

# Research Statement

Sen Xue

Australian National University

My research interest mainly lies in empirical labour, health and development economics, with a special interest in migration. I am also interested in theoretical microeconometrics which could have direct implication for empirical studies. My research goal is to improve public policy making through understanding salient issues in labour market. Currently my research projects are primarily focused on three areas: (1) internal migration in China; (2) other issues in the labour market in China; and (3) econometrics. These projects are representative of my ongoing research agenda that I am enthusiastic to pursue throughout my career.

## **1. Internal Migration in China**

Labour movement from agricultural sector to secondary and tertiary sectors is an essential factor to foster economic growth in early development. Several developing countries, such as China, Indonesia and Vietnam, are experiencing this transition. In my current studies I focus on the internal migration in China, from which other developing countries could draw on helpful experiences in their economic development.

One of the important issues in the rural-to-urban migration in China is the mental wellbeing of the migrants. Due to the working pressure, exclusion from the local society and limited access to social welfare, the rural migrants in Chinese cities are vulnerable to mental health problems (Qiu et al., 2011; Mou et al., 2011; He and Wong, 2013; Wong et al., 2008), and these migrants are found to be less mentally healthy than non-migrants (Li et al., 2009; Chen, 2011). As the mental wellbeing is directly related to the individual productivity and social stability, finding out a potential way to improve mental condition of migrants can provide tremendous economic and social benefit.

Motivated by this concern, my job market paper, “*Social Networks and Mental Health: Evidence from the Rural-to-Urban Migrants in China*”, joint with Xin Meng, investigates what is the role of social networks in shaping mental health of migrants. We employ a unique longitudinal survey, the migrant household survey in the Rural-to-Urban Migration in China (RUMIC) Project, to study this issue. In addition to the importance of this issue, this study contributes to the literature by providing an arguably better way to correct the endogeneity bias between social networks in the observational data. As migrants were separated from their hometown and staying in cities, what happened in the hometown is unlikely to affect the mental health problems of migrants who are staying in urban areas much. This unique feature of the migrant sample permits us to find plausibly exogenous variations in

the hometown of migrants to identify the effect. In particular, we take the past rainfall at home counties and the distance between home villages and its closest traffic hubs of migrants as the instrumental variables of social networks. Both the IV estimate and fixed effect IV estimates suggest larger social networks improves mental health. The results are also robust to whether to use the instrumental variables individually or jointly in the estimations. In the exploration of the heterogeneous impact we further find that the effect of social network is stronger among the migrants with smaller network, no access to social welfare and female migrants.

Improving urban locals' attitudes towards rural migrants could be another way to improve the mental wellbeing of migrants, since part of mental stress of migrants might be resulted in by the hostility or discrimination from the urban locals. To understand what helps to provide better social environment for migrants, the second chapter of my thesis, "*Can Contact Help to Improve Attitudes towards Migrants? Evidence from Urban China*", studies whether contact with migrants improves urban locals' attitudes towards them. In this paper, I use the 2005 China General Social Survey to study this issue. In contrast to the simple measure of attitudes towards migrants, like or dislike migrants, in the literature, this survey provides sophisticated measures on attitudes. The attitude measures range from the willingness on the non-intimate interaction with migrants, such as being colleagues or living in the same community, to the willingness on the intimate relationship, such as having children or relatives married with migrants. This categorization of different "levels" of attitudes provides an opportunity to see whether contact works on all the dimensions of attitudes or only some of them. Using the novel heteroskedasticity identification strategy (Lewbel, 2012), I find that contact improves the attitudes on the non-intimate interactions with migrants, but does not impact the attitudes on the intimate interactions. This suggests that although not harmful, contact is not panacea for all the discriminations or segregations.

Another important issue in the migration studies is the data issue. As a result of the floating nature of migrants, the longitudinal surveys on migrants are rare, and usually they suffer from attrition problem. As the migrant household survey of the RUMIC project has received much attention from the academic community, I take it as an example to study the attrition issue in the third chapter of my thesis, titled "*Who are the movers? Who are the stayers? Attrition in the Migrant Survey of the Rural-Urban Migration in China Project, 2008-2013*". In this project I find that the non-attritors may tend to have larger cost to migrate to other cities or back to hometown than the attritors, and the non-attritors are more likely to be self-employed, prefer staying in cities and economically gain more from migration. I also discuss the possibility of the bias in the estimates caused by the sample selection of the non-attritors. These findings help the data users to understand which group of migrants the non-attritors are biased to and interpret their results properly. The survey designers also could benefit from this study by knowing which groups of migrants are more mobile and they should pay more attention to on tracking.

## **2. Other Issues in the Labour Market in China**

One significant change other than the internal migration in China is the increase of wage inequality during the past twenty years. Between 1988 and 2009 the variance of log earnings increased by 94%. In the joint paper with Xin Meng and Kailing Shen, “*Economic reform, education expansion, and earnings inequality for urban males in China, 1988 - 2009*”, we seek to understand the mechanisms driving this increase in earnings inequality. Using a unique set of repeated cross-sectional data, we find that the major changes occurred in the 1990s when the labour market moved from a centrally-planned system to a market-oriented system. The decomposition exercise conducted in this paper identifies the factor that drives the significant increase in the earnings variance in the 1990s to be an increase in the within-education-experience cell residual variances. Such an increase may be explained mainly by the increase in the price of unobserved skills. When an economy shifts from an administratively determined wage system to a market-oriented one, rewards to both observed and unobserved skills increase. The turn of the century saw a slowing down of the reward to both the observed and unobserved skills, due, to some extent, to the college expansion program that occurred at the end of the 1990s.

## **3. Econometrics**

In the dynamic panel model the difference GMM estimator sometimes cannot provide identification. In the joint paper with Tue Gorgens and Chirok Han “*Moment restrictions and identification in linear dynamic panel data models*” we talk about under the assumptions proposed by Ahn and Schmidt (1995), how to identify the autoregressive parameter in simple linear AR(1) dynamic panel model when the difference GMM estimator cannot provide identification. This paper makes three points. First, the quadratic moment restrictions provide identification in some of the cases where the linear moment restrictions do not. Second, there exist valid mean moment restrictions which are usually not exploited but can be important for identification. Third, there are some cases where identification is not possible without additional assumptions. Currently we are exploring the novel asymptotics under these cases.

In addition to the academic training, I have devoted substantial time to the surveys of the RUMIC projects. I participated in the questionnaire design, training of enumerators and data cleaning. Not only bring the firsthand experience on the wellbeing of migrants, I believe these efforts would also complement my academic knowledge and benefit my future career.