



Rural Non-Agricultural Employment in West Bengal: a Village Level Analysis

KEYWORDS

Rural Area, Non-farm activities Non-farm employment / Non-agricultural employment
Drought Prone Area

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ABSTRACT In India, as in most parts of the developing world, labour absorption in agriculture and in the urban industrial and service sectors has not been fast enough to absorb the growing disguised labour force. Consequently, despite rural-urban migration the problems of poverty, unemployment and underemployment have persisted in both rural and urban areas. Under these circumstances, diversification of the rural economy is seen as an important element of the development strategy.

As growth rate of agriculture sector is very poor in Drought Prone region of West Bengal, the non-farm/non-agricultural sector may provide better scope for employment particularly in the drought prone region of rural area.

A certain shift in occupational structure of rural workforce (both male and female) is clearly noticed in the Drought Prone (DP) districts in favour of non-agricultural employment. Three drought prone districts (Midnapore, Bankura and Purulia) witnessed positive growth of rural non-farm workers (RNFNW) /non-agricultural workers (RNAW) during 1971 to 2011. It is also fairly established that West Bengal as a whole and the DP blocks of the state witnessed substantial variations in rural non-agricultural employment (RNAE) across districts and blocks. Therefore, some questions that arise are: What factors explain the growth as well as variation in RNAE across the sample DP villages? Which hypothesis or hypotheses is / are important to explain the same? Which factors are dominant for the growth of non-agriculture workers (RNAW) and its variation across the DP villages? The present endeavour seeks to address these questions with reference to the sample 32 Drought Prone villages of West Bengal.

Introduction:

It can be said that there are two broad ingredients that spurt non-agricultural employment in rural areas. These two factors are 'Pull' and 'Push' factors. Agricultural prosperity, rural infrastructure try to pull the labour force away from agriculture towards non-farm activities while the distress factors tend to push the rural workforce to go in search of low-paid / residue jobs.

Employment growth and expansion in the farm sector is dependent on and also determines the employment and growth in the non-farm sector. It is thus plausible to highlight two dimensions of growth process of the non-farm or off-farm activities in rural areas. These processes may emanate from either farm or outside it. Agricultural transformation depends upon green revolution technologies including increased agricultural productivity. The growth of agricultural production and productivity raises the income of the farmer which, in turn, may establish multiple linkages of agriculture with the rural non-farm sector including both consumption and production linkages. As per capita farm income rises, the demand for local services, housing and durables and other non-food items and also the pattern of demand for goods and services is altered. Agricultural wages are also expected to rise with the increase in agricultural productivity so that agricultural labourers would also have an enlarged demand for food and non-food items. In the mid-seventies Raj (1976) put forward the hypothesis that "conditions are favourable for the more extensive and rapid growth of small-scale industries in only some regions of India, i.e., those which have recorded moderate to high rates of growth of agricultural output without being subject to serious fluctuations". The performance of the agricultural sector determines the consumer demand in a country like India. The purchasing capacity of the rural community left for buying industrial products fluctuates heavily with the fluctuation of income of rural mass.

Papola (1987) found that the performance of rural industrial sector in different states was broadly related with the levels of agricultural productivity and more closely with the growth rate of agricultural output.

Production linkages, both backward and forward, would also emanate from the agricultural sector. Backward linkage is in the form of demand from farmer for inputs produced in non-farm sector enterprises (both trade and manufacturing supply inputs required by the farmer). The type and magnitude of such backward linkages depend on agricultural technology, size of holding, type of crop and whether the cropped area irrigated or rain-fed. The magnitude of these linkages in Asia was evaluated by Johnston and Kilby (1975). On the other hand, forward linkages necessitate processing of agricultural produces so that agro-processing industries, e.g. rice milling, fruit processing etc. would develop. The cropping pattern (for example, cultivation of commercial crops) and the extent of commercialisation determine the nature and magnitude of these linkages. Those apart, growth in agricultural production may result in surplus in the hands of rural masses which may be ploughed back in non-farm enterprises leading to the growth of non-farm employment. The growth of non-farm sector would, in turn, stimulate the growth of agricultural productivity through ploughing back into agriculture and thus establishes a kind of inter-linkage between the two sectors.

Other processes such as urbanisation and growth of rural infrastructure which emanate outside agriculture can lead to the growth of non-farm activities in the rural part of a region (Unni 1991). The growth of semi-urban centres is related to the extent of transportation facilities available between the urban centre and the rural hinterlands of the

adjacent areas. If all the areas were properly connected with the urban centre, the non-farm sector in the rural areas would consistently expand. The extent and diffusion of transport facilitates growth of rural non-farm employment via different processes. Another factor outside the agriculture that matters the growth of non-farm activities is human capital including education levels, health and social networks. In particular, education is one of the more robust stylized facts affecting the access to rural non-farm activities. A number of recent studies (Islam, 1997; Lanjouw and Shariff, 1999; Viverberg, 1995) have illustrated that level of education is a very important factor determining the access to rural non-farm employment.

The third dimensions to the growth of non-farm activity arise out of 'distress factors' which have come to dominate the discussion widely in the literature regarding the growth of these sectors. The third group includes poverty, unemployment, underemployment etc. While labour is not fully absorbed in the agricultural sector the non-farm sector acts as a sponge for the excess labour. Such a spill off of excess labour from farm to the non-farm sector can be termed as 'distress diversification'. This diversification has been put forward as the residual sector hypothesis (Vaidyanathan, 1986).

From the above discussion it can be said that there are two broad ingredients that spurt non-farm employment in rural areas. These two factors are 'Pull' and 'Push' factors. Agricultural prosperity, urbanisation, rural infrastructure try to pull the labour force away from agriculture towards non-farm activities while the distress factors tend to push the rural workforce to go in search of low-paid / residue jobs.

Objectives of the Study:

The objective is to examine the determinants of rural non-agricultural employment (RNAE) at village level.

Hypotheses:

Agricultural prosperity and distress variables explain significantly the level of rural non-agricultural employment across sample drought prone villages.

Methodology:

The study is based on secondary data collected from Census 2001. Eight villages are chosen from the Drought Prone districts of West Bengal. Simple Statistical techniques like Mean and coefficient of variation (CV) have been used and to examine the relationship among variables both correlation and regression analysis are used.

Framework of Testable Hypotheses:

The factors that affect the variation in RNAE across the sample villages of Drought prone blocks of West Bengal are grouped into two broad categories, namely, i) agricultural prosperity, and ii) distress variables.

i) Agricultural Prosperity:

Agricultural prosperity in a region is specified by three indicators: a) Foodgrain productivity or Yield rate (FGP), b) Percentage share of non-foodgrain area to total cropped area (NFGA) and c) Gross cropped area per rural population (GCA).

A high level of agricultural productivity (indicating high income of the farmer) would result increased demand for goods and services produced in near-by villages and towns. Another factor facilitating non-farm employment may be the predominance of non-food crops in the crop-

ping pattern of a region. This can have a direct impact on non-farm activity by supplying raw materials for processing and other industrial activities. Such a cropping pattern may also imply more commercialized agriculture in the region, which can have an indirect impact on non-farm activity through the inter-linkages between output, credit and labour markets. The specification of cropping pattern implies commercialization of agriculture, i.e., the percentage share of non-foodgrain area to gross cropped area (NFGA).

Land is an important asset in rural area. Availability of cultivable land engages people in the agricultural activity and does not attract to the low paid and low earned non-farm activity. Therefore, higher the ratio of gross cropped area per rural population (GCA) lower would be the share of RNFV.

ii) Distress Factors:

Two distress factors used to explain distress diversification of rural workers from farm sector to non-farm sector are: a) dependency ratio (DR) defined as ratio of non-workers to total population and b) percentage of marginal farmer households to total households (MFHTH).

Results:

Results from village level analysis of data from Census 2001 conform to the block level results concerning percentage of rural non-agricultural workers (PRNAW) in relation to agricultural prosperity and distress factors. Correlation matrix between the relevant variables at the village level indicates that PRNAW is negatively and significantly related to GCA while correlation coefficient between PRNAW and NFGA, MFHTH and DR is positive and significant (Table 1)

Table 1 Correlation Matrix at Village Level, 2001

	PRNAW	GCA	NFGA	MFHTH	DR
PRNAW	1.00				
GCA	-.38*	1.00			
NFGA	.58**	-.05	1.00		
MFHTH	.59**	-.12	.41*	1.00	
DR	.40*	-.66*	-.04	-.01	1.00

* Indicates significant at 5 percent level and ** significant at 1 percent level

Variation in GCA and that in NFGA as agricultural prosperity factors explain significantly the variation in PRNAW to the extent of 42 per cent. The respective t-values are 2.56 and 4.09 per cent. The whole model is significant at 1 per cent level, F value being 12.23. On the other hand, variations in distress factors like DR and MFHTH explain variation in PRNAW to the extent of 52 per cent. The whole model is significant at 1 per cent level, F value being 17.68 (Table 2).

Table 2 Determinants of RNFE in Sample Villages

PRNAW as Dependent Variable					
Independent Variables	Co-efficient	t-values	R ²	Adjusted R ²	F
I PRNAW and Agricultural Prosperity					
Intercept	41.20	5.36***	.46	.42	12.23***
GCA	-.95.55	2.56**			
NFGA	5.04	4.09***			
II PRNAW and Distress Factors					
Intercept	-2.54	-.39	.55	.52	17.68***
DR	.47	3.56***			
MFHTH	.66	4.20***			

** Significant at 5 per cent level and *** 1 per cent level.

Summary Results from Regression Equation:**Independent Variables PRNAW as Dependent Variable****I Agricultural Prosperity:**

- i) Gross cropped area (GCA) : Negative & Significant
- ii) Non-food grain area to total area (NFGA) : Positive & Significant

II Distress Factors:

- i) Dependency Ratio (DR) : Positive & Significant
- ii) Proportion of Marginal Households to Total Households (MFHTH) : Positive & Significant

A Summing Up:

Factors that affect rural non-farm employment (RNFE) / rural non-agricultural employment (RNAE) in the DP villages of West Bengal are classified into two broad groups, namely agricultural prosperity and distress variables.

Gross cropped area per rural population (GCA) and proportion of non-foodgrains area to gross cropped area (NFGA) represent agricultural prosperity and proportion of marginal farmer households to total households (MFHTH) and proportion of non-workers to total population (DR) indicate distress variables. GCA is negatively and significantly related to percentage of rural non-agricultural workers (PRNAW) while NFGA is directly and significantly related to PRNAW in the sample DP villages. There is also positive and significant relationship between PRNAW and distress variables.