

A Study on Occupational Mobility of Farmers of Ariyalur District of Tamil Nadu and Measures to Lessen this Iniquity

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ABSTRACT: The occupation can be divided into three types viz., Primary, Secondary and Tertiary occupation. As India is concern agriculture is being considered as primary occupation, industries as secondary and service sectors as tertiary occupation. Over 200 million Indian farmers and farm workers have been the backbone of India's Agriculture World Development Indicators, 2011 revealed that highest per capita income is inversely correlated with the active population engaged in agriculture. Reports of National Sample Survey Organization reveals that there was a sizable reduction in workforce engaged in the year 1972-763(74%) to 2009-10 (53%) in agricultural sector in India. It implies that occupational shift is taking place from agricultural to non-agricultural sector. A study conducted to analyse the factors responsible for occupational shift from agriculture to non-agriculture sector involving 180 respondents from all the six blocks of Ariyalur district of Tamil Nadu reveals that eleven factors acted as the driving force to drive away the farmers to other occupation. The factors viz., low income from agriculture, struggles in marketing of agricultural commodities. Lack of water resources and farmers' willing to get higher social status occupied the first, second, third and fourth rank with the mean score of 1.00, 0.75, 0.73 and 0.64 and are responsible for occupational shift from agriculture to non-agricultural activities. The simple correlation studies also implies the poor soil fertility (0.702), vagaries of monsoon (0.716), non-availability of inputs in time (0.677) and small land holding (0.819) are positively correlated with low and unstable income from agriculture that causes lack of interest among the farmers and looking for some other employment rather agriculture. Appropriate measures like backstopping of technologies in the field of soil and water resource management, Integrated farming system approach, reclamation of problem soils, GIS based soil mapping, invigorating extension system with ICT tools are also suggested to mitigate this issue and flourish Indian agriculture.

Keywords: Occupational shift, Agrarian community, per capita income, Natural resource, ICT based extension

I. INTRODUCTION

Rapid growth of agriculture is essential not only to achieve self reliance at national level but also for household food security and bring about equity in distribution of income and wealth resulting in rapid reduction in poverty levels. Agriculture, being a source of both livelihood and food security for a vast majority of our society, needs a higher priority to achieve inclusive growth. The widening population day by day has created a lot of pressure on agriculture by increasing the food demand, increased fragmentation of land holdings, decreased availability of cultivable land area and depleting ground water resources. Over 200 million India farmers and farm workers have been the backbone of India's agriculture.

Occupational Structure

The occupation has been divided into three types viz., primary, secondary and tertiary activities. Agriculture, Animal husbandry, fishery, forestry, etc. are collectively known as "Primary" activities. Manufacturing industries of both small and large scale are known as "Secondary" activities. Transport, communication, banking and finance and services are "Tertiary" activities. The occupational structure of a country refers to the distribution of division of its population according to different occupations. The structural shift in GDP share also has an impact on the employment pattern of distribution of workforce in India (Lalan Kumar Mahto, 2015).

Table 1. Distribution of labour force in selected countries

Country	Year	Income	% of		
			Agriculture	Industry	Services
USA	1960	2500	7	36	57
	2010	471053	1.6	16.7	81.2
UK	1960	1200	4	48	48
	2010	36343	1.2	19.1	78.9
Germany	1960	1220	1.4	48	38
	2010	40115	1.36	28.4	70
Japan	1960	420	33	30	37
	2010	42830	3.7	25.7	69.7
India	1960	70	74	18	15
	2010	1410	51.1	22.4	26.5

Source : World Development Indicators, 2011

Table 1 reveals that higher per capita income is inversely correlated with the population of active population engaged in agriculture. The advanced countries like the USA, the UK, Germany and Japan with a low proportion of active population dependent on agriculture reveal a higher per capita income while a developing country like India with a higher proportion of active population engaged in agriculture has very low per capita income (Sayira Banu, 2015).

Table 2. Distribution of workforce by sectors in India

Sector \ Year	Agriculture	Industry	Service	Unclassified	Total
1972-73	74.0	11.2	14.6	0.2	100
1983	68.1	13.9	18.2	0.4	100
1993-94	63.9	14.9	21.2	---	100
2009-10	53.2	21.5	25.4	---	100

Source: Various reports of National sample survey organization, Planning Commission, Eleventh Five Year Plan

Table 2 reveals very clearly that the work force engaged in agriculture has sharply declined from 74.0 percent during 1972-73 to 53.2 per cent during 2009-10. While the work force in industry and service sector increased from 11.2 per cent to 21.5 per cent and 14.6 to 25.4 percent respectively in the same period. Due to the lack o enough scope for acquiring livelihood in agriculture the occupational shift is common phenomenon all over the country. Ariyalur District located in the Central part of Tamil Nadu is also not exceptional to this fate.

Ariyalur District

Ariyalur District is considered as the backward district and agriculture is the major bread earning activity. The major crops being cultivated are paddy, Groundnut, Sugarcane, Cashew nut, Drumstick, Onion, Cotton and pulses. The net cultivated area is 1.02 lakhs ha. The water sources are borewells, open wells, canals and river water. The mean annual rainfall is 915 mm which is erratic and irregular hinders agricultural operation and affects yield. This District is well known for cement ore and it is called as Cement City. The Indian Council of Agricultural Research – Krishi Vigan Kendra hosted by Centre for Rural Education and Economic Development [CREED] is serving this district since 2009 by technology dissemination among the farmers. More often the extension staff can hear the phenomenon of leaving agriculture mostly by the youth farmers. The preliminary enquiries and discussions made with the villagers’ revealed the problem in agriculture and reasons for seeking employment in other sector rather than agriculture. Hence the present study has been carried out with the objectives of finding out the key factors responsible for occupational shift from agriculture to non agricultural occupations and to analyse the relationship between different factors and also to suggest suitable measures to minimize this evil.

II. RESEARCH METHODOLOGIES

The study was conducted in entire district of Ariyalur encompassing six blocks viz., Ariyalur, Thirumanur, Andimadam, Jayankondam, Sendurai and T.Palur. Three villages were randomly selected in each block and totally 180 respondents were selected by random sampling method at the rate of 10 farmer respondents per each village. The pre tested and structured questionnaire has been made to collect the data by personal interview method. The major data collected ate age of the respondents, educational status, years of experience in farming, land holding, cropping pattern, source of irrigation, source of inputs, annual family income from agriculture, income from other sources, nature and frequency of contact with the extension service providers, nature and extent of occupational mobility, etc. The factors responsible for occupational mobility

have been synthesized from the discussion made with the respondents and the secondary information from village panchayat leaders and village administrators. The factors responsible for change in occupation and the relationship among these factors alone are discussed in this paper. The statistical tools like mean score, ranking and correlation co-efficient (Jagannath *et al.*, 2016) were employed to analyse the data and interpretation made.

III. RESULTS AND DISCUSSION

Factors responsible for occupational shift from agriculture

The eleven key factors responsible for occupational shift from agriculture to non-agriculture professions, its mean score and rank is depicted in Table 3.

Table 3. Factors Responsible for occupational shift from agriculture to non- agricultural sector at Ariyalur District of Tamil Nadu

Sl. No.	Factor	Extent of agreement			Mean score	Rank
		Fully agreed	Agreed	Disagree		
1	Poor soil fertility status	18	26	136	0.29	10
2	Vagaries of monsoon	45	36	99	0.54	5
3	Lack of water resources	62	48	70	0.73	3
4	High cost of inputs	33	38	109	0.47	7
5	Non availability of inputs in time	47	31	102	0.52	6
6	Struggles in marketing	66	47	67	0.75	2
7	Lack of credit support	26	30	124	0.31	9
8	Lack of support of extension agencies	8	16	156	0.16	11
9	Small land holding	22	41	117	0.42	8
10	Low income levels from agriculture	88	63	29	1.00	1
11	To get higher social status	49	66	65	0.64	4

The data in Table. 3 reveals that the factors like low income from agriculture, struggles in marketing of agriculture produces, lack of water resources and to get higher social status recorded the means score of 1.00, 0.75, 0.73 and 0.64 and occupied the first, second, third and fourth ranks respectively with respect to the respondents of Ariyalur District. In pursuance of achieving ambitious goals of second green revolution, the Government of India is initiating various innovative strategies such as “Planning to weather proof food grain area” for various monsoon scenario, crop diversification, effective water resource management, increasing the water use efficiency through promotion of precision farming, micro irrigation, input supply management, integrated farming system approach, market advisories to farmers and formation of farmers producer organization. The farmers should be sensitized or facilitated to make aware of these kinds of knowledge and intelligence and to adopt them to reap high income from agriculture. To facilitate the marketing of the farm produce the government should take necessary steps to regulate the regulated markets, private sugar factories have to be instructed to make the payment in time to the sugarcane growers, market analysis should be done by the Government organizations and the market advisories have to be disseminated in time to the needy farmers. Besides farmers should be facilitated to take up group marketing so that they could eliminate the influence of intermediaries involved in marketing and reduce in commissions and other costs. Formation of Farmers Interest Groups (FIGs), Farmers Producer Companies (FPO) is the viable options for better marketing of agriculture produce in a direct way. Water is the precious commodity and depleting day by day. The methods for judicious use of water by drip and sprinkler irrigation systems can be popularized among the farmers so that they can get more income per drop of water.

The factors least responsible for occupations shift from agriculture are lack of support from extension agencies (11th rank), poor soil fertility (10th rank), lack of credit support (9th rank) and small land holding (8th rank). However it also contributes to this cause. The existing extension systems has to be further invigorated to serve the farmers with advanced technologies without causing damage to the natural resources like land, water and environment. The soil fertility can be improved by growing legumes, crop rotation, soil health card based application of fertilizers, use of biofertilizers and application of optimal quantities of organic manures. The high cost chemical fertilizers can be replaced to some extent by following these practices. Agricultural credit is the big issue to discuss as the farmers are struggling to avail the benefit of credit to raise their crop. The bankers especially nationalized banks are hesitating to extent credit facilities to the farmers as they encounter the problem in collection or repayment. Some of the farmers are expecting for loan waivers whenever the new Government assumes and delay the repayment. But most of the times crop failure and less income make the farmers debt always. So both the bankers and farmers have to be sensitized to facilitate the easy flow of agricultural credit. The authors opined that the small land holding is not a curse or hindering factor but it is a boon to the farmers. An area of one or two acres is compact and easy to manage under Integrated Farming System to reap more. Besides it offer an excellent solution of protected cultivation using polygreen houses under

which cash crops like Tomato, Capsicum, Gherkins, Cucumber, Gerbera, Gladiolus etc. can be cultivated intensively to obtain a high level of income per square meter of land and a drop of water.

Correlation among the factors responsible for occupational shift

The data in Table 4 reveals that all the eleven factors considered to be the key factors for occupational shift contribute to leaving agriculture by the farmers of Ariyalur district. Among the factors, small land holding positively correlated with poor soil fertility. Likewise poor soil fertility (0.702), vagaries of monsoon (0.716), non-availability of inputs in time (0.677), small land holding (0.819) are positively correlated with low income from agriculture and they are highly significant. The agrarian community is now-a-days looking for higher social status and this is the major reason for some other employment like construction, industrial sector, garments making, working in shops, NGOs, skilled works such as mechanical, electrical, rewinding, etc. (Jagannath *et al.*, 2016). This is also fact that these professions would give them secured income rather than agriculture. Hence the farming community should be given top most priority in all aspects to empower them with secured income and dignified socio-economic status to retain them in agriculture.

Table. 4. Correlation coefficients among the factors responsible for occupational shift from agriculture to non-agriculture at Ariyalur District of Tamilnadu

	Factors responsible	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	Y
X ₁	Poor soil fertility	1.000	0.378 ^{NS}	0.154 ^{NS}	0.391 ^{NS}	-0.783 ^{**}	0.305 ^{NS}	0.382 ^{NS}	0.797 ^{**}	0.130 ^{NS}	0.702 ^{**}	0.295 ^{NS}	0.577 [*]
X ₂	Vagaries of monsoon		1.000	0.077 ^{NS}	0.368 ^{NS}	0.281 ^{NS}	-0.636 ^{**}	0.357 ^{NS}	0.534 [*]	0.130 ^{NS}	0.716 ^{**}	0.269 ^{NS}	0.548 [*]
X ₃	Lack of water resources			1.000	0.031 ^{NS}	0.004 ^{NS}	-0.267 ^{NS}	-0.469 [*]	0.568 [*]	0.362 ^{NS}	0.237 ^{NS}	0.070 ^{NS}	0.504 [*]
X ₄	High cost of inputs				1.000	0.769 ^{**}	-0.502 [*]	0.339 [*]	0.030 ^{NS}	0.570 [*]	0.129 ^{NS}	0.306 ^{NS}	0.526 [*]
X ₅	Non-availability of inputs in time					1.000	0.178 ^{NS}	0.398 [*]	0.157 ^{NS}	0.678 ^{**}	0.677 ^{**}	0.341 [*]	0.548 [*]
X ₆	Struggles in marketing						1.000	0.649 ^{**}	0.519 [*]	0.254 ^{NS}	0.365 [*]	0.136 ^{NS}	0.669 ^{**}
X ₇	Lack of credit support							1.000	0.213 ^{NS}	0.209 ^{NS}	0.554 [*]	0.116 ^{NS}	0.446 [*]
X ₈	Small land holding								1.000	0.641 ^{**}	0.819 ^{**}	0.153 ^{**}	0.644 ^{**}
X ₉	Lack of extension support									1.000	0.277 ^{NS}	0.204 ^{**}	0.238 ^{NS}
X ₁₀	Low income from agriculture										1.000	-0.695 ^{**}	0.868 ^{**}
X ₁₁	To get higher social status											1.000	0.758 ^{**}
Y	Leaving agriculture												1.000

*, ** significant at 5 and 1 percent respectively; NS – Non-significant

IV. CONCLUSION

From the foregoing discussions, it could be concluded that agriculture is the predominant occupation in rural areas and in recent decades it fetch less importance and farmers are shifting to some other occupation leaving their hereditary profession. Ariyalur district of Tamil Nadu is also not an exemption for this undesirable shift as the present study revealed the factors responsible for this occupational shift. Low and unstable income from agriculture depletion and shrinking of natural resource like water and land respectively force the agrarian community to look for some alternative and remunerative employment for their livelihood.

Adopting suitable strategies like backstopping of technologies in the field of rainfed agriculture, land and water resource management, farm specific technologies, integrated farming system approach, reclamation of problem soils, GIS based soil mapping to economise fertilizer use, augmenting water harvesting resources such as farm ponds, percolation ponds, check dams, integrated resource management, strengthening input delivery system, mechanization, ICT based extension strategies will indeed improve the Farmers Development Index and thereby the shifting human resource from agriculture to non-agricultural activities could be minimized.

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