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Why do Rural Households Diversify Non-Farm Employment? Evidence from Baksa District, Assam

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Abstract
Rural nonfarm employment beyond agricultural diversification is affected by numerous and empirically unidentified factors in different rural space. Gathering primary data from 200 rural households located in Baksa district of Assam and using a logit model, this study explores the nature of rural nonfarm employment diversification strategy and identifies the underlying factors influencing households' decision of participation in rural nonfarm strategy as primary employment. The survey results unveiled that rural nonfarm households diversify their employment more as self-employed strategy in nonfarm activity, earning higher income as compared to agricultural families. The empirical model estimated the results that participation in nonfarm activities by rural households was driven by both developmental and distress-push factors. Household income from agriculture, age and education level of the household head, and family size are significant development related factors and poverty of household and land ownership were statistically significant push factors determining households' participation decision into nonfarm sector as primary employment strategy. The study suggests that government policies should pay more attention on education and skills of rural people, particularly youth population, enhancing agricultural productivity and proper implementation of rural employment and poverty alleviation schemes for realization of rural nonfarm diversification dynamic and productive that can ultimately target long run wellbeing of the rural masses.

Keywords: *1Non-farm activities;2 household income;3 employment diversification;4 logit model,5 Baksa district of Assam.*

Introduction

Agriculture residues the primary source of employment and income for the majority of rural population of developing countries across the world. However, agriculture alone is incapable to provide adequate livelihood opportunities to escape out of poverty and food insecurity for a large proportion of low-income farmers in many rural areas and to support their economy (Jilito, et al., 2018; World Bank, 2008). A large proportion of rural families, therefore, tend to diversify their employment sources in sectors beyond agriculture, what is known as rural nonfarm sector (RNFS). The RNFS encompasses a highly heterogeneous economic activities outside agriculture, hence, lacks proper definition in the literature but the most general convention is to include livestock and animal husbandry, hunting and trapping, fishing, forestry and logging, etc., in agriculture and for that reason, all other economic activities in rural areas would shape RNFS (Chadha, 1993). According to Pand (2017), RNFE (Rural Non-Farm Employment) in India generally includes all rural employments in nonagricultural activities such as mining and quarrying, household and non-household manufacturing, processing, repairs, transport, construction, trade and hotel, storage, communications, and community as well as personal and other services in rural setting.

Worldwide millions of rural people and households have enabled to leapfrog from poverty through better employment and incomes from rural non-farm enterprises and hence contributed to better livelihood opportunities (World Bank,2008). As rural non-farm economies are typically small-scale, its requirements of entry capital are lower, and its seasonality and amenability are relevant to home-based activity; they have a potential role to play in the economic transformation of developing countries, with implications for women's employment and poor families (Haggblade, et al., 2007). Enhanced role of employment diversification through various nonfarm activities in eradicating rural poverty and inequality, in spreading out of farm activities, in arresting rural-urban migration, and in improving food security among rural families of developing countries including India can be well understood from the recent trend of substantial growth of RNFS in contrast to farming employment (Haggblade, et al., 2007; Lanjouwb & Lanjouwa, 2001; ILO, 1984).

The volume of rural nonfarm economy and employment diversification in this sector has been growing rapidly overtime in developing countries and in India, providing productive employment and income diversification opportunities to the rural masses. However, despite higher wages in RNFS, evidences from the developing world did not support the view that the benefits from the sector are equitably distributed (Jatav & Sen, 2013; Reardon, et al., 2000). This indicates that diversification of livelihood strategy is influenced by various processes or factors which remained still unidentified empirical studies. According to Ellis (2000), the reasons behind the strategy of employment diversification is based mainly on two principal considerations- necessity or/and choice- as a livelihood strategy. While some people diversify into nonfarm activities because they have little choice (necessity due to due to desperation reasons) better-offs households may diversify because they have a lot of choices (Ellis, 2000). With this background above, there is need to find out underlying forces/factors influencing households' choices of nonfarm activity as principal occupation in view of policy implications.

Literature has classified the driving forces behind employment diversification into two categories, namely, demand-pull and distress-push factors. The first set of factors relate to development processes such as agricultural growth, technological opportunities, infrastructural development, urbanization, etc., while the second set of factors are push factors such as poverty or unemployment that forces to select nonfarm employment strategy (Roy & Dey, 2010; Mellor, 1976).Several previous studies on rural nonfarm economy have identified various factors responsible for the RNFE diversification at macro and household level studies in various developing countries or regions or sectors within a country (Panda, 2017; Jatav &Sen, 2013; Roy & Dey, 2010; Hazell & Haggblade, 1991; Srivastav & Dubey, 2002;Lanjouw & Shariff, 2002; Vaidyanathan, 1986;Mellor, 1976; et al.). But these studies were located elsewhere and generalisations about the dynamics

of RNFE in another rural space would be inappropriate because of differences within a country or region in the natural resource endowments, infrastructure, culture, location, etc. Considering this gap, this paper sheds new lights on the dynamics of RNFE in Baksa district of Assam (located in the North-eastern Region [NER] of India) where no particular study as yet conducted to the best of my knowledge. The main objective of the study is to analyse the nature and composition of rural employment situation and identify the important factors influencing the choices of rural households' participation in nonfarm economic activities as a principal employment strategy.

The paper is organized as follows: Section 2 provides a brief review of related literature followed by the presentation of the profile of study area in section 3; Section 4 presents the research methodology where sampling technique of data collection procedure and specification empirical model applied aredetailed; in section 5, the main results are presented and discussed. Finally, the paper concludes with some policy repercussions in section 6.

Review of Literature

Available literature has identified different aspects of the processes of the expansion of RNFE and one strand of literature identifies the virtual linkage between agriculture and the expansion of RNFE (Panda 2017; Gautam & Andersena, 2016; Jatav & Sen 2013; Lanjouwb & Lanjouwa, 2001; Lanjouw & Shariff, 2002; Mellor 1976). For instance, Mellor (1976) documented during the 1970s how agriculture and non-agriculture linkage stimulates the growth of both the sectors through various linkages such as production, consumption and potential linkages in the context of India. However,many empirical studies evidenced the absence or even inverse farm non-farm linkage (e.g., Sardana, et al., 1995; Chandrasekhar, 1993).

Another strand of literature contends that RNFS can emerge on its own in the presence of adequate rural infrastructure without necessarily the support of a vibrant farm sector (Islam, 1987, Lanjouw and Shariff, 2002). Urbanisation process linkage with villages also influences the RNFE by providing location and productive support to rural employment beyond agriculture (Eapen, 2001). A number of studies have proved the validity of Vaidyanthan's residual sector hypothesis of absorbing those rural workers who are pushed out of agriculture (Panda, 2017; Jatav and Sen 2013; Chadha & Sahu, 2002).

A number of studies recently identified underlying forces of RNFE diversification at the macro and household levels in different parts of India and developing world. For example, Panda (2017) found household income from agriculture, access to credit and distance from nearest urban centre to be important developmental factors and poverty of households to be emerging factors pushing rural households to opt for RNFE diversification in the NER of India including Assam.

Mada and Menza (2015)in rural Ethiopia of Kamba district revealed that saving and family size were positively related to nonfarm(off-farm) participation and increase in farm size, increase in animal wealth of the household and increase in family income decreased the probability of off-farm participation in rural areas of study district.

A study by Ghimire, et al. (2014) in Central Nepal revealed that household characteristics such as age, gender and education of the household head, and family size significantly influenced the rural household decision to participate in nonfarm work. Furthermore, regional differences played an important role in participation decisions among farm and nonfarm income diversification among farm households than their counterpart. In addition, the study found inverse association of income diversification strategy with farm size, distance to road and market impeding the opportunities for nonfarm work employment in the area.

Shehu and Abubaka (2015) in rural Nigeria revealed that results that participation decision of the household in non-farm enterprise was significantly determined by head's education, household size, community level

infrastructures and its distance to market. Jilito, et al. (2018) in Agarfa district in Ethiopia found that education level, family size, remittance, agricultural inputs, irrigation and distance from road were the responsible variables for rural household's selection of livelihood diversification strategies in that area.

In Northcentral EthiopiaAsfaw, et al. (2017) revealed that access to adequate capital, poor infrastructure and lack of training were the major constraints which hindered farmers from undertaking non-farm activities. The results of empirical model revealed that better-off households, households led by literate and younger heads, having access to microfinance, having extension services, and having social responsibilities determined the propensity of smallholder farmers' participation and engagement in non-farm economic activities.

InDibrugarh district of Assam, Mech, et al. (2017) using logistic regresion model found age, education level, household size, size of operational landholding, and ratio of non-farm income to farm income to be significant determinants of rural non-farm employment in rural areas.

Based on the brief literature review above, we find that much less studies have been devoted to the determinants affecting RNFE diversification at the household level in Assam. For this, a household level study is undertaken in Baksa district where no particular and systematic study conducted so far with the intend to explore the rural employment situation and identify the significant factors influencing rural households' choices of employment diversification in non-farm sector in lieu of agriculture as a principal occupational strategy. Next section 3 provides the profile of the Baksa district.

Baksa District: A Brief Profile of the Study Area

The study area, Baksa district is located in North-Western part of Assam in North-East Region of India. The district lies between 27^0 to 19^0 North latitude and 90^0 to12^0 East longitudes. The district is located in North-Western part of Assam, with 105 Km. away the district headquarter Mushalpur from the capital of the state. With roadways the only mode of transportation, the district is bordered to Bhutanese Kingdom that benefited additionally in terms of informal nonfarm economic opportunities to those living in nearly areas. The total population sheltered by the district is about 0.95 million out of which majority, i.e., 0.94 million population live in rural areas as compared to only 0.01 million urban popullation. As per 2011 Census, average literacy rate is about 70.53 percent, with male literacy rate of 78.55 percent at higher level as compared to female literacy rate of 62.23 percent. With prevalence of village economy, operating only a few small-scale enterprises and industries, less financial institutions and poor social infrastructures like education and health etc. indicate a relatively poor conditions of the district (Statistical Handbook, Government of Assam, 2014). People are predominantly dependent on traditional agriculture and allied activitiesas their livelihoodpractice, yet a few people engage in different occupations such as government jobs like teachers, shopkeepers, etc. Farmers are generally involved insmall and fragmented land-holdings with low use of modern agricultural inputs, HYV seedsand technology to cultivation of paddy, sugarcane, oilseeds, and pulses and often face difficultiesfrequent occurrence of floods threatening the livelihood sustainability. As a consequence, employment diversification into non-farm activities beyond agriculture has been underway in the district on the one hand and the development of rural infrastructures, access to microfinance, educational progress and urbanisation process strengthenednonfarmrural economy on the other for improving the quality of life and relieving poverty.

Research Methodology

Sampling Techniques: The studyselect sample households through primary survey following a multi-stage purposive random sampling procedure. In the first stage, Baksa district was selected purposively Secondly, out of eight development blocks in the district, two blocks, namely Jalah development Block and Baska development blocks based on distance from district's town. In the third stage, from each category of block, 5 villages were selected through simple random sampling from each Block to include a total of 10 villages. In the final stage, a total sample of 200 households spread over 10 selected villages were drawn using systematic random sampling proportionate to household head techniques and conducted a primary sample survey between October and January Months of 2019.

Information regarding socio-economic and demographic profiles such as age, education level, marital status, household type, family type, information on land, livelihood diversification in non-farm activities, principal and subsidiary occupations, workplace of occupation, employment status, income from farm and non-farm activities and etc. are collected from the household head or any other responsible member in the absence of head during survey period. Primary data were collected with the aid of structured interview schedule visiting door to door through face-to-face interview method. Statistical tools such as simple average, percentage and diagram are used to summarise the survey results.

To analyse the nature and composition of rural employment diversification as a primary livelihood strategy from among the multiple strategiespursued by the sample households, we followed the definitions ofNSSO 68thRound (2011-12).NSSO (2011–2012) defines principal status as 'the activity status where a person engage relatively more time during the 365 days priorto the date of survey' and subsidiary status as 'activity statuswhere a person engage for a shorter time but not less than 30 days, during the reference year'(NSSO 68thRound).Followingindustrial classification, principal occupations aredivided into eight industrial categories (see, Table-3).Then, the composition of employment status is elicited bydividingemployment type into five categories,viz., self-employed in both farm and non-farm activities, regular/salaried employment and casually employed in agriculture activities and non-agriculture activities. Self-employed, regular/salaried employed and casually employed in Table-4. As per NSSO (2011-12)self-employed are those persons who operate their own farm or non-farm enterprises or are engagedindependently in a profession or trade owner on account or with one or a few partners(NSSO, 2011-12). Casual workers are persons who are casually engaged in others' farm or non-farm enterprises (bothhousehold and non-household) and, in return, collects wages as per the terms of the daily orperiodic labour contract (NSSO, 2011-12). Regular wage/salaried employees are who work in others' farm or non-farm enterprises (bothhousehold and non-household) and, in return, collect salary or wages on regular basis, and not on the basis of periodic renewal of work contract or daily basis.

Specification of Logit Model

The dependent variable, employment participation in nonfarm activity as primary occupation, is a dichotomous variable in our study, therefore, either a probit or logit model can be applied to predict the likelihood of participation based on selected covariates (Gujrati, 2006). A binary logistic model is applied on the dependent variable of employment diversification in RNFS to extract out of the independent variables included in the model the dominant forces explaining that diversification and participation by a sample household in rural non-farm activity. The dependent dummy variable takes the value of 1, if the household heads were engaged in any nonfarm economic activity as principal occupation strategy and otherwise takes the value 0 if engaged in agriculture and allied activities. The independent variables may constitute quantitative, categorical or a mixture of the both variables. The operational definitions of the selected variable and hypothesised relationships are detailed in Table-1.

The model predicts the likelihood of happening (probability of participating in RNFE) of an event Y, [P(Y=1)] from a set of explanatory variables X_1, X_2, X_3… ……X_k.

The logit model is specified as:

$$\boldsymbol{P = P\left[\frac{1}{X_1, X_2, X_3, \ldots\ldots\ldots\ldots\ldots X_K}\right] = \frac{e^x}{1 - e^x} = \frac{\exp(Z)}{1 + \exp(Z)}}$$

Where, Z consists of a linear function of a set of explanatory variables, X_1, X_2, X_3,…… X_k. It follows the following equation:

$$\mathbf{Z = \alpha + \beta_1 X_1 + \beta_2 X_2 + \cdots\cdots\cdots\cdots\cdots\cdots\cdots + \beta_K X_K}$$

and, $\boldsymbol{\alpha, \beta_1, \beta_2 \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \beta_K}$ are symbolized as regression coefficients.

The Logit of P is derived by taking natural logarithm as follows:

$$\boldsymbol{log\left[\frac{P}{1 - P}\right] = Z}$$

The quantity $\left[\frac{P}{1-P}\right]$is the odds and therefore, $\boldsymbol{log\left[\frac{P}{1-P}\right]}$, the coefficients $\boldsymbol{\alpha, \beta_1, \beta_2 \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \beta_K}$are similar toregression coefficients which are called Logit regression coefficients.Odds ratios are computed by using these coefficients which give the ratio of two odds of an event happening or likelihood (Y=1). The odds ratio for binary independent variable can be interpreted as the increased odds of a positive outcome on the dependent variable for the affirmative category (X=1) over the negative one (X=0). An odds ratio more than one indicates a positive association between the independent and dependent variables and an odds ratio less than one indicates a negative association between the two. The explanatory variables, both development (pull) and distress (push) factors identified in the literature are selected to include in the logit model.

Table 1: **Definition of the Variables included in Binary Logistic Model**

Variables	Nature	Value/Measurement	Expected Sign
Dependent variable	Dummy	1= Engagement in primary occupation (in nonfarm activity) and 0 otherwise	
Independent Variables			
Age (AGE)	Continuous	Age of the households in years	-Ve for old
Education level (EDUH)	Continuous	Number of years completed formal schooling	+Ve for high Years
Family size (FMSIZ)	Continuous	Number of persons	-Ve for large size
Size of Operational landholdings (LOWN)	Continuous	The total farm size in hectares	-ve for large size
Household Income from-agriculture (IAH)	Continuous	Household Annual Income from Agriculture (proxy for agricultural growth)	+Ve
Access to formal credit (CRA)	Dummy	1 for Yes and 0= otherwise	+Ve for yes
Urban Proximity (URPX)	Continuous	Distance(in kilometer) to urban centre or market place	-Ve for large distance
Household Poverty(POV)	Dummy	1 for household living below the poverty line (BPL) and 0=otherwise/above poverty line (APL) household	+Ve for Poor

Results and Discussion

General Profile of Sample Households

The general socio-economic and demographic characteristics of the selected sample households revealed that the mean age of the sample household head is around 47 years, with maximum 65 years and minimum 24 years.The family size ranges ranging from 2 to 11 members in a household withaverage family size round 5 members. The type of family indicates that 54.5 percent of the family are nuclear which is little above the joint family type, indicating a slow move towards nuclear type family. The range of age of the household heads varies from a minimum of 24 years to a maximum 65 years but majority of the sample surveyed household heads were middle aged with mean age of about 47 years. In regard to operational (agricultural) landholdings, majority of the households owned small and marginal landholdings and on average about five bighas ranging from 0-19 bighas per family reveal less income from agricultural activity. Education of the heads of households showed that it ranges from illiterate (no formal education) to post graduate level with mean education completed about 9 years. The marital status of the households revealed that majority, i.e., 78.5 percent of the heads were married, 15 percent were unmarried and only about 6 percent were either divorcee or widow (Table 2).

Table 2: **Demographic and Socio-economic Profile of the Respondents**

Variable	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
Age of Household Heads (years)	46.93	8.65	24	65
Family Size	5.04	1.49	2	11
Operational Landholdings (bigha*)	4.89	4.58	NIL	19
Education of Heads (years)	8.88	3.82	0 (Illiterate)	17 (P.G.)
Marital Status	**Count**		**Percentage**	
Married	157		78.5	
Unmarried	30		15	
Widow/Divorce	13		6.5	
Family Type	**Count**		**Percentage**	
Nuclear	109		54.5	
Joint	91		45.5	
Total	**200**		**100**	

Source: Field survey, 2018

In Assam, 1 bigha* is equal to **0.3306** acres.

Employment Status of Sample Households

Primary occupation from among the multiple strategiespursued by the rural households was identified on the basis of maximum labour time spent to perform economic activities regardless of their earning from the activity. Thus, other occupations spendingrelatively less labour timewere considered as subsidiary activity. Table 3 summarises the survey resits of employment status of sample households by primary occupationas per industrial classification in India under eight categories.

A perusal on the table 3 reveals that out of total sample household, about 32.5 percent are employed in agriculture and allied sector as a principal occupation which indicates the 67.5 percent of the sample population are engaged in nonfarm activities. This shows that employment in non-farm sector assumes

importance for rural households, particularly in the study area. The disaggregation of non-farm sector reveals that out of the total employment, about 18.5 percent are employed in retail trade, hotel and restaurants, followed by community, social and personal services (13.5 per cent) and construction and repairing services (13.0 percent). These diversifications in non-farm activitiesbasically represent the increasing consumption status of the rural households, but low percentage of employment (11.0 percent) in manufacturing and processing sector reflects weak productive capacity of the rural economy.Transport,storage and communication employed about 5.5 percent, followed by 5 percent employment in financial and insurance services, etc. and the least employment share was in gas and electricity services (only one percent).

Table 3**: Classification of Sample Households by Principal Activity**

Sector	**Count**	**Percentage**
1. Agriculture and Allied Activity	65	32.5
Non-farm Sector		
1. Retail Trade, Hotel & Restaurants	37	18.5
2. Community, Social & Personal Services	27	13.5
3. Construction & Repairing	26	13.0
4. Manufacturing & Processing	22	11.0
5. Financial & Insurance, etc.	11	5.5
6. Transport, Storage & Communication	10	5.0
7. Gas, Electricity Services, etc.	2	1.0
All Occupations	**200**	**100.0**

Source: Field Survey

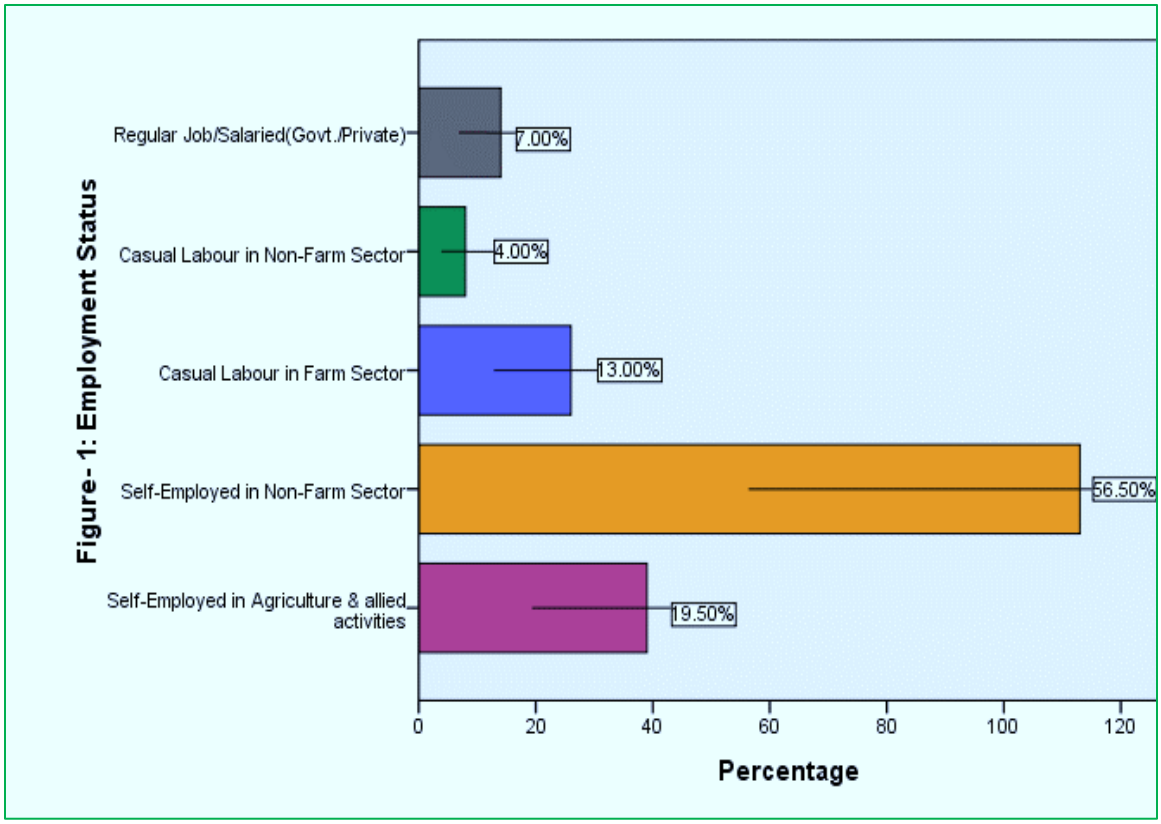
Nature and Composition of RNFE

The level of employment strategyof sample households areanalysed by categorising into five groups, viz., self-employment in farm and non-farm activities, regular/salaried employment and casual employment in agriculture activities and non-agriculture activities. A perusal of the Table 4 and Figure-1 reveals that the majority of the households, i.e., about76 percent people are self-employed including both the farm and nonfarm sector, but higher percentage of households (i.e.,56.5 percent) are in RNFS as compared to self-employed in agriculture (19.5 percent). A higher percentage of casual workers, i.e., about 13.0 percent are employed in agriculture and allied activities than employment in non-farm activities (4.0 percent).Only 7 percent households are engaged in any type (government or private job) of regular wage/salaried employees in the study area (Table 4).

Table 4**: Employment status of Sample Households**

Employment status	**Count**	**Percentage**
Self-Employed in agriculture and allied activities	39	19.5
Self-Employed on Non-farm sector	113	56.5
Casual labour in farm sector	26	13.0
Casual labour in Non-farm sector	8	4.0
Regular job/Salaried (Govt./Private)	14	7.0
Total	200	100.0

Source: Field Survey



Income Level of Non-Farm Vs. Farm Households

The survey results reveal that greater number of households engaged in non-farm activitiesearns higher income than their counterpart of farm families. Further, casual workers/households as wage labourers earned lower income than those of regular employee/self-employed households. A perusal of the Table 5 reveals that out of the total non-farm households, the highest percentage, i.e., 41.5 per cent have annual income level in the group of '₹50000-100000/-' as compared to 51.4 percent of farm familiesinlower category '₹25000-50000/-'. About 8.6 percent of the farm households belong to annual income bracket of 'Below ₹25000/-' as against only 1.5 percent of the nonfarm households. The proportion of households (i.e., 26.9 percent)of the non-farm groupin the income bracket of '₹100000-200000/-'is also higher than farm group which is only 7 percent. Moreover, about 14 percent nonfarm families belong to highest bracket of 'Above ₹200000/-', while none from farm families.

Table 5**: Distribution of Annual Income of Sample Households based on Principal Occupation Status**

Income Category (₹.)	**Farm household**		**Non-farm Household**	
	Count	**Percentage**	**Count**	**Percentage**
Below ₹25000	6	8.6	2	1.5
₹25000-50000/-	36	51.4	21	16.2
₹50000-100000/-	23	32.9	54	41.5
₹100000-200000/-	5	7.1	35	26.9
Above₹200000/-	0	0	18	13.8
Total	**70**	**100.0**	**130**	**100.0**

Source: Field Survey

Econometric Results: Determinants of Participation in Non-farm Activities

A binary logistic regression model was employed to examine the effect of hypothesised independentvariables (described in Table 1) on household'sparticipation decisionsin nonfarm economic activity. In the logit model, household poverty (POV) is an explanatory dummy variable taking value '1' if a household belong to BPL category and '0' for a household living as APL. BPL households from the sample households are identified according to the Government of Assam guidelines. Thus, a rural householdhaving a gross income of Rs.30000 or less annually have been classified as BPL family. Poverty of household and size of operational landholdings owned (LOWN) are included to put forward whether households diversify into non-farm employment because of low income and distress condition in the area under investigation.

The results of the empirical model show that the model fits the data well. Both the Cox & Snell and Nagelkerke R-square values are quite high at 0.62 and 0.86 percent respectively. The results indicate that among eight explanatory variables used, five variables, namely, household income from agriculture, land ownership, age and education of household head,and household povertysignificantly affect the participation into RNFE.

Table 6: **Binary Logistic Regression Results on Determinants of participation in RNFS**

	B	**S.E.**	**Wald**	**Exp(B)**
AGE	-.223*	.066	11.369	.800
LOWN	-.263**	.103	6.542	.768
FMSIZ	.582***	.337	2.990	1.790
EDUH	.384*	.121	10.117	1.468
URPX	-.195	.133	2.142	.823
IAH	.000**	.000	6.112	1.000
POV(1)	2.892*	1.057	7.493	18.029
CRA(1)	-1.223	.986	1.540	.294
Constant	9.317*	3.576	6.789	1.112E4
-2 Log liklihood =58.583 Cox & Snell R Square =.617 Nagelkerke R Square =.864 N =200				

Source: Researcher's own calculation based on primary data;

* Significance level at 1 per cent; ** Significance level at 5 per cent;

*** Significance level at 10 per cent.

As is evident from Table 6, age of the household head negatively and significantly affects the households'participation decision in nonfarm activity at less than 1 percent level of significance.Thus,the exponentialof the coefficientindicates that other factors remaining constant,increase in the age by one year, decreases the odds of participation in non-farm activities as primaryoccupation by about 20 per cent.

The coefficient of the size of operational landhodings (LOWN) has a negative and significant impacton RNFE. This indicates that an increase in land possession by one bigha (0.3306 acre) diminishes the odds of employmentin non-farm activity by about 23 percent. Conversely, this means dispossession of farm land pushes ruralhouseholds to opt for nonfarm service as principal occupation.

Family size (FMSIZ) positively and significantlyinfluenceshousehold's choice to be engaged in non-farm activity as aprincipal employment.The odds of being involved in nonfarmprincipal occupation increasesby about 1.8 times with the increase inhousehold size by one member.

Education qualification (EDUH) positively and significantly effectsthe households' choice of principal occupation in non-farm activity.The exponential of thecoefficient foreducation indicatesthat for one year

extra schooling increases the odds of primary employment in the RNFS by about 1.5 times. This result is similar with study by Mech, et al. (2017) in Assam, particularly in Dibrugarh district.

Income from agriculture (proxy of agricultural growth)has a significant positive impact on the growth of RNFE.With one unit increaseagricultural growth, the oddsof being involved in non-farm activities asprimary occupation strategy increases by multiple of one more time. This indicates positive influence on the growth of RNFE primarily through consumption linkages as is evident from in Table 3 which shows processing and manufacturing activityas performed by 11 percent of householdsonly.The coefficients of access to credit (CRA) and urban proximity (URPX) are found to be negative but notstatistically significant and hence cannot explain the growth of RNFE orchoices of participation of households in nonfarm area.

Poverty status (POV) dummy of the household, as hypothesised,was positivelyand significantly associated with households'selection of non-farm activities as principal occupation at less thanone percent significance level. The exponential of thecoefficient for poverty dummyindicates that for one unit increase in poverty level, the odds ofparticipation increases by multiple of eighteen times in the RNFS as a primaryoccupation strategy. This result indicates that incidence of poverty among rural households hasemerged as one of the most important distress factorspushing households to opt for non-farm activitiesas a principal strategy of survival.

The above findings revealthat the growth of RNFE as principal livelihood diversification strategy is induced by both development as well as distress factors in the area understudy. The finding is consistent with many previous studies such as by Panda (2017) in NER of India but contrasted with Roy and Dey (2010) in Assam who did not findit to be a distress phenomenonpushing towards RNFS diversification.

Conclusion and Policy Implications

This study was conducted in Baksa district, located in lower part of Assam to understand the actual employment situation, particularly nonfarm employment diversification in rural areas. The results of primary survey, conducted in the month of October to January, 2019, revealed that a larger number of sample households were engaged in non-farm activities as self-employed when compared to agricultural sector and farm households in the study period.Therefore, conclusion can be drawn that the RNFE as a primary source of livelihood strategy has enabled large number of rural population reduce their poverty incidence and improve living standard.The results of econometric model reveal that agricultural growth, age and education of the household head and family size were significant development factorswhile land ownership and poverty of households were distress factors explaining nonfarm activity participation. Hence, it can be concluded that the selection of non-farm activity as primary occupation by rural households was driven not only by development factors but primarily because of poverty.

These findings have a number of important policy implications.

- Since poor households engage in petty nonfarm activitiesmainly because of dispossession of land and poverty situation, specific attention should be paid for the development of nonfarm sector to multiple enhanced and productive employment opportunities in this sector through investments and wage increasefor meaningful poverty reduction.
- The survey indicated that agricultural income was lowerthan nonfarm income. So, agricultural production and productivity need to be improved through crop diversification, integrated faming and marketing supports for resultant produce.
- The empirical results revealed that agricultural growth has a significant positive impact on the growth of RNFE, but production diversification linkage seemed to be weak. Further, rural poverty pushes significantly to opt for non-farm activitiesas a survival strategy. Therefore,agricultural policies and rural development strategies need to stretch attention to strengthen the inter-sectoral production linkages to make the process of diversification of RNFE efficient and productive, thereby enhancing the impact on living standard and poverty reduction of the masses.

- Finally, providing practical support, enhancing education level and skills through training and development programmes, and connecting rural people with Banks and MFIs are necessary to create an entrepreneurial culture and boost rural nonfarm sources for a sustained long period of time.

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