

RURAL-URBAN MIGRATION IN CHINA AND INDONESIA: PATTERNS, CONSEQUENCES, AND POLICY INTERVENTIONS

Aims and Background

Economic growth almost inevitably leads to substantial movement of labour from the rural agricultural sector to secondary and tertiary industries in cities. This movement is thought to benefit both those who migrate and those who remain behind. As a result, rural-urban migration is often regarded as one of the most effective ways to reduce rural poverty and alleviate income inequality.

Over the course of the next two decades, China and Indonesia are expected to transform from largely rural-based to urban-based societies. For both countries, it is estimated that approximately two thirds of the rural labour force will migrate to urban areas. Compared to most developed countries where similar population movements occurred at the height of the Industrial Revolution, China and Indonesia are expected to witness the phenomenon on a much larger scale and within a much shorter period of time. The underlying driving force for this is the fact that the current economic growth rates of China and Indonesia are about twice as high as those of the US and Europe during the Industrial Revolution. The unprecedented scale and pace of the migration movements are likely to confront both governments with extremely challenging policy questions, particularly in terms of taking urgent measures to properly manage the process of migration.

While both China and Indonesia face similar challenges, the policies implemented and the consequences resulting from these policies are very different. China, for its part, has established a guest worker system with tight controls on the migration process, preventing overly fast migration as well as forcing migrants to keep ties with their home villages. One positive outcome of this system is that there are few slums of migrant workers in cities, despite the fact that more than 100 million rural migrants are currently employed in urban areas throughout China. However, this system has also led to large income gaps between migrant workers and urban residents, partly due to constraints on the types of jobs to which migrants have access (Meng and Zhang, 2001). Moreover, agricultural productivity has changed very little. Restrictions on land sale and limitations to access urban facilities prevented migrants from severing their ties with their rural land, and in turn severely hindered major progress in rationalization of the agriculture sector in most parts of the country. As a result, the income gaps between rural and urban areas have increased significantly over the last 20 years, and migration has led to only modest rural poverty reduction (Du, Park, and Wang, 2005). In addition, migrant families left behind in rural areas suffer disproportionately from social problems, such as lack of children's education (Giles and de Brauw, 2005), low nutrition and poor health, as well as lack of care for the elderly (Giles and Mu, 2005).

Rural-urban migration in Indonesia follows quite different patterns. In general, urbanisation over the past 40 years has been rapid and, in contrast to China, the government placed few restrictions on rural-urban migration. Most of the migration movements consisted of the rural poor moving into the informal sector and urban slums, although amongst them there are a considerable number of circular migrants who left their families behind in the villages (Hugo, 1982; Manning, 1988; Silvey and Elmhirst, 2003). Rural-urban migration slowed down after the economic crisis in 1998, but continued fuelling urban population growth (Hugo, 2000). During the last two decades, a picture emerged of Indonesia as a country with fast growing urban agglomerations on the one side, and a rapid decline in rural and urban poverty on the other side. Furthermore, increased rural labour productivity, partly related to out-migration, contributed to relatively small rural-urban income gaps (Manning, 1998; Sumarto, Suryahadi

and Pritchett, 2003). Given the different strategies of migration management and the impact of rural-urban migration, Indonesia can serve as an excellent case study that contrasts China regarding the benefits (and costs) of free migration. We are interested in the costs and benefits for migrants and their families, for urban residents as well as for the rural areas of origin. Moreover, migration in Indonesia is an important issue in its own right. While there has been considerable research on the impact of the economic crisis at the end of the 1990s, the impact of migration as a coping mechanism of Indonesian households is an under-researched area (Smith et al., 2002; Strauss et al., 2004).

The broad aim of this project is to gain understanding of the comparative urbanization process in China and Indonesia in order to inform policy makers about how to manage this process most effectively. The research project will focus on the following three main issues:

1. Income mobility and the impact on poverty alleviation

Studies on the income of migrant workers and their families in China often find that migrant workers tend to have much lower earnings than their urban counterparts (Zhao, 1999a; Meng and Zhang, 2001). The question arises as to whether they move to a better position as time goes by and whether they invest in their human capital so that their economic status improves over time. Studies looking at developed countries indicate those with few endowments exhibit low income mobility (see e.g. Gottschalk and Moffit, 1994, Geweke and Keane, 2000), while in developing countries, knowledge on income mobility is limited to a small number of studies (see, for instance, Fields et al. 2005). Research on income mobility and its determinants for rural-urban migrants in China and Indonesia are virtually non-existent.

The mechanisms through which migration affects rural poverty reduction have not been fully explored in the literature, although we do know from many studies that remittances from migrants play an important role in improving rural household income (Zhao, 1999). Little is known though about the impact of migration on human capital accumulation in the home villages, whether the production possibilities significantly changed due to the access to markets provided by migrants, and the extent through which remittances from migrants contribute to poverty alleviation in the countryside. Our aim is to throw lights on these issues.

2. The long-term impact on migrant children's education, health and nutrition

Migration very likely affects the welfare of future generations. For instance, a typical phenomenon in China is that many children of migrants are left behind in home villages, while those who are brought to cities have limited access to local schools and other public facilities. There is a body of evidence in the literature on the determinants of children's development that clearly demonstrates the importance of parental care on children's developmental and learning processes (see, for example Whitebook et al., 1989, and reviews by Love et al., 1996 and Lamb, 1998). The lack of parental care of migrant children in China, therefore, can potentially lead to the under-investment in their education, nutrition and health. This in turn has important implications for the income mobility and poverty of future generations. There have been very few studies on this very significant issue to date. This project intends to investigate the long term impact of migration on migrant children's education, health and nutrition.

3. The extent and channels of assimilation

An important policy issue of migration is how to 'keep peace' between migrants and the locals. This study intends to focus on the issues of assimilation, by which we mean the convergence of economic and cultural traits of migrants with the urban societies. The literature suggests that assimilation can take place through various channels such as investment in local human capital, linguistic adjustment (see, for example, Chiswick and Miller, 1992; Lazear, 1999; Dustmann and Fabbri, 2003), and intermarriage

(Meng and Gregory, 2005). Moreover, the size of an immigrant group may also affect the speed of assimilation (Lazear 1998). While considerable effort has been directed towards measuring the means, degree and speed of economic assimilation of immigrants in developed countries (Borjas, 1995; LaLonde and Topel, 1997; Frijters et al. 2005; Junankar and Mahuteau, 2005), knowledge on this topic in developing countries is very limited. This project will probe the extent to which migrants assimilate and the channels through which they assimilate into urban society. In doing so, it can potentially fill the gap in the existing literature and shed light on the future policymaking of rural-urban migration in China and Indonesia as well as the general understanding of migration issues in developing countries.

In addition to the three main issues proposed above, this project will evaluate ‘general policy experiments’. We will research the differences in migration processes and outcomes between the relatively liberalized migration system in Indonesia and the more restricted one in China. Some existing city-based policy experiments will be evaluated pertaining to migrant-related policies such as housing, education and discouragement (see Section E4 part 3 for details).

In summary, most previous studies have focused on the outcome of migration at one particular point in time and have primarily concentrated on the effects of migration on migrants themselves. We adopt a broader perspective over a longer period. We employ a comparative and dynamic methodology to study the process and impact of migration not only on migrants themselves, but also on their families, and on the urban societies the migrants entered, as well as the rural societies they left behind.

Significance and Innovation

Significance

First, over the course of the next 20 years, the world is expected to witness the largest population movement in human history (it was estimated that in China alone around 150 million migrants will move to cities in addition to the current 126 million). This project will provide important knowledge on the process of migration and its medium and long term impact on migrants, their families, and urban and rural societies in both China and Indonesia. This in turn will fill the gap in the theoretical and empirical literature of development economics. In particular, this study should significantly advance the economic literature in the areas of income mobility of migrants and their families, the impact of migration on their next generation’s education, nutrition, and health outcomes, and the impact on the coherence of urban and rural communities.

Second, the unprecedented population movements have extremely critical implications to the economic and political stability of China and Indonesia, and to some extent, of the world. The evaluations of the existing policies and comparative analysis on different strategies within a country or across these two countries can serve not only as an assessment of the existing policies but a guideline for future policymaking. Given that the initiatives of this project are encouragingly endorsed by both Chinese and Indonesian governments, it is reasonable to expect that the outcome of this study may have considerable influence on migration policies in these countries.

Third, this project will conduct a longitudinal survey in China and Indonesia. Previous studies on migration issues have mostly used cross-section surveys, which limited the ability of answering questions of a dynamic nature. Furthermore, due to the limitation of cross-section data settings, existing studies often suffer from unobserved heterogeneity problems and arrive at biased estimation results. The longitudinal dataset, which will be compiled as integral part of the project output and will be made available to others, will greatly assist researchers to gain insights which are not available otherwise and to allow in-depth analysis to be carried out.

Fourth, the project connects various stakeholders, e.g. AusAID, the Ministry of Labour and Social Security in China (MOLSS), and the Regional development in the National Planning Board in Indonesia. The project serves as a bridge between policymakers and researchers. In particular, these government departments will participate in the survey design and data analysis in a formal and active

manner. This close research-policy interaction implies that this project can significantly improve the general understanding of migration issues in China and Indonesia, and constitute an important input to the capacity-building activities of the related organisations.

Innovation

First, compared to conventional migration studies that only focus on migrants per se, this project will investigate the impact of migration within a greater scope. It will study more than just the migrants themselves, and include their families, the rural societies they leave behind and the urban societies they have entered or intend to enter.

Second, this project aims to compare the outcomes of rural-urban migration in two countries with similar migration issues yet differing policy instruments. This provides a rare natural experiment, through which important migration policies can be evaluated qualitatively as well as quantitatively. Also, urban communities in both China and Indonesia which experimented with particular policies will be included. By comparing them with carefully chosen counterfactuals, we can use modern methodologies to evaluate these policies.

Third, longitudinal surveys will be conducted during particular festivities, when both migrants and their family that stayed behind can be found in the home village. This allows valuable insights to be gained into the poverty dynamics and human capital decisions of entire households, which were previously hampered by a lack of such comprehensive data.

Fourth, a recent methodological innovation developed by Hamermesh (2005) will be applied on a large scale for the first time (if it works in trials to be had in the first year of the project). This method requires families with migrant members to nominate two or three families without migrant members within the same village and of comparative size and structure. The main advantage of employing this method is that it overcomes a problem of many previous studies, where important characteristics involved in migration decision are unobserved and potentially skew the survey outcome. The self-assigned comparison group will not be perfect, but certainly better than the comparison group used so far in the literature.

The overall strength of this research project will be the all-encompassing collaborative effort among individuals with specialized expertise in areas related to rural-urban migration. This includes China and Indonesia experts and government officials, local policy makers, and researchers with proven academic track records in migration-related areas of research. Such interactive research design will enable synergistic effects to unfold amongst the individual members of this research project. Most importantly, it can lead to significant contributions to the theoretical and empirical literature of economics of development and poverty reduction, as well as to sensible policy recommendations of practical use to the governments and policymakers of those two countries.

Approach

Research questions

The project investigates the following areas and questions:

1. The income mobility of migrants and their families and the impact of migration on poverty alleviation.
 - a. Wage and job dynamics of migrants.
 - b. Poverty incidence of migrants and their families and whether it is permanent or transitory.
 - c. The dynamic of the human capital investments of migrant workers (e.g., education, training, and health) and its impact on their income dynamics.
2. The experience of the children of migrants who remain in home villages and those who migrate with their parents:

- a. The determinants of the development, health and education outcomes of children of migrants, and the ways through which the migration of parents or other family members affect these outcomes.
 - b. The importance and effect of different policies of access to public school and other facilities in the destiny region on children's education and health outcomes.
3. The assimilation of migrant workers into the city:
- a. The extent to which the situation of migrants is comparable to those of urban residents in terms of earnings, jobs, marriage, and social attitude.
 - b. The speed of convergence in economic and cultural traits and the consequences of a lack of convergence.
 - c. The channels through which migrants assimilate and the policy levers involved.
 - d. The depth of the feelings of disenfranchisement and unhappiness of migrants and the way in which this resentment is channelled; the impact of specific policies, such as mixed housing, limited rights, and political representation.

Data

There are cross-section survey data in both countries with information on migration and migrant workers, as well as on urban and rural households (e.g. the China Income Distribution Survey, the NBS Urban Expenditure Surveys and Susenas in Indonesia). These surveys are useful for analysing the income and employment situations of migrant workers at one point in time but cannot be used to study the dynamics of these issues and ignore the impact on migrant families. In addition, two panel surveys (China Health and Nutrition Survey (CHNS) and Indonesia Family Life Survey (IFLS)) are not designed to study migration issues and hence provide limited information on a small group of migrants. No panel-data surveys devoted to migration issues in China or Indonesia are available. To study the above-mentioned research questions, longitudinal survey data specifically designed to study migration issues are required. A rural-based longitudinal survey of migrant households with their counterfactuals and an urban-based community level survey will be carried out in both countries. The annual surveys will be conducted from the end of the first year for five consecutive years so as to provide the necessary data to allow an evaluation of long-term policy impacts.

In particular, the rural surveys will be designed as targeted random samples with a focus on regions which provide a large number of migrants to the cities of particular interest. This includes, for example, Sichuan, Hunan, Hubei, Jianxi, Hebei, Henan, Anhui provinces in China and Central and East Java, Riau (Sumatra), South Sulawesi and Jayapura (Papua) in Indonesia. Within each targeted region, a stratified random sampling of villages will be applied by randomly choosing households with migrant workers in sample villages and requiring them to nominate counterfactual households without migrant workers. The urban community level surveys will mainly focus on cities with large migrant inflows, such as Beijing, Shanghai, Shenzhen, Guangzhou, Shenyang, Jinan in China, and Solo, Surabaya, Pekanbaru, Makassar and Jayapura in Indonesia. In addition, cities where major policy experiments were conducted, e.g. Shijiazhang, and Wuxi and their possible control cities (i.e. cities with similar population size, per capita GDP, and level of per capita infrastructure) will also be included. Within each city, we will sample communities such that we have an even spread in terms of density of migrants.

The questionnaires will be designed by the research team and in-country collaborators with input from AusAID as well as Ministry of Labour and Social Security (MOLSS), China and in consultation with the Regional development in the National Planning Board (Bappenas) in Jakarta, Indonesia. In China the surveys will be conducted by country collaborators through the administrative channels of MOLSS, while in Indonesia they will be conducted by the Economic Policy Research Institute, University of Padjadjaran, in collaboration with SMERU (Social Monitoring and Early Response Unit).

Methodology

1. General methodological issues:

One of the main methodological issues related to migration studies is that the migration decision is often determined by unobserved factors, such as motivation and innate ability. Estimates of the effects of migration on economic outcome variables of interest (e.g. earnings, household income, training, or children's education and health outcomes) are often plagued by this correlation. Previous studies have largely ignored this fact mainly due to data paucity. Consider the following relationship:

$$Y_{it} = X_{it}\beta + D_{it}\gamma + \alpha_i + \varepsilon_{it} \quad (1)$$

where Y_{it} is one of the outcome variables, D_{it} is a dummy variable indicating migration status, X_{it} is a vector of observable individual and household characteristics, α_i is unobservable individual or household effect, and ε_{it} is the error term. Equation (1) can be estimated by GLS provided that α_i is not correlated with X_{it} and D_{it} . However, if D_{it} and α_i are correlated, GLS estimates are biased. With panel data, this problem can be solved by estimating fixed-effects difference-in-differences models.

A similar approach is applicable when evaluating different policy experiments, where Y_{it} is a community level outcome indicator, such as the crime rate, some measure of social coherence, or community infrastructure investment or usage rate; D_{it} is an indicator for whether the community is subject to the experiment; and α_i is an unobservable community characteristic. Because communities with policy initiatives may have certain unobservable characteristics, GLS will provide a biased estimate of γ . Fixed-effects models or difference-in-differences estimations will then be unbiased.

For continuous variables, estimating (1) involves standard panel data technique. With qualitative ordinal data (such as attitudes to migrants which may rate from 'very negative' to 'very positive'), conditional fixed effects logit model (Ferrer and Frijters 2004) of the following form can be applied.

$$AM_{it}^* = x_{i,t}\beta + \delta_t + f_i + \varepsilon_{it} \quad (2)$$

$$AM_{it} = k \Leftrightarrow GS_{it}^* \in [\lambda_k, \lambda_{k+1}]$$

where AM_{it}^* is the latent attitude to migrants; AM_{it} is, for example, the observed attitude to migrants; λ_k is the cut-off point (increasing in k) for the attitudinal answers; x_{it} is observable time-varying characteristics; δ_t denotes time-varying general circumstances; f_i is an individual fixed characteristic; and ε_{it} is a time-varying logit-distributed error-term that is orthogonal to all characteristics.

The conditional estimator for δ_t and β maximizes the following conditional likelihood:

$$L[I(AM_{it} > k_i), \dots, I(AM_{iT} > k_i) | \sum_t I(AM_{it} > k_i) = c] = \frac{e^{\sum_{t=1}^T I(AM_{it} > k_i) x_{it}\beta}}{\sum_{AM \in S(k_i, c)} e^{\sum_{t=1}^T I(AM_{it} > k_i) x_{it}\beta}} \quad (3)$$

Given that there are c out of the T observations that are above k_i , (3) indicates the likelihood of observing which of the T satisfactions of the same individual are above k_i .

While the fixed-effects are dropped, this likelihood yields estimates for δ_t and β . Unlike the Chamberlain (1980) methodology that recodes the data such that only crossing over a barrier that is the same for everyone (say, k) can be used, this model uses crossings over person specific barriers (say, k_i). Thus, it allows observation of all individuals whose satisfaction differs over time, by which it increases observed variation significantly relative to Chamberlain's (1980) method. Furthermore, the log-likelihood is greatly increased by choosing k_i optimally.

2. Specific methodological issues:

A. Income, job, human capital mobility, remittances, and poverty alleviation:

We will investigate the determinants of income dynamics over time and particularly the effect of human capital accumulation. Following the approach of Lillard and Willis (1978) a standard earnings function will be estimated, in which time effects are included and the error term is assumed to consist of a normally distributed individual random effect and a time-varying normally distributed AR(1) component. By estimating this model, transitory and non-transitory income can be disentangled. Given the specification of the error term, the probability that an individual's income will fall into a particular (low) income class at a given time can be computed by evaluating the appropriate multivariate normal integral within the limits of the class. Thus, the full transition matrix can be estimated.

The existing literature on intra-family income transfer (remittances) primarily focuses on distinguishing altruistic and exchange motives. While altruistic motives are recognised to be at work, transfer and pre-transfer incomes are inter-related (Farrel, Frijters, and Shields 2005). Thus, to study the effect of remittances on poverty (or income) the issue of endogeneity needs to be handled. To this end, $Y_t = \alpha + \beta X_{it} + \delta T_{it-1} + \varepsilon_{it}$, can be estimated with panel data, where Y_t is household income at time t while T_{it-1} is remittances at time $t-1$. Furthermore, Cox, Hansen, and Jimenez (2004) indicated that both altruistic and exchange motives may be present in the transfer decision, with potential differences in the strength of each motive at different levels of pre-transfer household income. They proposed a Conditional Least Squared estimation with an endogenous knot, at which level of income altruistic motive switch to exchange motives. Cai, Giles and Meng (2005) use an even more flexible semi-parametric model and found that in urban China, intra-family transfers are mainly altruistically motivated at incomes below poverty line and then switch to exchange motives. In this project, the semi-parametric method will be employed.

B. Migrant children's outcomes:

Young children's developmental outcomes will be measured by standard test scores such as WAI test, PPVT test, and their health and education outcomes can be measured by BMI (or disease occurrence) and their school enrolment (or school test results), respectively. Simple linear models will be used at the first stage when only cross-sectional data are available to analyse the effect of migration on children's developmental, health, and education outcomes. However, the identification of the effects is likely to be plagued by unobserved individual effects and parental unobservable characteristics through intergenerational transfers. Similar to the method mentioned above, both continuous and ordinal fixed-effects methodology will be employed as soon as the longitudinal data becomes available.

C. Assimilation of migrants and their families and the effect of disenfranchisement:

This project will conduct surveys covering a wide range of attributes of migrant, including language skills, where they received their education, whether and to what extent they invested in city based skills and in local social network, etc. Surveys conducted for this project will be combined with the Urban Income and Expenditure Survey of China and Susenas survey of Indonesia to study the extent and the speed of assimilation (Borjas, 1995). With panel data, the effects of time at migration and age per se can be distinguished from the effect of years since migration (assimilation). Furthermore, the impact of migrants' attributes on their assimilation outcomes (e.g. earnings, jobs and satisfaction levels relative to those of locals) will be examined, and channels through which migrants assimilate will be identified.

3. Policy evaluations

The following existing policy experiments will be evaluated.

Experiment 1 (*education*): in 2004, Wuxi in Jiansu province and Shijiazhuang, the capital city in Hebei province, implemented a policy which allows migrant children to enrol in city public schools at the

same cost as the local children, while other cities have not implemented such a policy. Two control cities where migrant children need to pay substantially higher prices to access local schools will be chosen for comparative study. The two control cities are preferably similar in size, per capital income level, economic growth, industrial structure, job opportunity, and living cost. Suzhou in Jiansu province and Hefei, the capital city in Anhui are preliminary control cities for Wuxi and Shijiazhuang, respectively.

Experiment 2 (*housing*): migrant workers mainly reside in outskirt city areas and rent from the locals (mixed housing arrangement) in Beijing and Shijiazhuang, whereas in Dongguan and Wuxi, migrants primarily live in dormitories and city arranged housing. These two types of housing arrangements can be evaluated by contrasting a series of indicators, such as crime rates, general living conditions, migrants' income and human capital dynamics, as well as their average health conditions among different communities with different migrant concentration rate.

Experiment 3 (*discouragement*): the city government of Pekanbaru in Sumatra has imposed taxes on migrant workers from outside the region and employed in private sector firms. Similar taxes are also applicable to recruiting agents supplying labour to private firms. With similar size but with no formal restrictions on migrants, Makassar (Sulawesi) is chosen to be the comparison city to examine the impact of these restrictions.

Industry Partner Commitment and Collaboration

Given the large scope and the degree of complexity of the research, close collaboration between the researchers and the industry partners will be essential. Both AusAID and the Ministry of Labour and Social Security (MOLSS) in China consider the proposed study a key research project for the next few years. AusAID regards the rural-urban migration issue as extremely important and believes the comparative nature of the project to be of considerable interest to their aid and development work. The lessons learned from this project will guide their choices.

The AusAID Principal Economist will participate in the research team as a Partner Investigator for the duration of the project. Moreover, AusAID will make a large cash contribution toward the survey data collection costs. The research team and AusAID will ensure the joint management of the project through the establishment of a steering committee. The committee, consisting of the Chief Investigators, Partner Investigators, the Research Associate, and key AusAID staff will meet biannually to discuss the broad direction of the project, funding issues and data analysis. MOLSS will be consulted for the agenda before each meeting, and we will have informal contacts throughout the year. It has been agreed that MOLSS will also designate a liaison officer to be in close contact with the research team. In addition, MOLSS will provide administrative channels, personnel and all other necessary help for conducting the survey in China. The mutual benefits of skill sharing and capacity building due to the collaborative nature of this project are important considerations for both AusAID and MOLSS.

National Benefit

China and Indonesia are two of Australia's most important neighbours. Their process of economic development and the social and political stability have tremendous impact on Australia's economic performance and prosperity. During the course of the next two decades, rural-urban migration and urbanization will be amongst the most important economic and social changes in both China and Indonesia. Effectively managing the large scale rural-urban migration is thus a top priority of both governments. Assisting China and Indonesia to effectively manage the unprecedented large scale rural-urban migration is consistent with Australia's own interest.

In addition, Australia has been playing a significant role in the development of China and Indonesia through financial aid and other means. From AusAID's perspective, this project will lead to important policy analyses that help the effective and efficient allocation of Australia's development aid budget.

Moreover, this project builds research and policy linkages between an Australian government agency (i.e. AusAID) and relevant institutions both within Australia and in the countries concerned, which effectively increases Australia's influence in these matters.

Communication of results

This research project will lead to papers being submitted to leading economic journals, and research results that are presented at appropriate conferences. Two workshops will be organised to present the research outcomes, to discuss policy implications and to seek feedback. Academics and high level government officials from China, Indonesia and Australia will be invited. The close interaction with government agencies in respective countries is expected to enable a symbiotic feedback of policy concerns and findings. The research team will also provide relevant findings to government agencies in a policy-friendly format (e.g. policy briefs). The data will be made publicly available after 3 years, allowing the wider research community to be involved.

Description of personnel

The *chief investigator, Dr Xin Meng*, has a well-established interest, expertise, and publication record in the analysis of the Chinese labour market. Dr Meng will be responsible for overseeing the entire project and to provide the link between investigators and AusAID and MOLSS. Her main role will consist of developing the conceptual framework, questionnaire design, and performing the empirical analysis. The *chief investigator, Dr Paul Frijters*, has experience in questionnaire design (including surveys in South Africa on Indian migrants) and numerical analysis with large datasets. He will be involved in all aspects of the project. The *chief investigator, Dr Xiaodong Gong* has extensive experience in modelling household and individual behaviour in the Chinese labour market. He has also analysed the impact of immigration on children's development, education and health. He will assist with questionnaire design, in the pilot survey, and in the empirical analyses. The *chief investigator, Dr. Chris Manning*, has extensive experience in research on Indonesian labour markets, including research on both rural-to-urban and international migration. Dr. Manning will contribute significantly by liaising with the Indonesian partners and all other aspects of the Indonesian case. The *chief investigator, Dr Budy Resosudarmo* has a comprehensive knowledge of the Indonesian economy, particularly regional development. Dr Resosudarmo will contribute significantly to all aspects of the Indonesian case. The *partner investigator, Dr Stephen Howes* (AusAID Principal Economist), has previously worked in the World Bank and has extensive experience on issues related to economic development. He will provide the research team with direct feedback from AusAID.

The *research associate, Tao Kong*, has recently completed her PhD in Economics at the Australian National University and currently is a consultant to the World Bank. She has strong analytical skills and valuable research experience in examining large household survey datasets of China as well as other developing countries. She speaks both Chinese and Indonesian fluently. Her comparative advantage and extensive knowledge on China and Indonesia will be a rare asset that significantly contributes to the comparative study of these two countries. We require two skilled research assistants with outstanding computer skills, including special programming expertise, experienced in handling large panel household survey databases, good knowledge of econometrics and background in labour economics. The range of data bases, the longitudinal nature of the main data base, and the background knowledge needed to match data bases requires two skilled assistants that can be employed for the duration of the project. Two APAI's will be an integral part of the project, one to work in each country, providing much needed training in this field.

This project will be conducted in close collaboration with a number of international experts: Professor Shi Li (Chinese Academy of Social Sciences (CASS), expert on Chinese labour market); Professor Fang Cai, (CASS, expert on demographic changes and labour market in China, will work on

economic impact of migration); Professor Nansheng Bai, (Renmin University, expert on large household survey and sampling in rural China); Dr. Armida Alisjahbana (The Centre for Economic Policy Research, Gadjah Mada University); and Dr Asep Suryahadi (SMERU Research Institute, Indonesia, expert on questionnaire design and quantitative analysis using large datasets).

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