability and housing space choices are in line with the predictions of the theoretical model. It is found that the difference between maximal and actual HA in the current dwelling has a significant positive effect on moving probability and that those who move adjust their housing spaciousness in the direction where HA increases.

### **A spatial and temporal autoregressive local estimation for the Paris housing market**

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This original study examines the potential of a spatiotemporal autoregressive (STAR) approach in modelling transaction prices for the housing market in Paris and its inner suburbs. We use a data set from the Paris Region notary office ('Chambre des notaires d'Île-de-France') which consists of more than 400,000 transactions units between the first quarter of 1990 and the end

of 2005. We use the exact X -- Y coordinates and transaction date to spatially and temporally sort each transaction.

We first choose to use the spatiotemporal autoregressive (STAR) approach proposed by Pace, Barry, Clapp and Rodriguez (1998). This method incorporates a spatiotemporal filtering process into the conventional hedonic function and attempts to correct for spatial and temporal correlative effects. We do not find a global significant improvement from the STAR method for the modelling of the Paris Region housing market compared to a standard hedonic estimate. Nevertheless, we find evidence of a strong presence of both spatial and temporal heterogeneity in the model. Hence, we decide to develop a spatial and temporal autoregressive local estimation method. With this approach introduced by Pace and Lesage (1999) in a spatially autoregressive setup, we do no longer need to exogenously specify geographical submarket, nor to impose specified parameter variation function to take spatial heterogeneity in hedonic coefficients into account.

It appears that spatial autoregressive effects seem to be much more pronounced in the historical centre of Paris than in its surrounding area. Moreover, these effects which were sizeable and significant for some geographical areas in 1991 have been deeply reduced between 1997 and 2005.

### **Housing and intergenerational sustainability: Methods and evidence from Australia**

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This paper will address the question of whether key outcomes of the Australian housing system are sustainable into the future under current policy settings. The research project on which the paper will be drawing follows on from the first Intergenerational Report (IGR) in Australia that was undertaken by the Australian Treasury in 2002/03. The Australian IGR considered the long term fiscal sustainability of current government policies in major public expenditure areas, especially in the context of an ageing population. However, it did not incorporate consideration of the impacts of projected demographic and economic developments on housing outcomes and policies. The current research aims to address that gap.

The question of whether the present system of housing provision is sustainable is being addressed initially by projecting housing affordability in the Australian context at two future periods, 2026 and 2045, using micro-simulation techniques applied to baseline data for 2006. The presentation will describe the broad rationale for the approach being taken to assessing intergenerational sustainability in housing; outline the assumptions made in order to project housing outcomes into the future and present projected affordability outcomes for renters and owner/purchasers in different age cohorts under a range of economic and demographic scenarios. It will also provide an indication of the main fiscal impacts that could be expected under a continuation of current housing policy settings. The paper will conclude with a discussion of the changes to those settings that would be desirable to achieve a sustainable housing system for the next generation in Australia.

### **Modelling tenure choice: Low cost home ownership in the UK**

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Low cost home ownership, in the form of shared ownership, shared equity and other arrangements, provides a significantly smaller subsidy than traditional demand side assistance with housing costs in the UK. For this reason as well as the objective of achieving mixed communities and addressing increasing problems of affordability the government is

increasingly emphasising this approach through new policy instruments. Targeting these schemes is not easy in part because the details are important for those prepared to take up the options and because government does not want to subsidise unnecessarily. Moreover survey evidence on who has taken up similar schemes is quite limited. This paper reports on an attempt to model tenure choice and potential take up of particular schemes using logistic regression techniques to create a model that aims to identify the characteristics of those who might benefit from taking up low cost home ownership instruments in the future if they were more widely available. The model takes account not only of household variables but also both supply and credit constraints. The paper concludes by drawing implications for policy in the UK and for the potential for transferring such schemes to other countries.

### **Low-income households and the dynamics of housing demand**

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Current income and expected future income streams are among the most important determinants of housing choices. The question of whether there are qualitative differences between the income effects at high and low levels of income is not settled, and our paper aims to contribute to the knowledge on this topic. The paper utilises a panel data set to reveal the determinants of housing demand of low-income households. Specifications are chosen so that dynamic dimensions of housing choices can be illuminated. Among these inertia, or state dependency, due to the combined effects of moving costs and wealth effects and the shape of dynamic paths of planned housing consumption will be emphasised.

In our analysis of Low-income households and the dynamics of housing demand we will treat tenure choice, tenure transitions as well as the quantitative dimension of housing demand. Support to low-income households is a central part of the housing policy in most countries. Hence, the analysis of our paper will provide a useful background for design and evaluations of housing programmes targeted towards low-income households.

### **A general equilibrium analysis of land use restrictions and residential welfare**

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We consider the general equilibrium implications of land use restrictions which result in a reduction of otherwise profitable residential development. If the regulations affect a significant amount of land, they may have important effects on the rest of the regional economy - increasing rents and densities on lands not subject to the regulation, causing the conversion of lands from alternative uses, increasing the net developed area in the region, and decreasing consumer welfare. We develop a flexible general equilibrium simulation of the economic effects of land use restrictions, explicitly considering the distributional effects upon owners of different types of land and upon housing consumers. The results of our simulation show that the most significant economic effects of land use regulations occur outside of the designated area. The prices and rents of non-restricted lands increase significantly, and the well being of housing consumers is further affected through these linkages.

### **Owner-occupied housing and demand for risky financial assets: Some Finnish evidence**

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This paper studies the link between owner-occupied housing and household portfolio choices. The work follows the theoretical results by Flavin and Yamashita (American Economic Review, 92 (2002) 345'362.) who show that the home-owning decision and exposure to house price risk

may have a dramatic effect on the mean-variance efficient asset portfolio available to the household. This suggests, that we should observe that homeowners with a high house value-to-net wealth ratio hold their liquid wealth in a safer form than other homeowners or renter households. The paper tests this hypothesis by using the 1998 Wealth Survey produced by Statistics Finland. The data include household level information on wealth portfolios along with various household characteristics such as socio-economic status, demographics, income, taxes and housing. Regression results suggest that homeowner households tend to invest their liquid wealth in a more risk-averse manner compared to similar renter households. Furthermore, among homeowners those with a high house value at a given net wealth level are less likely to own stocks and have a lower share of their liquid wealth invested in stocks. However, it is somewhat unclear whether these results can be attributed to housing price risk or to fixed entry cost constraint to stock markets which becomes binding for homeowners who have most of their wealth invested in housing.

### **The demand for rental homes in Denmark**

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For a number of years, homeownership rates have been increasing with increasing GDP per capita in most European countries, but not in Denmark since year 2000. Why has increased real incomes kept the demand for rental housing up in Denmark? The present paper takes a closer look at the Danish development to find explanations, and starts out - based on information from a 20 per cent sample of Danish dwellings to give some indications of the future demand for rental housing in Denmark.

### **An economics approach to housing and poverty**

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Conventional measures of poverty do not take into account the economic value of housing consumption and fail to treat housing costs in a consistent way. In this paper we present results from Netherlands and England to show the impact of housing income and costs on the rates of poverty. We will also be able to estimate the value of different components of housing income, and the economic value and distribution of housing subsidies.

### **On the price (in)elasticity of Dutch housing supply**

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A growing body of literature points to relationships between land use regulation, housing supply and the level and volatility of prices. We provide a robust set of estimates of the price elasticity of housing supply in the Netherlands, where restrictions on land use and construction are particularly tight. Time series evidence on the number of newly constructed dwellings in the owner-occupier sector, and on the volume of residential investment, suggests a long-run elasticity that does not exceed 0.2. Price responsiveness of supply through the quality of new construction, as measured by its value in a recent base year, has apparently been limited as well. Furthermore, an analysis of regional construction rates also suggests a long-run elasticity close to zero. We interpret these findings in the light of government interventions in housing and land markets.

## **A House Price Index for the Netherlands: A review of the SPAR Method**

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The so-called Sale Price Appraisal Ratio (SPAR) method has been applied in a number of countries to construct house price indexes. The method, which uses ratios of transaction prices and previous appraised values to build up an index, has been applied in New Zealand, Sweden and Denmark. This paper discusses the statistical properties of the SPAR price indexes and we compare the SPAR with Repeat Sales Index and Hedonic Analyses created from the same transactions data. Preliminary empirical results for the Netherlands covering a period of over ten years are presented. Given the advantages we find for the SPAR method relative to the more traditional methods, we maintain that it should be considered by government agencies elsewhere when developing house price indexes.

## **Housing wealth of young households in regional volatility**

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This study explores house price variation on house choices of young households with respect to housing wealth. We will analyze the determinants to young households' decisions on a regional level and identify the influence of regional price on housing careers. In particular, the paper studies the variety in age homeowner formation, financial burden and the responses to the price changes of the young households in the regions with different house price performances. We use Swedish Survey of Housing and Rents (BHU) information from 1982 to 2002 and carry out an empirical study for Sweden. This study is expected to highlight the correction between house price and household consumption pattern and provide insights in housing affordability and accessibility from regional perspective.