

Impact of Rural-Urban Migration on Rural Children: A Micro-Level Study

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Abstract

Rural-urban adult migration, mainly adult male migration makes heavy demand on all family members, but especially on children who are left behind in rural area to shoulder the responsibility of agricultural production and food security. Labor shortage due to rural-urban adult migration may mean that children in rural area often have to face tighter time schedules and patterns of time use and human energy inputs required in agricultural production. The study revealed the impact of rural-urban migration on rural children. In the study, sample was restricted to households that own and/or operate agricultural land in rural area. A purposive sampling was adopted to select villages and covered 100 sample households. The study was based on link between rural-urban migration of adult persons and child labor in rural area. The empirical result showed that an additional rural migrant of a household increases the probability of having child worker in that household by approximately 51%. However, it was found that children of migrant households receive less preventive health care in their infancy. The study also showed that an additional adult worker of a household increases the probability of having child worker in that household by 29%. For this reason, this study supports the hypothesis that children are the last economic resource of a household.

Key Words: Rural-urban migration, Child farm labor, Child activities, and Health input

Introduction

Migration is radically changing the socio-economic, demographic and development profiles of developing countries, with far-reaching implications for agriculture-based economies. According to United Nations estimates, 50% of the projected increase in the world's urban population will come from rural-to-urban migration so that by 2025, over 1.1 billion urban people in Less Developed Regions will be rural migrants (Guerny, 1995). Clearly, the socio-economic and demographic ramifications of this massive rural exodus will have a marked impact not only on urban but also on rural areas alike. Long-term male migration from rural to urban area may fundamentally change the gender division of labor in farm households. Men may not be available for ploughing and planting which are both time and energy-intensive. For rural children, this translates into a marked increase in agricultural work.

Ashagrie (1997) estimates that 70% of working children of 26 developing countries are engaged in agricultural activities. The next heaviest users of child labor have much smaller shares, including manufacturing 8.3%, trade 8.3% and personal services 6.5% etc. In case of Bangladesh, about 4.2 million child workers are engaged in the agriculture sector (BBS, 2003). Similarly, a recent survey indicates that about 56% child workers are engaged in agricultural sector (The Daily Star, 2003).

With a diminishing supply of adult labor especially male in rural areas due to adult rural-urban migration, the farm has to depend on either children of that area or hired adult labor coming from other areas or both. Studies on several Asian countries have conclusively shown that it is primarily

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the young, able-bodied and better educated rural inhabitants who emigrate, leaving substantial gaps in the agricultural and rural labor force. As farming is essentially a family enterprise in most Asian countries, rural-urban migration of able-bodied young workers leaves the burden on older and children in rural areas who tend to be less productive. The long-term implications of agricultural labor force shortages are likely to result in a decline in the health status of rural families including a rise in mortality and a rise in child farm workers.

Several articles have already studied the issues of child labor and rural-urban migration separately. But the literature about the impact of migration on the children of origin is very limited. Among the more recent studies, Hildebrandt and McKenzie (2005), using a nationally representative demographic survey of Mexico, found that children in migrant households received less preventive healthcare facilities such as breastfeeding and vaccination than children in non-migrant households. Salmon (2005) identified that children are much more likely to work when they live in a household where the potential of income generation is low and where this potential has already been used up. His results are based on the Bangladesh Labor Force Survey, 2000.

The main objective of this paper was to focus on the impact of rural-urban migration on the rural children. In this case, efforts were made to find out the impact of rural-urban migration on the following three aspects: (1) child farm labor, (2) child activities and, (3) child health. Further, a comparison was made between migrant and non-migrant households by using the features such as household structure and child activities.

Methods

The data for this study was collected from two villages under *Rupsha upazila* of Khulna district of Bangladesh during January-February, 2007. These villages are *Noihati* and *Khan Mohammad* from Khulna district. The financial and temporal constraints were the main reasons for selecting small sample size. A purposive sampling was adopted to select villages and covered 100 sample households. Sample was restricted to households that own and/or operate agricultural land in rural area. To cover the information, a modified definition of household was adopted. A household was defined as a dwelling unit where a group of persons usually live together in rural area and takes food from common kitchen. It also includes those who live outside the villages but claim the household to be their own. Persons of this category work outside the villages and often send remittances. Such persons were called the migrated members of the household and such households are known as migrant household. If there was no migrated member in a household then it was called non-migrant household. The study was performed based on field level survey. In most of the cases information was collected from the households head for reliable and desirable information. In the absence of the household head information was collected from another adult member of that household. The analysis done in this study was based on a data set with an explicit focus on rural urban migration and rural children.

Results and Discussions

The sample consisted of 100 households, of which 59 households reported to have at least one migrant. All households participated in a screening study in order to find out general household characteristics, such as household size and number of adult members etc. and labor profile of a household such as number of adult workers among all adult persons and number of child worker among all the children etc. Moreover, this study used the sample of households with child worker to investigate the impact of rural-urban migration on rural children (especially on child farm labor).

Present Circumstances of Migrant and Non-migrant Households: ANOVA (Analysis of variance) test shows the present circumstances of migrant and non-migrant households on the basis of different characteristics like household structure and child activities etc (Table 1). The independent variable was a dummy variable³ taking on values of 0 or 1, 0 meaning non-migrant household and 1 meaning migrant household. For each feature the dummy variable was considered as an independent variable to find out whether migrant household made any differences in that particular feature.

Household Structure: This study analyzed the household structure of both migrant and non-migrant household under the following heads to address its objectives.

Household Size: The result showed that the estimated average household size of migrant household was higher than non-migrant households.

Number of Children: The total number of children was slightly higher in migrant household than in non-migrant households. Since null hypothesis ($H_0: \beta=0$) was rejected at the 1% significant level, the result indicates that the average number of children of the two categories was different.

Percentage of Adult Workers among all Adult: There was a huge difference between migrant and non-migrant households in case of number of adult workers among all adult persons of a household. The result showed that the mean percentage of adult workers among all adult was about 13% higher for migrant households than non-migrant households with the standard error of about 3%.

Percentage of Adult Workers Engaged in Agriculture and Stay in Rural Area: If the area of origin was considered then migrant households generally had less adult workers engaged in agriculture than in non-migrant households. The result showed that in case of migrant households the average percentage of adult workers engaged in agriculture and staying in rural area was 30% lower than non-migrant households.

Percentage of Child Workers among all Children: Due to the shortage of adult workers in migrant households as a result of rural-urban migration, these households more often used their children as workers. The mean percentage of child workers among all the children was much higher for the migrant households.

Child Activities: This study also analyzed the child activities of rural migrant and non-migrant households of the concerned study area.

Total Participation: From Table 1 it can be seen that the average percentage of household child farm workers among all child workers was high for migrant households but the percentage of wage workers of migrant households is less than non-migrant households. Table 1

³Variables that assume 0 and 1 values are called dummy variables. Alternative names are indicator variables, binary variables, categorical variables and dichotomous variables. It is not absolutely essential that dummy variables take the values of 0 and 1. The pair (0,1) can be transformed into any other pair by a linear function such that $Z=a+ b D$ ($b \neq 0$), where a and b are constants and where $D=1$ or 0 . When $D=1$ we have $Z=a+b$ and when $D=0$, we have $Z=a$. Thus, the pair becomes $(a, a+b)$.

also showed that the average percentage of school attainment among all the children was less for migrant households than non-migrant households.

Participation in One Activity: The result showed that the percentage of only household farm worker among all the child workers of migrant households was about 57% higher than that of non-migrant households. But in case of only wage worker among all child workers and only school going children among all the children the mean percentage of migrant households was lower than non-migrant households.

Combination of Types of Work: In some cases it was found that a child works as both household farm worker and wage worker. But this type of combination of work was less likely in case of migrant households than non-migrant households.

Combination of Work and School: Here it was mainly tried to find out the combination of child work and school attendance. The result showed that in case of combination of farm work and school attendance, the mean percentage was lower for migrant households.

Impact of Rural-urban Migration on Child Labor: This section discussed the impact of adult migration from rural to urban on rural child labor. The working sample included households where at least one child aged between 5 to 14 years was working as a worker. Here, the dependent variable was households with child worker. Several independent variables were included for analysis such as household size, age of the household head, number of adult members and number of adult migrants etc. Salmon (2005), reported that children are more likely to work when they live in a household where all the adults are working. For this reason, the hypothesis of child labor being the last economic resource of household was supported by his findings.

In present result, it was found that the estimated slope coefficient was 0.252 that means an additional adult worker increases the probability of having a child worker in the household by approximately 29%⁴. The result also showed that the coefficient of number of rural migrants turns out to be significantly positive. Hence, an additional rural migrant of a household increases the probability of having child worker in that household by approximately 51% (Table 2).

Impact of Rural-urban Migration on Child Activities: This section mainly tried to find out the impact of adult rural-urban migration on activities of rural children. The dependent variables in the child activities equation are as follows: (1) a variable indicating the total number of child household farm workers among all the children of a household, (2) a variable indicating the total number of child wage workers among all the children of a household, (3) a variable indicating the total number of children going to school among all the children of a household and (4) a variable indicating the total number of children only goes to school⁵ among all the children of a household.

In case of regression 1, it was found that children were more likely to work as household farm worker when they live in a household where number of adult worker was high. Similarly the number of rural migrants of a household was highly significant in explaining the probability of child household farm worker (Table 3). From regression 2, it can be seen that there was a significant negative effect of number of rural migrants on the child wage working and number of

⁴In general, if we take the antilog of estimated slope coefficients, subtract by 1 and multiply the result by 100 then we will get percent change for a unit increase.

⁵In this case, we consider only those children of a household who go to school and do not engage in any work.

adult workers was not a significant determinant for child wage working (Table 3). In regression 3, all the three independent variables were not significant determinant for school attainment of children (Table 3). In case of regression 4, the result showed that number of adult workers was not significant determinant. But the number of rural migrants has an expected negative association with the probability of school attainment of those children who were not engaged in any type of work (Table 3).

Impact of Rural-urban Migration on Child Health: The main aim of this section was to find out the impact of adult rural-urban migration on rural child health. But during survey period information was collected about only one health input and that was the number of children received vaccination. Due to the lack of data this study only showed the impact of adult rural-urban migration on health input. After analyzing the concerned data, it was found that children in migrant households to be significantly less likely to receive all vaccination than children in non-migrant households (Table 4). This means that children of migrant households received less preventive health care in their infancy. One of the possible reasons for this may be a higher opportunity cost of time for migrant parents.

Conclusion

The analysis of link between adult rural-urban migration and child farm labor lends support to the hypothesis that an additional adult rural migrant of a household increases the probability of having child worker in that household. This study also has found out that children were much more likely to work when they live in a household where the potential income generation was low or where this potential has already been used up. It was further found that children are more likely to work as household farm worker when they live in a household where number of adult worker was high. The number of rural migrants of a household was highly significant in explaining the probability of child farm worker in rural areas. The empirical result also showed that there was a significant negative effect of number of rural migrants on the child wage working in rural areas. From the field observation, the idea was obtained that most of the rural migrant households uses the major portion of internal remittance to buy fixed assets like land. It also has major positive impact on the child farm labor. Further research is suggested on this particular topic, which could ensure the total welfare of working children especially in rural areas of Bangladesh. It was found that preventive health care that is vaccination was less likely for children in migrant households. The result suggested a need for future research into understanding the causes of lower preventive healthcare in migrant households in order to develop appropriate policy responses.

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Appendices

Results of Analysis

Table 1. A Comparison of Household Structure and Child Activities of Migrant and Non-Migrant Households

Characteristics	Coefficient (β)	Test * ($H_0: \beta=0$)
A. Household Structure:		
Household size		
Number of children	1.251 (0.343)	***
% of adult workers among all adults	0.746 (0.187)	***
% of adult workers engaged in agriculture and stay in rural area	13.041 (3.088)	***
% of child workers among all children	-29.946 (1.938)	***
	22.543 (4.557)	***
B. Child Activities:		
a. Total participation		
Household farm work (in %)	17.205 (5.952)	***
Wage work (in %)	-42.600 (7.243)	***
School (in %)	-30.254 (4.895)	***
b. Participation in one activity		
Farm work only (in %)	56.753 (6.370)	***
Wage work only (in %)	-17.798 (5.709)	***
School only (in %)	-22.375 (4.592)	***
c. Combination of types of work		
Household farm & wage work (in %)	-19.540 (5.602)	***
d. Combination of work & school		
Farm work & school (in %)	-26.096 (8.399)	***
Wage work & school (in %)	-7.790 (3.612)	**

Source: Field survey, January-February, 2007

Note: *** H_0 is rejected at the 1% significance level, ** H_0 is rejected at the 5% level and * H_0 is rejected at the 10% level.

* Null hypothesis, $H_0: \beta=0$ and alternative hypothesis, $H_A: \beta \neq 0$. Parentheses indicate standard error of slope coefficient.

Table 2. Marginal Effects of the Probability of Becoming a Child Worker

Independent Variables	Households with Child Worker
Household size	0.016 (0.067)
Age of the household head	0.003 (0.016)
Number of adult members	0.121 (0.102)
Number of adult workers among all adults	0.252 * (0.138)
Number of adults engaged in rural agriculture	0.056 (0.212)
Number of rural migrants	0.413** (0.170)
Number of observations	91

Source: Field survey, January-February, 2007.

Estimation results of logit model

Note: ** indicates significant at the 5% level and * indicates significant at the 10% level. Parentheses indicate standard error of regression coefficient.

Table 3. Marginal Effects of the Probability of a Particular Type of Child Activity

Explanatory Variables	(1)	(2)	(3)	(4)
Household size	-0.275*** (0.088)	0.139 (0.100)	0.081 (0.082)	0.018 (0.085)
Number of adult workers	0.429* (0.230)	-0.091 (0.274)	-0.107 (0.220)	0.201 (0.222)
Number of rural migrants	0.626*** (0.246)	-0.868*** (0.324)	-0.400 (0.246)	-0.824*** (0.250)
Constant	0.063 (0.662)	-1.509* (0.860)	-0.374 (0.667)	0.328 (0.661)
Number of observations	91	91	91	91

Source: Field survey, January-February, 2007.

Estimation results of logit model

Note: *** indicates significant at the 1% level, ** indicates significant at the 5% level and * indicates significant at the 10% level. Parentheses indicate standard error of regression coefficient.

Table 4. Marginal Effects of the Probability of a Child Received all Vaccination

Explanatory Variable	Child Received all Vaccination
Dummy: if migrant household	-0.503* (0.288)
Household size	-0.194*** (0.073)
Mother's year of schooling	0.245*** (0.046)
Constant	1.158** (0.575)
Number of observations	100

Source: Field survey, January-February, 2007.

Estimation results of logit model

Note: *** indicates significant at the 1% level, ** indicates significant at the 5% level and

* indicates significant at the 10% level.

Parentheses indicate standard error of regression coefficient.