

Impact of Agricultural Development on Size, Composition and Growth of Agricultural Labor in India

Judicious balance in the availability and use of various farm resources is one of the important dimensions in augmenting the efficiency of a farm production unit. Undersupply of a given resource would act as a constraint on maximizing returns from production activity, and its oversupply might push its use to a point where marginal returns to this factor would be low. Farm labor in Indian agriculture exhibits distinct characteristics of oversupply and undersupply, depending on the intensity of seasonality in its requirements (Hebbar and Bisaliah, 1987). According to Census 2011, out of total agricultural workers i.e., 263 million, the total agricultural labour population in India is 144.3 million and the cultivator's population is 118.7 million. The total population of agricultural labour has increased in 2011 as compared to 2001 Census (Table 1). However, according to National Sample Survey, an additional 13 million left agriculture in two years, between 2009-10 and 2011-12, a historic shift in employment away from agriculture (Thomas, 2014).

Labour absorption is the total labour that is used in the process of production. The term's absorption and utilization, which can be interchangeably used, refer to the labour employed rather than labour required in agriculture. The actual labour employed can be more or less than the labour required. Labour required is the amount of labour which has to be put in the production process to get the optimum output (Reddy V R, 1995).

The major factors which affect the labour absorption in agriculture are irrigation, changes in net sown area, cropping intensity or changes in gross cropped area, technology involving

(seeds, chemicals, fertilizers and mechanization), soil climatic conditions, and institutional factors such as tenancy and finally wage rate itself (Reddy and Venkatanarayana, 2013).

Table 1: Population and Agricultural Workers (India)

(in Millions)

	Total Population	Average Annual Exponential Growth (%)	Rural Population	Agricultural Workers		
				Cultivators	Agricultural Labour	Total
1961	439.2	1.96	360.3 (82.0)	99.6 (76.0)	31.5 (24.0)	131.1
1971	548.2	2.20	439.0 (80.1)	78.2 (62.2)	47.5 (37.8)	125.7
1981	683.3	2.22	525.6 (76.9)	92.5 (62.5)	55.5 (37.5)	148.0
1991	846.4	2.16	630.6 (74.5)	110.7 (59.7)	74.6 (40.3)	185.3
2001	1028.7	1.97	742.6 (72.2)	127.3 (54.4)	106.8 (45.6)	234.1
2011*	1210.6	1.64	833.5 (68.8)	118.7 (45.1)	144.3 (54.9)	263.0

Note: 1. Figures within parentheses in column 4 are percentages to the total population.

2. Figures within parentheses in columns 5 and 6 are percentages to column 7.

* Provisional

Source: Registrar General of India.

The relationship between the various technology inputs and employment is a dynamic one and encompasses socio-economic as well as technical links between inputs and outputs. The so-called "green revolution" technology in India has been associated with the growth and development of market and non-market forces, which in turn influence the extent and nature of

labour use in agriculture. The spread of the new technology has led to an increased market dependence of the farmer for supply of inputs like seeds, chemical fertilizers, pesticides, herbicides, mechanized inputs and for the sale of output (cited by Basant R, 1987 from Dasgupta, 1977).

The specific objective of this study is to examine the growth of agricultural production, productivity and size, composition and growth of employment in different regions, categorized on the basis of level of agricultural development in India. It was hypothesized that the movement of labor away from agriculture is largely confined to least developed regions of India.

Data from various reports of Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India, various rounds of National Sample Survey and Census of India were collected for the data analysis section. Percentage distribution and growth rates were used. It was found that the less developed state like Rajasthan, Bihar, Jharkhand etc, the labor is moving away from agriculture and is migrating to highly developed states like Punjab, Maharashtra etc specially male agricultural labor while females are bearing the responsibility of taking care of domestic as well as farm operations in the field.

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