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Finding Quality Employment through Rural Urban Migration: a case study from Thailand

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"Finding Quality Employment through Rural Urban Migration: a case study from Thailand"

by

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Abstract

This study investigates the effects of rural urban migration on economic development in Thailand. It draws upon a panel data base of some 2000 rural households collected from 2007 to 2010 in three provinces from Northeast Thailand and migrant survey of some 650 migrants in the Greater Bangkok area conducted in 2010. The study offers some new findings on migration in Thailand. First there is evidence that the widely praised social protection policies for the rural poor in Thailand may be less effective for urban migrants. Second, the study shows that migration has benefits for income growth of rural households but is less effective in reducing inequality and relative poverty in rural areas. Generally the less favored rural households tend to have migrants who are more educated albeit at an overall low education level of the rural population in Thailand. The overall message which emerges from this paper is that poor rural households tend to produce poor migrants which could be one of the reasons for the continuous existence of a wide rural urban divide in welfare. The crucial importance of education for migration success calls for more investment in secondary education in rural areas.

Keywords: Rural Urban Migration, Thailand, Employment Quality

JEL classification: O15, O53, I3, J81

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I. Introduction

Background

Economic development anywhere in the world can be understood as a process of transforming the economy of a country from a traditional agriculture-based society into an economy in which the share of agriculture both in terms of production and employment is declining while industry and service sectors are rising. This process is driven by economic forces such as the declining income elasticity of agricultural goods when per capita incomes rise. Economies of scale and other agglomeration benefits demand that the modern sector is spatially concentrated in the urban centers, which makes migration inevitable. Not surprisingly therefore, policy makers and development specialists often equate urbanization with development. Under the assumption that marginal productivity of labor in the rural sector and in small-scale agriculture is below those of the other sectors the role of agriculture in development diminishes to one of supplying cheap labor for the industrialization process. Policy makers and economists in the past therefore considered investment in agriculture as unproductive as this can make labor in agriculture dearer and hereby impede the economic transformation process. Hence, movement of rural people out of agriculture in order to find jobs in urban centers has become a normal process in developing countries especially in the emerging market economies.

Thailand, which is the subject of this research, is a particularly good example because of its long history of rural urban migration, high rates of economic growth, good record of poverty reduction but also experience with economic and political shocks and a large share of the population living in rural areas. Also, Thailand has established rather advanced social protection policies for the poor including the informal sector. However little empirical evidence exists to what extent such social protection schemes are implemented and achieve the intended effect.

Studying migration in Thailand and other emerging market economies must assess the costs and benefits of migration decisions including the downside effects of urbanization. Not all migration decisions lead to the expected success. Many migrants end up in uncertain and dangerous employment and must live in poor environments with

sometimes catastrophic hygienic conditions. Rapid urbanization can lead to barley manageable mega cities with high levels of congestion and pollution. Slum development, crime, social problems and the growth of a sheer uncontrollable informal employment sector are typical externalities of migration. Many migrants may end up in so-called “bad employment” including prostitution and child labor. Policy makers tend to accept these negative externalities as an unavoidable by-product of development with the notion that it is still better (..and economically more efficient) to “be poor in the city than poor on the farm”.

Migration has also profound consequences for the rural areas, i.e. the migrants’ natal villages. For a household in a rural village temporary out migration is a labor diversification-based livelihood strategy. Part of that strategy is the establishment of dual, multiple or simply sub-households in the place of a migrant’s employment. Under this arrangement, the rural household remains the nucleus and its migrants remain members of the rural household regardless of their duration of absence, frequency of home visits or place of official registration. The actual presence in the household, which is used as criterion for many household definitions in poverty studies, for example, is no longer a main issue for the social ties between rural households and migrant. The widespread use of mobile phones and other modern information technology makes money transfers fast and communication easy and cheap. The rural household remains a source and a sink of migrants support measures. Oftentimes uncertain employment conditions for the migrants can cause migration failure especially in times of economic crisis. Some migrants will be able “to make it” and can lay the foundation of a new, largely independent urban household, for others migration is a temporary state with the intention to return to the rural village once sufficient wealth has been accumulated.

In the place of migration origin, the rural village, the aggregate effect of individual migration decisions can have strong implications for the institutional and social conditions. When the younger and economically more active population moves out of agriculture a decline in production and productivity can result unless structural change and agricultural modernization is facilitated. Considering the challenges ahead to feed a

growing world population with limited natural resources and under the conditions of environmental degradation and climate change, it is necessary that even the low potential agricultural areas remain in the food supply chain. Furthermore, even in emerging market economies like Thailand the economic transformation process will still take a long time before the stage of a modern agriculture as we know it from the developed world is reached. This process may still take several decades and will not be a smooth transition given the increasing likelihood of economic, political and ecological shocks. The 2008 upspring of food prices is a stern warning for the periods ahead. Quite reasonably therefore, the World Development Report of 2009 emphasizes the disadvantage of an *"urban bias in development"* and calls for *"progressively deeper integration of rural, peri-urban, and urban factor and goods markets" (WDR 2008).* Cherdchuchai and Otsuka (2006) have shown for Thailand that poverty reduction in rural areas is linked to the development of the rural non-farm labor market coupled with improvements of the education levels of the rural population. Hence, there is a need for more profound empirical evidence of the effects of migration on rural village development on the one hand and on the prospects of the migrants in their urban environment.

The issues pointed out here lead to three questions which are addressed in this paper. First, what are the underlying forces that motivate rural households to send some of their members to urban industrial centers for work. Secondly, what determines the success of such livelihood strategy from the point of view of the rural household and thirdly from the point of view from of the migrant. A related question is whether quality employment of the migrant is supportive to the welfare of the rural household and if so how significant this factor is.

Objectives and outline of the paper

The overall objective of the paper is to establish empirical evidence of the impact of rural urban migration on the working and living conditions of domestic migrants in Thailand as well as on the well being of their natal households. The specific objectives are:

i) To identify the factors that motivates rural households to send one or more of their household members for employment to the city.

ii) To identify the factors, that enable a migrant to find quality employment and to what extent this has positive effects for the welfare of their natal households.

iii) To assess the effects of the migration decision on the welfare of the rural household using household income as a proxy.

iv) To examine the impact of migrants with a better quality employment versus migrants with a less favorable employment conditions on rural households wellbeing.

The empirical basis of the study is a rural household panel data base that includes some 2000 rural households from three provinces in the northeast of Thailand and a survey in 2010 of the migrants of these rural households in the Greater Bangkok area. The data base is unique as it combines comprehensive household level data, which include information on household composition and dynamics, occupation, education and health status of household members, income by source, assets, consumption as well as shock experience and risk expectations. Information on migrant household members was included in the questionnaire and asked from the household head or her representative. The rural household survey was carried out in 2007, 2008 and 2010. In the latter year a simultaneous migrant tracking survey was carried out. A total of 643 migrants could be interviewed in the Greater Bangkok.

Given the rich empirical data set the paper can make three contributions to the existing migration literature. First, most studies on migration mainly use cross section data to examine the determinants and the impact of a migration decision with the general drawback of a sample selection bias and endogeneity problems. By using a panel data set it was examined in which way different household characteristics can help to explain migration decisions to assess the impact of migration on household well being. The second contribution of this paper is to introduce parameters for quality employment of migrant workers based on: a) a subjective measure of the migrant's recent job and b) a list of indicators that can be assumed to be closely related to quality employment. These indicators include income stability, working and living conditions, insurance coverage, contractual security, income savings and recent changes in job conditions. The third contribution of the paper, is the identification of factors that can facilitate quality employment of a migrant and established the effect on the welfare of the rural household.

The paper proceeds as follows: in the next section a brief review of migration theories and findings of the empirical literature on the role of migration in development is presented. This is complemented by a review of the literature on migration in Thailand which allows establishing the hypotheses of this study. In section III the data base used for the descriptive and econometric analysis is introduced followed by a section that describes the methodology including the econometric models. Section VI presents the results of the study including the factors that determine migration and migration success. Finally section VII concludes and identifies remaining gaps.

II. Review of the Migration Literature

Quantitative models of migration are generally based on neoclassic economic theory and focus either on macro or micro level analysis. Macro models deal with migration in the context of economic development. The unlimited supply of labor hypothesis of Lewis (1954) can be considered an important point of departure for later quantitative migration models. The main hypothesis is that the marginal product of labor in the subsistence agriculture sector (largely corresponding with rural areas) is zero or negative. Therefore under the condition of high population growth, a continuous movement of labor to the modern sector is possible facilitating industrial growth. Ranis and Fei (1961) expand the Lewis model and include the productivity in the agricultural sector as a major factor for determining industrial wages. The Harris and Todaro (1970) model emphasizes the wage differential hypothesis but takes into account the possibility of temporary unemployment. The major criterion thus becomes the differential in discounted expected wage less employment and migration costs. Micro economic models of migration (e.g. Sjaastad, 1962; Todaro and Maruszko, 1987) consider migration as an investment in human capital. On the cost side traveling costs, costs of job search and training as well as psychological costs are included. On the benefit side the expected wage differential but also non-market benefits of migration like better access to health are considered. In the papers of Stark and Levhari, 1982; Rosenzweig and Stark, 1989; Taylor and Fletcher, 2007, Hagen-Zanker, 2008) migration is seen as a measure of ex-ante risk mitigation and ex post coping hypothesizing that the risks in rural areas are mostly un- or negatively correlated with those in urban areas. Adding the idea of social network to the study of

migration issues (e.g. Massey, 1990) interpersonal relationships among migrants as well as between migrants and their natal household members must be considered as a factor that determine the net benefits from migration. Lucas (2004) in a seminal article has proposed to think of rural urban migration in terms of “life learning”. In his models, urban areas are places where migrants can accumulate the skills required by modern production technologies. Thus he introduces the notions of a skills differentiation with skills jobs available for people who migrated some time ago and low skills jobs for new arrivals. He also points to the aspect of timing and speed on migration with returns to the migrant’s human capital investment as a major factor. Furthermore a widening gap between urban and rural areas is implicit from his theoretical deliberations.

Rural-urban linkages have received considerable attention in Thailand and have been explicitly mentioned in the 9th Development Plan of Thailand. Official data are problematic however. For example in 2000, only some 20 per cent of the population of Thailand resided in urban areas according to United Nations data (Yap, 2002). The problem is that many migrants who are residing in urban areas did not change their civil registration and are therefore counted as rural population. In addition, good transport infrastructure even in the rural areas in Northeast Thailand facilitates seasonal and back and forth migration. Clearly urbanization in Thailand is extremely skewed towards the Bangkok Metropolitan Region where over 50 % of the urban population lives.
In the course of renewed emphasis on rural development as initiated by the Thaksin government in the late 1990s the issue of rural-urban migration has become less prominent. On the other hand the 10th National Development Plan of Thailand (2007-2011) while not making any reference to internal migration pays some attention to social protection issues in the informal economy (Natali, 2009).

Empirical research in Thailand has been facilitated through longitudinal studies which mostly included a simultaneous elaboration of the origin and the destination of migrants (Chamratrithirong, 2007). Two important data sources of migration studies in recent years are the so-called Nang Rong Project, which started in 1984, and the more recent Kanchanburi Demographic Surveillance System (KDSS) which was initiated in 2000.

Both studies have a longitudinal design to detect the changes among migrants and their households as consequences of migration. Data from the latter project are useful to assess the emerging problems currently facing Thai society including the issue of the elderly in villages, health problems of adolescent migrants including HIV infection, poverty and use of remittance, changes in land use pattern, and the well-being of migrants' children. However the studies are limited in geographical focus and a rigid economic analysis has not been part of the portfolio.

However, longitudinal (16 years) case study results from the Nang Rong Project exist. For example, the study of Piotrowski and Tong (2002) used a cohort of 3,021 young rural migrants from preadolescence to young adulthood. The study particularly examines economic and non-economic determinants of return migration. Results show some evidence of negative human capital selection. Most importantly the study finds that connections to origin family members (including children, spouse, and parents) are important determinants of return.

Many studies on female labor migration in Thailand focus on the country's sex industry (e.g. Pasuk Phongpaichit, *et al.,* 2004). This was complemented by Mills (1999) with a study of female migrants working in less visible occupations, such as factories and sweatshops in the Bangkok metropolis which however equally raises the question quality employment.

None of the studies on migration in Thailand has explicitly addressed the question of employment quality as a means to assess long term migrant success from an economic point of view. While in general data bases on migration exist the data used in this study are unique as they use a large provincial sample with comprehensive multi period information on consumption, income, assets, shocks and risks for rural households. The corresponding information of migrants which can be matched with the rural households particularly facilitates the study of urban rural resource flows and livelihood strategies for migrants and rural households.

In the next section we describe the data that were used in the analysis of migration and migrations success both for the migrant and the rural household.

III. Description of the Data

We use data from the 2007, 2008 and 2010 panel waves of a household survey carried out in the context of the DFG FOR 756 Research Grant project "Vulnerability to poverty in Thailand and Vietnam", which also includes interviews with the village headmen. Initially 2200 rural households were selected in a three stage sampling process. The sample was designed in such a way that it is representative of the target population and would allow drawing conclusions for the vulnerability of rural households in the selected provinces and areas with similar conditions. The sampling procedure consists of a 3-stage cluster sampling design with district, sub district and village. The ultimate cluster size of 10 households in a village was chosen based on organizational aspects of the survey. The primary sampling unit was the sub district assuming homogeneity within a province, which is quite reasonable for Northeastern region of Thailand especially with regards to the natural resource conditions.

The survey was conducted in three provinces, namely Buriram, Nakhon Phanom and Ubon Ratchathani. All three provinces belong to the North-eastern region, still considered the "poverty pocket" of Thailand (Healy and Jitsichon, 2007). Nakhon Phanom has a population of around 720,000, dominantly living in rural environments, and is located some 700 km northeast of Bangkok. Ubon Ratchathani has a population of about 1.7 million and is situated further south bordering Laos and Cambodia. While still dominated by agriculture, the economy of this province is rapidly diversifying with significant infrastructure development. Buriram has about 1.5 million inhabitants and hosts a sizeable Khmer-speaking minority. The structure of agricultural production is similar in all three provinces with rice as the dominant crop (over 80% of agricultural land), followed by cassava; perennial crops like rubber have recently become more important. In all three provinces income from agriculture and natural resources is less than from other income sources including non farm wage employment, self employment

and remittances (Hardeweg, *et al.*, 2011), which suggest that migration is an important component of the livelihood strategies of these households.

The three provinces are located in rural and peripheral areas (bordering Laos and/or Cambodia) in locations characterized by remoteness and multiple risks with poor agricultural infrastructure that makes people generally vulnerable to poverty. Hence urban migration is a livelihood option that many households consider. The study uses two types of data. First, those collected from rural households, which are representative of the rural population in the three provinces. The survey instrument includes information on household characteristics of all persons considered as members by the household head, including persons staying in the village household as well as migrants, their occupation, education and health. In addition, the usual components of living standard surveys including income from agriculture and natural resources, off farm and non farm income, borrowing lending, savings, social protection benefits, consumption and assets are available. Additional information on the household's shock experience, risk perception and subjective assessment of well-being was added as a major component of the questionnaire. Secondly, data from a survey of the migrant members of these households working and residing in the Greater Bangkok area was conducted in 2010. In the migrant survey migrant characteristics, living conditions, migration history, types of employment, remittances send and received, social protection benefits, shock experience, risk attitude, borrowing, lending, savings, assets and subjective assessment of wealth and future prospects was compiled.

The migrant survey applied the concept of tracking surveys similar to those carried out in the "Nang Rong Project" in Thailand (Rindfuss, *et al.*, 2004) and World Bank Health studies in Tanzania (Beegle, et al 2006). The migrant survey took place during the height of a political crisis, which nearly paralyzed parts of Thailand's capital city during May to July 2010. This severely constrained the implementation of the survey and therefore only 643 out of nearly 1100 migrants in the data base could be interviewed. Based on national statistics (NSO 2008) over 80 % of migration from the Northeastern Region is directed to Bangkok or its surrounding areas. This general pattern of migration was also confirmed

by the results of the second panel in 2008 of the rural household survey in the three provinces. Hence in our migrant data base, the survey was limited to the Greater Bangkok metropolitan area including the surrounding provinces of Samut Sakhon, Samut Prakan, Samut Songkhram, Nonthaburi, Nakhon Pathom, Pathum Thani, Ayutthaya, Saraburi, Nakhon Nayok, Chachoengsao and Chonburi were included. For the tracking survey migrants were already identified during the parallel household interviews based on the information provided by the respondent. The following criteria were applied for a person to be included in the migrant data base:

- considered as household member by the respondent of the rural household survey regardless of the number of days per year the person spends in the rural house
- at least 15 years of age
- has left the rural household for at least one month during the reference period and is living in migrant target area (Greater Bangkok area) at the time of the interview.
- did not migrate for religious reasons (monks) or being in jail.

IV. Methodology

To address the following research questions, we have developed two models. We use difference in difference matching estimator to examine the drivers of a household to engage in migration and evaluate the impact of migration on improving the wellbeing. We then empirically quantify using a two-stage model at whether migration actually increases the probability of obtaining better employment opportunities, and whether migrant and rural household characteristics have differential outcomes in term of ability to obtain better employment opportunities conditional on migration and examine the differential gain of better employment opportunity in improving wellbeing of the rural household.

The models developed in this study t should help to identify the factors that can the following set of questions:

i) what motivates rural households to send some of their members for working in the city

ii) do rural households benefit from a livelihood strategy that relies on the diversification of labor out of agriculture and the establishment of a multiple household system

iii) does migration actually increase the probability of obtaining better employment opportunities

iv) what are the factors for a migrant to obtain better employment opportunities conditional on migration

v) does finding quality employment in urban area for a migrant improve wellbeing of the rural household in natal area

Empirical model: impact evaluation of migration on wellbeing of rural households

In the first model we investigate the factors that influence the decision of a rural household in the three provinces in Northeast Thailand to send one or more members to the Greater Bangkok area for employment. Subsequently we analyze the impact of that decision on the welfare of the rural household. To choose the variables to be included in the model one can refer to the review of the micro economic migration theories as summarized in section II. Hence, the decision of a rural household to send one or several of its members to an urban center for employment is driven by the expectation of increasing welfare for the entire household. The estimation of that welfare gain of a household engaged in migration is not trivial because of the need of finding a valid counterfactual. Ideally we would be able to establish a "double delta" case whereby we would know the welfare before and after migration of both migrant and non migrant households. In the absence of such experimental design we must avoid the possible selection bias resulting from observed and unobserved household characteristics, which may have affected the migration decision and are correlated with the outcome variable (Heckman et al., 2004). The difference-in-difference propensity score matching method is a possibility to control sources of selection bias (Rosenbaum and Rubin, 1983). Hereby a plausible comparison group is established by matching households engaged in

migration to similar non-engaged households using a set of covariates comparing the outcomes of the migration decisions across these two groups before and after migration. We used the 2010 data set for selecting the outcome indicators and the 2008 data set as explanatory variables.

Thus, in a formal notation, let Y^1_{2010} be the value of outcome of interest (e.g. income) in time period t when the household i is subject to treatment and Y^0_t the same variable when the household is belongs to the comparison group. The gain of a household with migrants is specified as follows:

$$\Delta y = Y^1_{2010} - Y^1_{2008} \qquad (1)$$

However, we can only observe $E(Y^1_{2010})$ while $E(Y^0_{2010})$ is not observed. A possible remedy to this problem is to create the counterfactual $E(Y^0_{2010})$ by matching treatment and comparison groups. The treatment group, $D_i = 1$, includes a household i engaged in migration and the comparison group, $D_i = 0$, a household who did not have a migrant in a defined period. Our estimation is based on the conditional independence assumption (CIA) which states that all variables influencing the participation decision and outcome variables should be observed simultaneously. If however, both groups differ on unobserved variables which affect simultaneously the assignment to treatment and the outcome variable a 'hidden bias' might arise. However due to the panel nature of our data matching difference in difference estimators can be assumed to be robust (Smith and Todd, 2005).

Since we have panel data available equation 1 can be improved through propensity score matching, by subtracting the outcome of interest based on the baseline data set between households engaged in migration and the matched comparison group non-engaged households (equation 2):

$$ATT = [Y^1_{2010} - Y^1_{2008} \,\big|\, X_{2008}, D = 1] - [Y^0_{2010} - Y^0_{2008} \,\big|\, X_{2010}, D = 0] \qquad (2)$$

where ATT denotes the average treatment effect and the subscripts 2008 denote baseline income and 2010 after the decision to engage in migration respectively. The propensity score is estimated by a simple binary choice model. Based on the propensity scoring

results the sample is split into equally spaced intervals of the propensity score. Treated and control households are matched on the basis of their scores in order to identify for each household the closest propensity score for both treated and control, using the Kernel matching and nearest neighbor methods. A household is considered a treatment household if it has at least one member migrated to another province for at least one month for employment or educational purposes in 2010. A household is considered a comparison group household if it has no migrant member for education or employment outside the province.

To estimate the effect of the migration decision on household welfare we used a difference in difference matching method. We indicate wellbeing in terms of growth in income per adult equivalent terms from 2008 and 2010 for households with migrant and those without. While admittedly this is a short period it nevertheless can serve as an indicator of impact of migration on rural households.

Empirical model: quality of migrant employment

One main issue that this paper attempts to address is how rural-urban migration opens up more opportunities for the rural population to get into more productive employment opportunities. In this paper, we specifically attempt to investigate how the migration decision affects migrant employment. In this framework therefore, endogeneity is the main concern, unobservable heterogeneities may be correlated with each other and affect both the migration decision and obtaining a better quality job. In this case, the use of standard logit or probit models yields biased and inconsistent estimates (Cameron and Trivedi, 2010). The probit estimate of the maximum likelihood estimators may be inconsistent if one of the regressors is endogenous, in our case, the migration decision. Instrumental Variable (IV) probit is used in this study to correct for endogeneity. The model defines a residual for equation of decency model and uses the IV estimator based on the originality of instruments and this residual (Cameron and Trivedi, 2010). Following Cameron and Trivedi, (2010) we consider the following linear latent variable model, in, which Y_{it}^{*} is the dependent variable in the structural equation and Y_{2i} is an endogenous regressors in equation 3:

$$Y_{1i}^{*} = Y_{2i}^{'}\alpha + X_{1i}^{'}\gamma + \upsilon_{1i} \quad (3)$$

$$Y_{2i} = X_{1i}^{'}\beta + X_{2i}^{'}\lambda + \mu_{i_{2i}} \quad (4)$$

Where i=1,…N; X is a $K_1 \times 1$ vector of exogenous regressors; and X_2 is $K_2 \times 1$ and vector of additional instrumental variables that can be excluded from equation (3) as they do not directly affect Y_2. Identification requires that $K_2 \geq 0$ with the assumption that (ν_i, μ_i) are jointly normally distributed. Since our main objective is to address whether migration increases the probability of obtaining better employment opportunities, we run the job outcomes equation (3) of a migrant conditioning on migration equation (4) which serves as a source of identifying instruments with a number of a migrant characteristics variables.

While developing a measure for quality employment is a complex issue one can start with using proxies. In a first approximation we considered the migrant's subjective assessment regarding the improvement in her job. The migrant was asked how the working conditions have improved or not (including getting worse) since she had changed her job. Here, we consider two categories, zero if the conditions did not improve (or got worse) and one if the conditions had improved. As explanatory variables we included the migration history of the migrant together with her personal characteristics. In addition we have detailed information from the corresponding rural household which contains variables that could explain the type of job a migrant is able to get.

Second we construct a simple index that lists a variety of available indicators that could describe employment quality. For each parameter a value of one was assigned if the response was positive and zero otherwise. Eight indicators were identified as follows: (1) general improvement in the migrant's working (2) living condition since the departure from the village (3) if migrant feels better off than last year (4) migrant has a written contract of employment (5) stability of the migrant's income (6) migrant's income is

above average (7) migrant has accumulated savings, (8) migrant has one or more insurance contracts.

Our two stage migrant employment model is based on a migration decision function, which includes variables related to village level conditions and household characteristics that are expected to affect finding a better employment in urban through its effect on the migration decision.

V. Results and discussions

In the following the results of our analysis using the rural household panel data base and the corresponding migrant survey are presented. As a first step a descriptive analysis from the migrant survey 2010 is presented. In the second part of the section the econometric results are discussed, which allows some conclusions and policy recommendations to be drawn. We thereby follow a step by step procedure to present regression results that demonstrate the relationships among the variables of main concern.

Descriptive results on various aspects of migration

The selected descriptive statistics in this section can illustrate some important characteristics of the migrants and the migration process that can support some of the underlying hypotheses of the study and further qualify some variables for the later modeling exercise. The aim of this section is to set the scene for a quantitative and causal analysis of the questions raised at the outset.

Regarding the migration process table 1 lists the main reasons for migrating as stated by the migrants themselves. While it is recognized that the decision to migrate may not necessarily have been an independent decision of the migrant herself the answer categories provide some insight into the reasons for migrating. As expected, the most frequent reason is employment, which may also be a part of the remaining answers. Quite obviously pull factors are the dominant factors.

Table 1: Why do people migrate?

Reasons for migration	N	%
Job opportunity	301	46,81
Follow Family	115	17,88
Lack of money/ food/debt	79	12,29
Family/Friend wanted me to go	73	11,35
Education	73	11,35
Others	2	0,31
Total	**643**	**100,00**

Source: DFG Bangkok Migrant Survey, 2010

Table 2 presents some selected indicators of quality of life and work of the migrants. At a first glance and as shown by the general indicators migrants have improved their conditions since they left their village. However the picture is bleaker when looking at some indicators of social protection. For example, almost 70 % of migrants do not have any written work contract and only less than one forth have an unlimited written contract. Also, almost 80 % of the respondents said they have no insurance at all. Surprisingly health insurance, which is a major flagship of the Thai social protection schemes for the poor in rural areas, is lowest among the urban migrants with less than 2 % reporting to have such insurance. This indicates that the implementation of social protection policies may be deficient.

Table 2: Selected indicators of migrant's quality of life and work conditions

Indicator	Percent
General	
Migrants report stable income	60
Working condition improved since last job	80
Living condition improved since left the rural	67
Feels better of last year	59
Have savings	80
Specific	
Contractual arrangement for work	
Unlimited (written contract)	24
Unlimited (verbal agreement)	65.5
Limited (written contract)	7
Limited (verbal agreement)	3.5
Insurance	
Have no insurance	79
Life insurance	13
Health insurance	1.4
Car/ Motorcycle insurance	1.7
Accident/ Injury insurance	4.9

Source: DFG Bangkok Migrant Survey, 2010

Table 3 show what migrants with wage employment (which is the majority) earn per day. Almost 70 % earn less than 300 Baht (around 8 $) and only about 2 % of the migrants would earn around 20 $ per day, which would roughly correspond with the level of the new Asian middle class.

Table 3: Daily wage income of migrant (THB)

Daily wage income (THB)	Percent
<200	19.4
201-300	48.8
301-400	16
401-600	11.1
601-800	2.5
>800	2.3
Median of wage income	264.29
Mean wage income	350.45

Source: DFG Bangkok Migrant Survey, 2010

For the type of employment 85 % of the migrants are engaged in wage employment, 10 % are self employed and 5 % reported to have been unemployment during the time of the interview. Most migrants (48.8 %) work in the industrial sector, 42.3 % in service, only 2.1 % are in government service and 1.9 % is in education. The remaining 5 % are in various other jobs including agriculture. In terms of job quality (table 4) 9.9 % of the female and 2.8 % of migrants are in jobs that could be described as those with fairly high status. For example, only 5 out of the 323 female and 3 out of the 318 male migrants in our sample have reached the profession of nurse. While these jobs are those which are considered to be of good status these may not be the only ones that can be called quality employment.

Table 4: Migrants in better jobs

	Female		**Male**	
Jobs	**N**	**%**	**N**	**%**
Nurse	5	1.55	3	0.94
Teacher	4	1.24	2	0.63
Accountant/Clerk	23	7.12	3	0.94
Policeman	0	0	1	0.31
Total	32	9.91	9	2.82
Total Sample	323		318	

Source: DFG Bangkok Migrant Survey, 2010

An indicator of the general livelihood conditions is the migrant's apartment or dwelling. Most migrants stay in dormitory-like accommodations of their employer, better off migrants often stay in apartment houses with a large number of small single. The average space per person was computed with 11.9 square meters but 55 % of migrants live in accommodations with less than 10 square meters. 80 % of the migrants share their room with a companion or partner and 71 % reported that they sleep on the floor.

In the following table (Table 5) results of the migrant's own assessment of their migration decision and their future plans are reported. It is striking that over 85 % said they were quite happy to leave their village and almost the same fractions wanted to go back in the future. When asked about their future income possibilities (not reported in the table) 40 % of the migrants plan to either invest or work in agriculture and about 26 % said they would rely on their savings.

Table 5: Assessment of migration decisions and future plans

	Happy to Leave		Want to Go back	
	N	Percent	N	Percent
Yes	552	85.85	518	80.56
No	38	5.91	70	10.89
Not sure	53	8.24	55	8.55
Total	643	100	643	100

Source: DFG Bangkok Migrant Survey 2010

A summary statistics comparing households engaged in migration and households that did not have a migrant in 2010 is presented in Table 6. Some significant differences exist in both directions. The summary descriptive statistics result can serve as indicative measures of the differences in important variables between a migration and non migration households. In table 6 some important variables used in the model estimates in the later section show statistically significant difference in mean values. Some significant differences exist in both directions. First migrant households tend to be younger than non migrant households. The same is true for households with more educated members. This supports the notion of human capital drain from rural to urban areas. On the other hand non migrant households are those with more land. Income from remittance (in 2008) was higher for households engaged in migration than households did not engage in migration. This may indicate that remittance income motivates households to participate in migration insistently. Total income (in terms of PPP$ in 2010) is significantly higher for migrant compared to non migrant households.

Table 6: Summary statistics of household by migration engagement status

Variable Description	Variable Code	Migrant Households	Non-Migrant Households	Significance
Household size	**HS**	3.95	4.13	ns
Female headed (percent)	**FH**	0.28	0.26	ns
Household head age (years)	**HA**	53.11	54.48	ns
Mean age of the household (years)	**MAH**	36.26	37.48	ns
Household head schooling (years)	**HHS**	4.68	5.34	**
Total number of households members below primary school	**TNHMBP**	1.70	1.61	ns
Total number of households members completed primary	**TNHMCP**	2.66	2.11	**
Total number of households members who completed secondary school	**TNHMCS**	1.13	0.67	***
Total number of households members who completed above secondary school	**TNHMCAS**	0.29	0.17	***
Dependency ratio	**DR**	1.67	1.61	ns
Income from Remittance ($ PPP)	**IRE**	0.47	0.28	**
Land per capita (ha)	**LPC**	0.60	0.57	ns
Households experienced demographic shocks (percent)	**HEDS**	0.21	0.20	ns
Households experienced Health shocks	**HEHS**	0.35	0.39	*
Households experienced Agricultural shocks (percent)	**HEAS**	0.48	0.46	ns
Households experienced Economic shocks	**HEES**	0.31	0.28	ns
Total income per capita ($ PPP in 2010)	**LTI**	161.41	123.2572	***
Time to reach the hospital (minutes)	**TRH**	21.55	20.41	ns
Time to reach the market (minute)	**TRM**	20.13	18.34	ns
Distance to other public infrastructure	**DPI**	14.2	13. 8	ns

Source: DFG Rural Household Surveys 2008 and 2010

*Household demographics, income, asset and remittance are from 2008 unless otherwise specified

Econometric Results

To better understand the factors that make rural households to send one or more of its household members to work in the city and to assess the impact of that migration decision on the welfare of the rural households a counterfactual group using propensity score matching had to be established as described in section III. To construct the propensity score of the migration households, we use a broad set of covariates, including household characteristics (e.g. household size, mean age of the household, gender, marital status, dependency ratio, total number of households completed senior secondary and above, total number of households who completed junior secondary school, total number of households who completed primary school, log of mean age of the household,

mean age of the household in 2008); asset holding (agricultural land per household size); income sources (agriculture, wage employment, self employment, natural resource and remittance in 2008); infrastructural facilities (distance to schools, distance to main market and distance to internet shops); and different shocks (climate, health, biological, social and economic shocks.

Table 7 shows the results of the probit estimates. The overall results are robust and most coefficients show the expected signs. Since we use panel data and a rich set of covariates we consider the endogeneity problem to be insignificant. The model confirms some of the hypotheses that can be derived from theory. Foremost the education variables show that if a household has better educated members there is a higher probability that such a household has migrants. The negative sign for a household head's education indicates that those household heads may see little prospects in focusing the household's livelihood on the village economy and therefore send their children away while the opposite tendency exists if household heads have a higher education level.

Households where the average age of their members is high and with more household members below fifteen or above 60 years of age are more likely to engage in migration. This confirms the typical age pyramid found for rural households in the three provinces with a gap in the age group 20 to 35 years (Hardeweg *et al.*, 2011).

Migrants are more likely to come from land poor households as the variable for land per capita is negative and significant. This supports the observation of Rigg (2006) that the role of land is declining for poorer rural households as they increasingly rely on non- and off farm income sources. Households with more land may be more reluctant to send household members away as they are needed for farm work. The household income variable (log-TI) is significant but negative, which suggests that one of the motivating factors for migration is poverty. Community variables like the time needed to reach district or provincial infrastructures are included to assess the push factors that can motivate migration. For example, the time required reaching nearest market or hospital are positive and have a significant effect on migration. This indicates that the more

remote rural locations where costs of access to infrastructure are high increase the likelihood of migration. The significance of the provincial dummy for Ubon province is a possible reflection of the differences in natural resource and development potential. Ubon province has good economic and agricultural potential but also a high degree of diversity in socioeconomic conditions, which could explain the lower probability of migration.

The migration model provides the first lesson of this study namely that generally it is the poorer households located in remote areas who tend to have migrants. Also migrants tend to be such persons who have better formal education albeit most of them at the primary level. This raises the question to what extent migrants can be successful in supporting their native household and if these migrants can really progress in the urban setting and achieve a better employment that allows them to develop their career outside the rural village.

Table 7: Probit estimates for household engaged in migration

Variables	Coef.	Std. Err.	z	P>z
FH	0.09	0.07	1.22	0.22
HS	-0.04	0.01	**-4.28**	0.00
TNHMBP	0.02	0.4	0.33	0.71
TNHMCP	0.04	0.01	**7.94**	0.00
TNHMCS	0.14	0.01	**10.87**	0.00
TNHMCAS	0.05	0.00	**10.75**	0.00
MAH	0.09	0.02	**5.16**	0.00
HHS	-0.30	0.03	**-10.68**	0.00
DR	0.02	0.04	0.36	0.72
Log-TI	-0.09	0.03	**-2.77**	0.01
IRE	0.05	0.02	**2.61**	0.01
TRH	0.28	0.08	**3.36**	0.00
TRM	0.13	0.06	**2.06**	0.04
Log_ DPI	-0.23	0.13	**-1.80**	0.07
UP	-0.27	0.09	**-3.06**	0.00
BP	0.09	0.10	0.94	0.35
LPC	-0.05	0.03	**-1.76**	0.08
Log-WPC	0.03	0.04	0.91	0.36
HEDS	-0.01	0.08	-0.14	0.89
HEHS	-0.15	0.06	**-2.32**	0.02
HEAS	-0.02	0.06	-0.34	0.73
HEES	0.04	0.07	0.59	0.56
_cons	-0.38	0.61	-0.62	0.54

Probit regression	Number of obs	= 2105
	LR chi2(24)	= 501.58
	Prob > chi2	= 0.0000
Log likelihood = -1178.5443	Pseudo R2	= 0.1755

*Household demographics, income, asset and remittance are from 2008 unless otherwise specified
** Significant at the 10% level; ** Significant at the 5% level, *** Significant at the 1% level*
Absolute value of z-statistics in the parenthesis
Source: own calculations based on DFG rural household survey

Quality of migrant employment

In this section the question is addressed what factors are responsible for migrants to obtain quality employment. Judging from results of the previous model it is rather clear that migration may not always be successful. Table 8 presents the mean and standard deviation of the variables used in the two models for assessing employment quality of migrants in Bangkok. It shows that for the first proxy for a migrant having a better job over 75 % of the migrants judged that their working conditions had improved since their

last job. The average age of the migrant, 31 years, confirming the increasing out migration of young members to urban centers. It seems there was difference of migration to Bangkok city. Only 17% were from Nakhon Phanom while more than 40% of the migrants were from Ubon province.

Table 8: Definition and summary statistics of variables used in the migrant quality employment model

Variable description	Variable Code	Mean	Std. Dev.
Better working condition	**BWC**	0.767	0.423
Age of migrant (years)	**AM**	31.030	8.730
Hours working per day	**HWD**	8.910	2.769
Months stayed in current job	**MSJ**	53.023	62.555
Government support	**GS**	0.21	0.41
Insurance (yes/no)	**INS**	0.59	0.49
Owning land dummy (yes/no)	**OLD**	0.797	0.403
Years of schooling of migrant	**YSM**	9.192	3.567
Female migrants	**F**	0.541	0.499
Daily Wage income ($PPP)	**MI**	16.50	23.77
Self employed	**SE**	0.103	0.305
Wage employed	**WE**	0.842	0.365
Debt of migrant	**DM**	0.402	0.491
Households experienced agricultural shocks	**HEES**	0.571	0.663
Households experienced economic shocks	**HHSY**	0.302	0.460
Household head schooling years	**HHYS**	4.40	2.42
Household size	**HHS**	4.01	1.91
Age mean of household members	**AMHM**	33.246	7.923
Total income per capita per month ($ PPP) in 2008	**TI**	140.10	249.20
Land per capita (ha)	**LPC**	0.54	0.68
Wealth of the rural household per capita in 2008	**WH**	5899.11	891
Ubon province	**UP**	0.436	0.496
Buriram province	**BP**	0.386	0.487

Source: own calculations based on DFG rural household survey

Results in table 9 include a test of the null hypothesis of exogeneity which at 0.10 level indicate that the null hypothesis of exogeneity is rejected. To overcome the endogeneity problems an instrumental variable approach has been adopted. In table 9 results of the second stage probit estimates are presented. The dependent variable is the subjective assessment of the migrant regarding the status of her working conditions in reference to her past job using the binary categories of getting better with reference to no change. For the education variable (years of education) an additional year of schooling of the migrant increases the chance of an improvement in working conditions by 6 %. Similarly, if a migrant works more hours per day she is likely to improve her work conditions. On the other hand if migrant is indebted this reduces the likelihood of improvement in work conditions. Consistent with expectations, we find that the probability of a positive assessment is significantly higher for migrants where the rural household has higher income. On the other hand no difference between male and female migrants could be detected.

The positive and significant sign for the migration variable indicates that there is a 75 % chance that the work conditions improve on the short run relative to the previous job. This is a positive sign for the success of migration but it must be interpreted against the background of the 2008 global financial crisis and the recovery that has taken place until 2010, the time of the migrant survey. At least it indicates that the 2008 crisis has been less dramatic and that perhaps government support measures were effective. This is conclusion is supported by the positive sign of dummy variable of government support. The significant effect of the two provincial dummies for Ubon Ratchathani and Buri Ram suggests that if a migrant comes from these tow provinces he is more likely to experience an improvement in job conditions that if she would come from the poorer province of Nakon Phanom.

Table 9: IV Probit estimates of migrant's subjective assessment of work

Variables	Coef.	Robust Std.	z	P>z	Marginal Effect
Migration	3.451	1.541	**2.240**	0.025	3.381
AM	-0.006	0.009	-0.640	0.519	-0.013
OLD	-0.247	0.177	-1.390	0.163	-0.212
HWD	0.055	0.027	**2.040**	0.041	0.071
MSJ	-0.001	0.001	-0.580	0.565	-0.001
YSM	0.046	0.024	**1.890**	0.058	0.051
F	0.047	0.109	0.430	0.666	0.070
GS	0.258	0.151	**1.710**	0.088	0.223
SE	0.020	0.452	0.040	0.965	0.019
WE	-0.287	0.389	-0.740	0.460	-0.267
DM	-0.276	0.118	**-2.340**	0.019	-0.301
HHYS	-0.020	0.023	-0.870	0.382	-0.020
HHS	-0.014	0.089	-0.160	0.874	-0.013
Log TIC	0.133	0.051	**2.600**	0.009	0.137
LPC	0.018	0.074	0.240	0.812	0.020
Log WH	0.029	0.077	0.380	0.707	0.031
UP	0.342	0.173	**1.980**	0.048	0.331
BP	0.266	0.158	**1.690**	0.092	0.274
cons	-3.918	1.457	-2.690	0.007	
/athrho	-0.808	0.431	-1.870	0.061	
/lnsigma	-1.746	0.099	-17.650	0.000	
rho	-0.669	0.238			
sigma	0.174	0.017			

Probit model with endogenous regressors — Number of obs = 545
Wald chi2(18) = 72.96
Log pseudolikelihood = -77.79651 — Prob > chi2 = 0.00

Instrumented: Migration decision

Instruments: AM OLD HWD MSJ YSM F GS SE WE DM HHYS HHS Log TIC LPC Log WH UP BP FH HHS TNHMSS TNHMJS TNHMP MAH Square-MAG HHS LPC Log-WPC DR Log-TI IRE Log-TRH Log-TRM Log-DPI HEDS HEHS HEAS HEES

Wald test of exogeneity (/athrho = 0): chi2 (1) = 3.51 Prob > chi2 = 0.0609

Source: own calculations based on migrant survey 2010 and rural household survey 2008

Quality of work index

In table 10 the results of the model where we used an eight criteria index as dependent variable using a two stage regression approach. We believe that the index will allow a more robust conclusion about job outcomes that arise due to migration and what factors are responsible whether or not a person's living and working circumstances have improved. Results of the index model largely confirm those found for the model on subjective assessment presented above (see table 9). Some of the significant variables are identical. Overall there is a chance that if a rural household has a migrant he will move up the social ladder based on the criteria chosen for quality of employment and life in the urban environment. Consistent with the first model better education increases the likelihood of quality employment and improves life conditions for migrants although the marginal effect is smaller than in the previous model. The time for working and job stability is a positive factor too, i.e. if migrants have employment where they can work longer hours and if they stay in the same job for a longer period this has positive effects on the employment quality index. Again government support seems to help to improve migrants' conditions quite considerably. Also the wealth status of the rural household increase the likelihood of better living and working conditions of the migrants, which once more suggests that relatively better rural households make better migrants which ultimately contributes to the already existing inequality in the rural areas.

Table 10: IV estimates for quality of employment index

Variables	Coef.	Robust Std. Err.	z	P>z
Migration	0.192	0.091	**2.130**	0.007
Age	0.008	0.010	0.820	0.411
OLD	-0.177	0.201	-0.880	0.380
HWD	0.076	0.027	**2.830**	0.005
MSJ	0.006	0.001	**5.150**	0.000
YSM	0.114	0.021	**5.440**	0.000
F	-0.071	0.125	-0.570	0.572
GS	0.741	0.132	**5.610**	0.000
DM	0.033	0.135	0.240	0.808
log-WHP	0.190	0.072	**2.630**	0.009
Log-remit	0.038	0.023	**1.670**	0.094
HEES	0.208	0.393	0.530	0.597
HHSY	-0.818	0.476	**-1.720**	0.086
UP	-0.031	0.203	-0.150	0.878
BP	-0.028	0.194	-0.140	0.885
cons	0.264	1.351	0.200	0.845

Instrumental variables (GMM) regression — Number of obs = 587; Wald chi2(15) = 208.68; Prob > chi2 = 0.0000; R-squared = 0.2049; Root MSE = 1.5234

GMM weight matrix: Robust

Source: own calculations based on DFG rural household survey

Effects of migration success on welfare or rural households

After having shed some light on the factors that drive rural urban migration in Thailand and the what determines positive work and life conditions of these migrants in their urban environment the final two questions are to what extend migration is positive for the rural household and more specifically whether migrant success equally also means positive development of the rural households. As explained in the methodology section the estimation of the welfare impact in the absence of perfect experimental designs is problematic. Mean separation tests suffer from the non-comparability of the two sub-samples and also the fact that we can not control for the effect of other covariates. To overcome these problems to the extent possible, we use differences-in-difference matching estimates on the basis of their scores for kernel and neighborhood methods comparing households with and without migrants (table 11) and based on our quality of

employment and life conditions index households with successful versus those with less successful migrants (table 12).

Table 11 shows estimates of the average impact of migration on income growth of rural households between 2008 and 2010. Results show that overall migration has a significant impact on rural household income growth. The estimated treatment effect of 0.17 and 0.22 for kernel and neighborhood method respectively is large. This indicates that the income of rural households with migrants enjoyed income growth between 2008 and 2010, which is between 17 % and 22% higher than for households without migrants. Comparing province we find that the impact of migration is more pronounced in Ubon and Buriram province while there is no significant difference in Nakhon Phanom which is the poorest among the three provinces.

Table 11: Difference-in-difference estimates of the impact of engaged in migration on income ($ PPP) for two different PPS methods

Outcome variable (PPS method)	*Engaged*	*Non-engaged*	*Difference in the average outcomes, ATT*
Average income (Kernel)	1.28	1.10	0.17***(2.87)
Average income (Neighborhood)	1.28	1.06	0.22***(2.88)
Impacts by province categories			
Ubon province	1.90	1.43	0.47**(2.15)
Buriram province	1.02	0.67	0.35*(1.93)
Nakhon Phanom	0.61	0.26	0.35(1.52)

Note: absolute value of t-statistic in parenthesis, Bootstrapped standard errors using 1000 replications of the sample

Source: own calculations based on DFG rural household survey

The final question whether migrant success measured in terms of quality employment and good living conditions can further augment the positive income effect from migration is answered in table 12. The differential gain in income growth of " migrants who have better employment opptunity" is conducted using two stage differences-in-difference matching estimates. First, we use a probit model to predict the probability to satisfy more

than four of the quality indicators which we have included in our quality index (see also table 10). The main purpose of the propensity score estimation is to balance the observed distribution of covariates across the groups of migrants with a better job and with not-good job. we check the ability of the matching procedure in which case, the matched comparison group can be considered a plausible counterfactual (Ali and Abdulai, 2010). but on the propensity score,. The result is that there is no systematic difference in the distribution of covariates between migrants who satisfied more than four employment indicators and these that did not. Both the neighborhood and kernel estimates of the average income growth impact are presented in Table 12. The results show a statistically significant impact of employment quality of migrants on household welfare measured by income per capita grwoth between 2008 and 2010. Neighborhood and kernel propensity score estimate show a statistically significant impact of having a better employment opportunity on improving household welfare measured by growth in real income per capita. Specifically, the neighborhood and kernel estimates suggest that getting better employment opportunity in urban area increases the growth of the income of the household by 40% and 46% respectively to that of matched did not get better employment opportunity.

Table 12*:* Difference-in-difference estimates of the impact a migrant with better employment compare to ordinal migrant with less good job conditions on income ($ PPP) for two different PPS methods

Outcome variable (PPS method)	*migrants with better employment*	*Migrants with less good employment*	*Difference in the average outcomes, ATT*
Average income (Kernel)	1.54	1.13	0.40***(2.47)
Average income (Neighborhood)	1.51	1.06	0.46**(2.08)

Note: absolute value of t-statistic in parenthesis, Bootstrapped standard errors using 1000 replications of the sample

Source: own calculations based on DFG rural household survey

VI. Conclusions and Policy Recommendations

This study presents some quantitative evidence on the effects of rural urban migration for the development in Thailand. It includes the effects on the rural household sending the migrant and the prospects for migrants in the Greater Bangkok area. The study draws upon a panel data base from some 2000 rural households in three provinces from Northeast Thailand and migrant survey in the Greater Bangkok area conducted in 2010.

The data were analyzed by means of selected descriptive statistics from the migrant survey and three econometric models. The descriptive statistics provide some information on the reasons of migration and the living and employment conditions of the migrants. For the models, first a probit model was developed that can help to identify the factors which make rural households in Thailand to decide in favor or against the migration of one or more of their household members. Second, a model that specifically looks at quality employment of migrants identifying the factors that can make a migrant to be relatively successful in terms of employment quality and living conditions. To achieve this objective we have defined two different variables, namely a binary variable that measures the short term improvements in migrant conditions since their previous employment and an index of quality employment consisting of eight indicators. Third a difference in difference treatment effects model using propensity score matching to assess the income effect of migration and migration success on the welfare of the rural households.

Summarizing the results of this study a number of interesting results were found that can provide some insights of formerly less well know phenomena and that can improve our understanding on the role of migration for development:

1. The information obtained from the migrant survey provides some evidence that the widely praises social protection policies for the poor may excluded domestic migrant and could be biased towards the rural poor. It is striking that most migrants do not have written employment contracts and rarely have insurances including those for health. Often they may be still registered in the rural area and thus a re excluded from the social security measures implemented by the government.

2. The decision of a rural household in Northeast Thailand to send one or more members for work or education to the Bangkok metropolitan area is strongly related with household characteristics. Generally it is the less favored rural households that send mostly younger family members away for work in the Greater Bangkok area. Also there seem to be strong push factors of migration embedded in poor access to social and physical infrastructures at district or provincial level. Most importantly and consistent with previous studies education is an important factor. Clearly it is the more educated people that migrate but this must be judged against the overall low education level of the rural population in Thailand.
3. Employment quality and relative improvement in the migrant's conditions is affected by both characteristics of the migrant and of its native household. Once again education of the migrant and the economic conditions of the rural household are decisive. The two models to explain migration success rather consistently show that it is the better rural households with the relatively better educated migrants that can make a migrant to be relatively successful in terms of employment circumstances and living conditions. This result is reinforced by the fact that the poorest among the three provinces is less likely to have successful migrants.
4. In general migration is positive for rural household well being. Income of rural households with migrants grows faster than that do not have migrants. We find significant average treatment effects of migration on the growth of the per capita income of the rural household ranging from 18 to 22 per cent. Disaggregating the results shows that for the poorest province the welfare effect of migration cannot be shown.
5. Migrant success also means positive welfare effects for their natal rural households. The impact on income growth between 2008 and 2010 was 40 % higher if the migrant is above average in terms of an index that includes eight indicators of employment quality and living circumstances in the urban environment.

The study allows to raw some conclusions that can be useful for policy design and implementation. Most rural households in Northeast Thailand do have migrant members but there are some who don't. There is a certain profile that one can attribute to households, namely they tend to be the ones which are poor and see less future in agriculture. They tend to send the more educated members away but education level generally remains low and quality is poor in the rural areas. Since among those households with migrants it is the better ones that have the more successful migrants from which the rural household benefits migration tends to increase inequality. In fact this may provide some explanation why the decline of poverty in some rural areas is unequal within the rural areas and overall is much slower in rural than in urban areas (Warr, 2001). In other words migration seems to do little to narrow the urban rural divide. The fact that the impact among the three provinces differs with the poorest province not significantly gaining underlies this fact. Additional geographic or administrative differentiation might further sharpen this picture.

For the assessment of the migrant's work quality we can say that there are positive and negative signs. On the positive side most migrants report that they were happy to leave their village and that their working and living conditions have improved since they left home. Majority also said that their income is quite stable although the daily wage it not very high with a mode around 250 Baht per day (< 8 $). Majority of them also was able to save some amount although judging form their living conditions (e.g. most sleep on the floor in small dwellings) the savings may not be much. The fact that in terms of social protection conditions for migrants in Thailand these seem to be not as good than what they are supposed to be on paper (e.g. health and other social protection programs) demand some policy attention. The contractual arrangements of migrants with their employer do not seem to give them much protection nor are migrants well covered by insurance schemes. Hence while migrants may be better off in terms of material consumption than their rural counterparts they remain vulnerable especially if economic crisis will hit.

In terms of policy recommendations two aspects seem to emerge from these preliminary results. First, the Thai government should pay more attention to secondary level

education in rural areas. While success has been achieved in primary education there is a strong deficit in good quality secondary education in rural areas. The current scheme of adult education is popular among the poor as eventually everyone can get a high school degree (M 6 level) raise some doubt on its quality based on anecdotic evidence of the third author. The second recommendation is along the same lines as the first one. Again on paper Thai government may have introduced health insurance, pension schemes, allowances etc. The question is how much of this is really implemented. For example, if a person not formally employed (e.g. in a household or a small or medium size enterprise) and not backed by a legally binding written contract then the social protection schemes may be rather ineffective. The migrant survey lends some support for this hypothesis, which can be backed again by anecdotic evidence. For example, during our tracking survey in 2001 in the Bangkok it was often not possible to interview the migrant without the presence of the employer.

Finally it must be admitted that there are ways how the paper could be further improved. One way to do this could be to develop a better index of job quality perhaps more closely based on the standards proposed by the ILO (e.g. Ghai 2006; Dahl et al 2009). In addition it might be also interesting to draw some cases from the data base that show a particularly successful and a counteraction failure case in a concise narrative manner possibly combining this with an improved decency index.

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