

## **Impact of Male Migration on Female Headship' s Time Allocation and Inputs in Rice Farming in rainfed low land rice area, a case of Hiep Thanh village, Bac Lieu Town, Bac Lieu province**

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### **ABSTRACT**

*A purposive survey of 50 households to collect information on husband's and wife's time allocation and inputs for crop production in rainfed rice area in Hiep Thanh village (Bac Lieu town) indicates female managed farm significantly spent more hours for domestic work than males during slack period. For long term migration of male head, females significantly spent more hours for livestock than males. During peak period (harvesting time), the females in the household with long term migration of male head spent more hours/day for farm (4.47 hours) than males (2.16 hours). Under female managed farm category, females contributed their labors higher than the females under male managed farm category. The female managed farm also replaced the absent male family labor by hiring labors. The female managed farm had smaller rice farm than male managed farm. This may be the reason for more migration of male members in these households. The inputs for rice production in female managed farm was higher than those of male managed farm due to their less access to the technical information and lower education than males. Consequently, the return from rice farm of female managed farm was lower than those of male managed farm. Only land size significantly affected household income. Migration, remittances and who managed farm did not affected household income due to low income from migrants' work.*

### **INTRODUCTION**

Under the economic transition of Viet Nam, the industrialization for import substitution nowadays has withdrawn rural labor to engage in non-farm activities. Truong Si Anh (1995) reported that more than 46% males migrated to Ho Chi Minh city to look for long-term job with the hope of higher income. Nguyen Hoang Bao and et al. (1999) revealed that there were three main reasons for more migration after "Doi Moi" policy in 1986 such as changing cultivation system, removal of subsidies system and no limitation for private business and transportation. Due to the big difference in income and living level among zones within country, many families in the poor zones received remittances from relatives and family members and these were spent for food, hospital, education and for business (Le Minh Tam and Nguyen Duc Vinh, 1999). According to Truong Si Anh (1995), a survey of migrants in Ho Chi Minh city, 20% males and 30% females migrated to city after 1989 had sent remittances for their

families. With this situation, the principle male heads migrate out of the rural area to work in other places raising the issue of how females who left behind allocate their time and input for crop production with their existing technical knowledge. This paper focuses on the analysis of differences in time allocation, inputs, and access to information and knowledge between female managed farm or female head and male managed farm or male head.

### **METHODS OF DATA COLLECTION AND ANALYSIS**

Hiep Thanh village of Bac Lieu province was representative for rainfed low land rice. The people in the village comprises of Vietnamese (60%), Chinese (25%) and Cambodian (15%) in 7 hamlets. Fifty households were purposively selected from the 94 households contacted from the rapid rural appraisals to collect information on husband's and wife's time allocation and inputs for rice production. Male and female

farmers were directly interviewed by using the structure questionnaire. The respondents were either male or female heads.

Descriptive statistic was used to summarize the data in the form of frequency, mean and percentage. Multiple regression was employed to identify the factors affecting household income. T-test was used to know the differences in mean hours allocated by activities between male and female managed farm.

## RESULT AND DISCUSSION

### *Time allocation of male and female managed farms.*

The activities were classified for time spent as farm, livestock, non-farm, reproductive, and domestic. The farm activity included hand weeding, planting, seed sowing, harvesting, irrigation, fertilizer and pesticide application, field visiting, rat control, drying rice and selling farm products. Livestock comprised of catching and selecting shrimp, feeding pig, chicken, duck, fish, and weaving net for fishing. Non-farm included small trading, riding, factory worker and handicraft. Reproductive work included child care, sleep, taking rest, eat meals, watch television and listening to radio, taking a bath, drinking coffee, teaching children and visiting relatives and parents. Domestic work included cooking, washing dishes, cleaning the house and surrounding, collecting water, cutting fuel wood, and going to market

The households with female heads who manage farm are those with husband's out-migration. The household with male head or male manage farm are those without husband's migration. During slack period of rice production (surveyed in August when farmers finished seed sowing and weeding in rice field but still were busy with other crops as vegetables), for the households with long term migration of husband, female managed farm spent more time for reproductive work (38%) followed by for farm (25%). Similar trend was found for off- farm and non-farm worker (short term migration of male head) and females spent 42% of time for reproductive work and 28% for farm. During peak period (harvesting time), female managed farm under long-term migration of husband spent most of time for reproductive work (48%) followed by for farm (31%).

T-test for difference of mean hours/day between male and female managed farm shows that females significantly spent more hours for domestic work than males during slack period (table 1). For long term migration of male head, females significantly spent more hours for livestock than males.

During harvesting time (peak period), the females of the household with long term migration spent more hours/day for farm (4.47 hours) than males (2.16 hours) though it was not significantly different. This trend was similar for the household with off-farm and non-farm workers.

Table 1: T-Test for difference of mean hours/day spent by male and female manage farm

Activity	Household without migrant			Off-farm and non-farm worker (a)			Long term migrant		
	Male	Female	T-Value	Male	Female	T-Value	Male	Female	T-Value
<b>Slack period</b>									
Farm	5.38	4.00	0.34	4.93	4.33	0.40	5.00	4.10	0.99
Livestock	0.50	2.50	-0.79	1.14	0.83	0.32	0.00	1.13	-2.98**
Non-farm	0.00	2.00	-2.00	0.57	1.17	-0.82	2.25	1.39	0.91
Reproductive	7.63	4.50	-3.38	7.00	6.33	0.69	7.25	6.00	1.68
Domestic	0.25	2.00	-10.69**	0.36	1.50	-2.17	0.00	2.04	-7.78**
All activities	14.00	14.00	0.00	14.14	14.00	0.28	14.50	14.57	-0.20
<b>Peak period</b>									
Farm	6.88	5.10	0.74	6.25	6.26	-0.01	2.16	4.47	-2.09
Livestock	0.95	1.36	-0.43	1.81	0.74	1.54	0.97	0.56	0.41
Non-farm	0.11	0.12	-0.08	0.29	0.20	0.44	3.00	0.17	2.00
Reproductive	6.27	4.50	1.49	5.75	4.71	1.28	7.29	6.27	0.99
Domestic	0.21	0.07	-1.71	0.31	2.25	-2.58	1.70	2.86	-1.39
All activities	14.41	14.11	2.85*	14.41	14.15	2.16 *	15.11	14.34	4.39*

\* Significant at 0.05, (a) short-term migration

### *Inputs for crop production*

Labor input (person days /hectare) for rice production was mainly family labors. The

male members under male managed farm contributed more labor than under female managed farm. Under male managed farm,



*Source of information for farming:*

Male farmers who managed farm got information for farming from many sources, mainly from male neighbors (86%), mass media (76%), technician and sale agents (57%), and farmers' club (29%). More than half female managed farm got the information on farming from male neighbor, mass media and from husband. Less females (40%) than males (57%) contacted the technician, 32% got information from farmers' club and sale agent, and 12% from Women's Association.

*Factors affecting household income:*

Multiple regression with 2 models in table 4 indicates that only land size was positively and significantly affected household income. Most of households in rainfed area (Hiep Thanh village) are poor and they only earned small amount from off farm and non-farm work outside the village and city, the remittances did not contribute significantly to the family income. The main factor had increased income was land size. This indicates that the household with larger land farm had higher income than those had small land farm.

*Information of remittances for the households with remittances*

Most of male heads with long term migration (100%) and short term working as

off- farm and non- farm worker (67%) sent remittances to their families. Other members of the households as sons and daughters also sent money home. For the household with migration, most of remittances were spent for food, some for farm and children education. The amount of remittances for farm usually was spent for fertilizer and pesticide.

The amount of remittances received per year were small, the household with long term migration of male head only received 1649 thousand dong/year. Off-farm and non-farm male head worker sent 1000 thousand dong/year. The household with long term migration of other members received 4635 thousand dong/ year. These amounts are small for the need of the households. Farmers usually said remittances were not enough for family food during off season.

The migrants earned money in the household with long term migration of head were off-farm workers (80%), trading (40%) and fishing (20). The short term head migrants earned from non-farm workers (67%), 33% from driving and off-farm worker.

Most of wives of the households received and spent the remittances.

Table 4: Regression Analysis between Household income (Million dong/year) and Socio-Economic Factors in rainfed area

Variable	Model 1			Model 2		
	Estimate	Standard error	T-Value	Estimate	Standard error	T-Value
Intercept	-0.479	6.258	-0.08	0.299	6.347	0.05
Land size (ha)	1.1084**	1.585	6.99	10.995**	1.584	6.94
Household size	1.157	1.115	1.002	1.077	1.156	0.93
Number of children	-0.462	1.146	-0.403	-0.416	1.14	0.37
Age of head	-0.081	0.105	-0.77	-0.079	0.104	-0.76
Education of head	-0.135	0.427	-0.32	-0.155	0.427	-0.36
Years in farming of head	-0.077	0.092	-0.84	-0.073	0.092	-0.79
Working place of head	2.164	2.123	1.02	2.047	2.121	0.97
Remittances	2.441	3.241	0.753	2.553	3.147	0.81
Types of family	1.957	3.453	0.567	1.973	3.432	0.58
Migration	-1.658	2.583	-0.642	-1.352	2.577	-0.53
Gender 1	-0.808	1.394	-0.58			
Gender 2				-2.176	2.449	-0.89
R <sup>2</sup>	0.471			0.473		

Significant at 0.01

Model 1 with Gender 1: 0= Male headed household, male manage farm  
1= Female headed (De Facto & De Jure)  
2= Male headed, female manage farm

Model 2 with Gender 2: 0= Other households  
1= Female headed (De Facto & De Jure), male headed, female manage farm

Migration (dummy variable): 0= No migration, 1= Migration

Type of family (dummy variable): 0= Absolute nuclear, 1= Extended

Remittances (dummy variable): 0= No remittances, 1= With remittances

Working place of head (dummy variable): 0= Within village, 1= outside the village

## CONCLUSIONS

Most of households in the rainfed area are poor, not only male head but also other members as wife, sons and daughters migrated to other village and city to seek for off-farm and non-farm work. The sex of migrants is dominantly male.

Female managed farm significantly spent more hours for domestic work than males during slack period. For long term migration of male head, females significantly spent more hours for livestock than males. During harvesting time (peak period), the females of the household with long term migration spent more hours/day for farm (4.47 hours) than males (2.16 hours). This trend was similar for the females with short term migration of male head.

Under female managed farm category, females contributed their labors higher than the females under male managed category. The female managed farm also replaced the absent male family labor by hiring labors. Therefore the hired labors in female managed farm were contributed more labor days than in male managed farm. The male managed farm had larger farm than female managed farm. This is one of the reason for the migration in the household with female managed farm. The inputs for rice production in female

managed farm was higher than those of male managed farm. The reason for higher inputs from female managed farm due to their less access to the technical information, low education leading to easily persuaded by the sale agents who sell fertilizer and pesticide. Farmers felt that they obtained relatively large amount of money after selling rice. However, the high input led to very low net return. The return from female managed farm was lower than those of male managed farm. Only land size significantly affected household income. Migration, remittances and who managed farm did not clearly affected due to low income from migrants' work. The migrants lived out side their home, according to them, the wage was sufficient for food and room rent and the rest of money for sending home was small. Moreover, the wage mostly was paid on day bases, the work at city or other village were not regularly operated and therefore jobless for some time. Most of wives received and spent the remittances. Migration could not reduced the poverty in rainfed area. Both male and female farmers in studied site still lack of knowledge and skill in farming. Therefore, other intervention should implement to improve their rice production efficiency in this poor area.

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**SUMMARY IN VIETNAMESE**

Điều tra có mục đích từ 50 hộ để thu thập thông tin về phân phối thời gian cho công việc và đầu tư cho cây trồng ở vùng lúa nước trời của xã Hiệp Thành (thị xã Bạc Liêu) cho thấy rằng lúc nông nhàn phụ nữ quản lý sản xuất giành nhiều thời gian cho công việc nội trợ. Số giờ trung bình cho công việc đồng áng của nữ quản lý sản xuất (4.47 giờ) do chồng đi làm xa nhà dài hạn vào lúc bận rộn (thu hoạch) cao hơn nam quản lý sản xuất (2.16 giờ). Phụ nữ ở hộ nữ quản lý sản xuất đóng góp nhiều công lao động cho đồng áng hơn phụ nữ ở hộ nam quản lý sản xuất. Nữ quản lý sản xuất cũng thay thế lao động nam gia đình (do vắng nhà) bằng công lao động thuê. Nữ quản lý sản xuất đầu tư phân và thuốc cho lúa cao hơn nam quản lý sản xuất nên lợi nhuận từ lúa của họ ít hơn nam quản lý sản xuất. Chỉ có diện tích đất canh tác ảnh hưởng đến thu nhập nông hộ. Hộ có hay không có người đi làm xa, hộ có hay không có nhận tiền gửi và giới tính của người quản lý sản xuất không ảnh hưởng đến thu nhập nông hộ. Điều này có thể do cả hai nam và nữ quản lý sản xuất tại xã này có trình độ sản xuất đều thấp. Ngoài ra, trình độ văn hóa, khả năng tìm việc và làm việc, và tính chất công việc của người đi làm xa nhà chưa có thu nhập thỏa đáng cho nhu cầu sản xuất và tiêu dùng của gia đình.

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