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STRUCTURAL CHANGES IN THE RURAL ECONOMY OF ARALAMALLIGE VILLAGE- A GEOGRAPHICAL ANALYSIS

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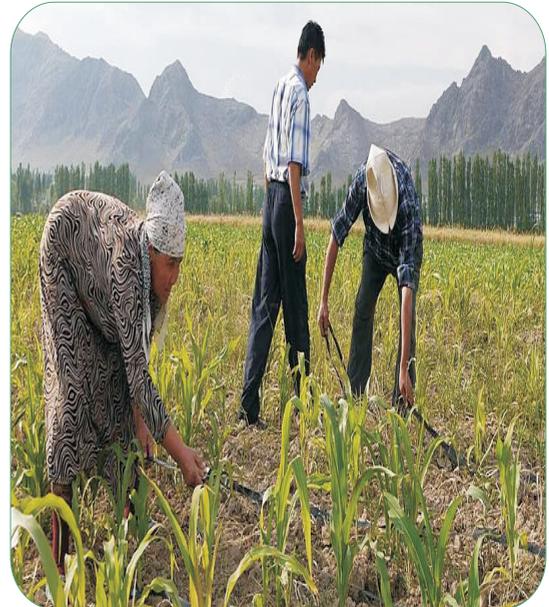
ABSTRACT

Today the whole country's economy is undergoing structural changes and transformation. The rural economy is not exception to this. With the changing ideology under revision of economic conditions from protectionism to globalization, from nationalization to privatization and from restrictions and controls to liberalization and de-licensing the whole Indian economic scenario is undergoing fast structural transformation and changes in all sectors.

KEYWORDS :country's economy , economic conditions, protectionism to globalization.

INTRODUCTION

Change is a law of nature. Change may either positive or negative. Now a days the impact of globalization, modernization, privatization, and liberalization on the structure of economy particularly on rural economy is clearly seen. The process of change in the rural economic structure has a lot turning point on the national economy. The intensity and extensiveness of the changes depends on the conditions prevailing in a particular area and in a particular sector. All sectors of the economy viz., agriculture, industry and service sectors are not equally developed. Hence, their adoptability susceptibility to change is not similar. In an agricultural economy like India, structural change not only affects economic scenario but also involves social justice and social welfare. Rural economy is highly a complex subject consisting of multi-dimensional structure which needs to be studied and understood.



OBJECTIVES

It is attempted in this paper

- 1.To identify the nature of change in the structure of Aralamallige village.
- 2.To examine the factors behind the changes in various elements of rural structure.
- 3.To find out the reasons for the changes in the study area.

METHODOLOGY

As the study concentrates mainly on the rural economic structure, the secondary data is collected to examine the overall changes in the structure of Aralamallige Village. Census reports, handbooks, monographs, and other books published by Government are referred to collect the required secondary data.

To know the changes in the structure of rural economy, various

aspects like economic aspects, socio-cultural aspects and demographic aspects of the village are considered. In addition to this the data is also collected through primary investigation from the village. The collected data is analyzed with the help of Cartographic techniques.

STUDY AREA

Aralamallige a medium sized village in Doddaballapura Taluk of Bangalore Rural District is situated by the side of a large irrigation tank which is constructed in a shallow valley of undulating terrain of Southern Maidan. The village is located at 13°15' North Latitude and 77°30' East Longitude and only 5 Kms. from Doddaballapura Town with which it is connected by the Doddaballapura — Nelamangala State Road.

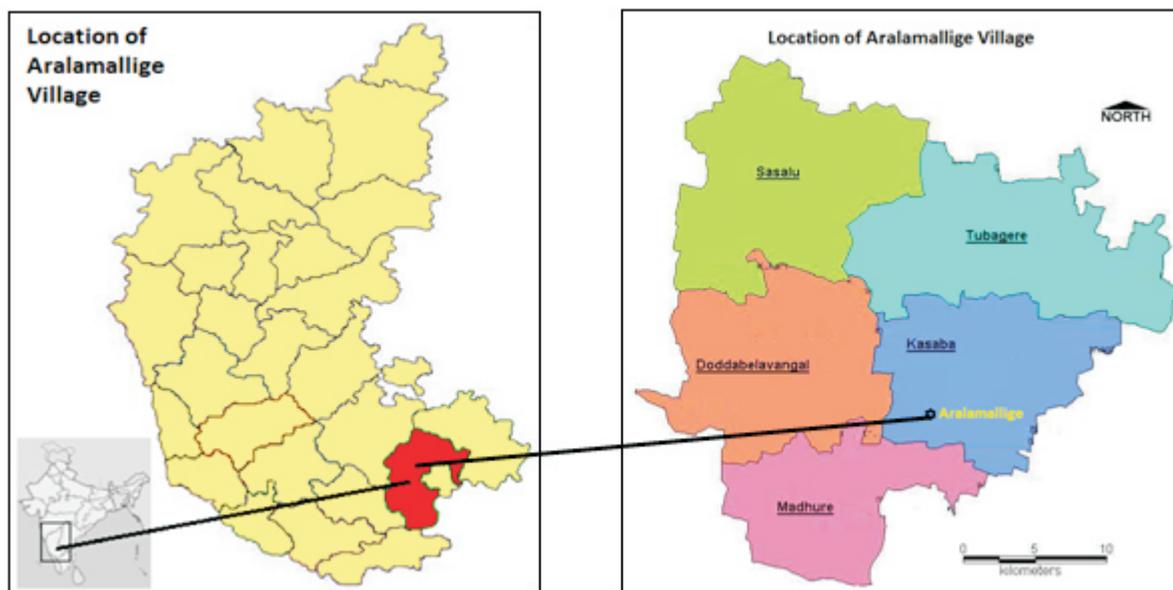


Fig 1 – Location Map of Aralamallige Village

Table 1 - Important Characteristics of Aralamallige Village

Village Name	Taluk	District	Population	No. of Households	Size of the village	Administrative Status
Aralamallige	Doddaballapura	Bangalore Rural	2264	569	Medium	Panchayat Head Quarters

Type of settlement	Geographical Region	Historical Region	Irrigation Type	Agro-climatic region	Major Crops
	Southern Maidan	Old Mysore	Tank Well	South Eastern Dry Zone	Ragi, Paddy, Sugarcane, Vegetables

There are no certain records to show the origin of the village name. But there is a stone inscription in old Kannada language in the village temple of Chennakeshava. According to this inscription the village was in existence over 600 years ago. A legend has been attached to this village about its name. The name of the village Aralamallige means Jasmine Blossomed. It is stated that

Jasmine buds made up of silver which a devotee offered to the village temple in fulfillment of a vow, had blossomed into flowers on the day after the offering. Aralamallige village having located on a major state road is a small central place for many of its surrounding villages. The village is situated in a region which is a open and undulating covered with scrub jungle. It lies within the river basin of Arkavathy. There are no hills in immediate neighbourhood, the village is situated on Karnataka plateau having an elevation of between 865 mtrs. 915 Mtrs above sea level (Kenzo, Fuziwara 1978). The larger part of village is composed of the upland and its slopes.

STRUCTURAL CHANGES OF THE ECONOMY OF ARALAMALLIGE VILLAGE — AN ANALYSIS OF AGRICULTURAL ASPECTS

It is essential to understand what changes have taken place in agricultural aspects in the study area over period of four decades from 1961 — 2015 (2011 for census data). For this purpose some important indicators like occupational structure, landholding size, land use pattern, irrigational facilities and cropping pattern are taken into consideration for comparative analysis.

ANALYSIS OF OCCUPATIONAL STRUCTURE

Table 2 – Occupational Structure

Occupation	1961		1981		2001		2011	
	Persons	in %						
Cultivators	359	58.90	243	38.44	208	25.54	298	23.24
Agricultural Labourers	186	30.09	252	39.87	319	39.40	546	42.58
Household Industrial Workers	61	9.87	114	18.03	196	24.26	48	3.76
Businessmen and Other workers	12	1.94	23	3.63	85	10.51	390	30.42

Source: Census, monographs and field survey

The above table shows the occupational structure of Aralamallige village and its changing trend from 1961-2011. Although the main occupation of the village is agriculture the percentage of cultivators were more than 58% during 1961, but it came down to 38.44% in 1981. The decreasing trend of cultivators continued even during 2001 and stood at 25.14%. This declining trend clearly indicates that the main occupation of the village i.e. agriculture is losing its base and other commercial activities are taking the place of cultivation. Fragmentation of landholding and erratic monsoon are the main reasons for decreasing trend of cultivators. Further the impact of globalization is also clearly seen in case of businessmen and other workers because in 1961 there were only 1.94% persons in this category which gradually increased decade by decade and stood at 30.42% in 2011.

As far as agricultural labourers are concerned the above table clearly shows the increasing trend from decade to decade. Household industrial workers category has also registered the increasing trend from 9.87% in 1961 to 24.26% in 2001 but it has declined to 3.76% due to shift towards businessmen and other workers category. Further, the number of buses plying between Aralamallige village and Doddaballapura Town and Bangalore City has increased in the last four decades paving the way for easy commuting of people. Thus, more number of people have engaged in non-agricultural activities. In the

village itself more number of people are working in Hotels, Provision Stores, Tailoring shops (See Modern facility table), stone crushing, cable network etc.

LAND HOLDINGS

Land holding is actual piece of land owned by an individual. The size of the land holdings determines the type of farming practiced by the farmer. If the land holding size is large the farming would be commercial one and if the land holding size is small the farming type would be mixed or subsistence one. In Aralamallige village land holding size has been decreasing from decade to decade. The below table clearly shows the changing patterns of land holding size of the village from 1961 to 2001.

Table 3 – Landholdings

Land Holdings (in acres)	1961 (in nos.)	1981 (in nos.)	2001 (in nos.)	2015 (in nos.)
Landless	48	178	212	169
Below 5	85	142	230	118
5 – 10	59	48	11	09
> 10	13	09	03	02

Source: Census, monographs and field survey

Landless people in the village are rapidly increasing over a period of 4 decades. In 1961 landless persons were 48 and it increased to 178 in 1981. In 2001 the number again increased and stood at 212. Sub division and fragmentation of land holding is rapidly increasing in the village. In below five acres land holding category, the number of holdings were 85 in 1961 and it increased to 142 in 1981. Finally the number again increased to 230 in 2001. The main reason for this fragmentation is law of property inheritance and erosion of joint family systems. The number of big landlords has come down and in more than 10 acres land category the number has decreased from 13 in 1961 to only 3 in 2002 and this declining trend continued further in 2015 to settle at only 2.

IRRIGATIONAL PATTERNS

Irrigation is being practiced in Aralamallige village from ancient times. Irrigational tank and wells are familiar features of the village landscape. Agriculture is mainly depending on tank irrigation as monsoon is most uncertain and unreliable. The below tables shows the changing trend in irrigational facilities in the village over a period of more than six decades.

Table 4 – Irrigational Patterns

Category (in acres)	1961	1981	2002	2015
Irrigated wet land	347.38	427.08	631.05	419
Un-irrigated dry land	683.34	643.30	271.00	304
Tube wells (in nos.)	Nil	30	100	114

Source: Census, monographs and field survey

In 1961 the source of irrigation was a tank which was constructed at the southern part of the village about 500 years ago [Fuziwarra, Monograph 1978]. The area brought under tank irrigation was 347.38 acres. In the same decade the un-irrigated land area was 683.34 acres i.e. more than double the

area of irrigated land. The number of pump-sets drilled for irrigation was nil. The irrigation situation slightly improved during 1981 and the area increased to 427 acres mainly because of 30 tube-wells which were drilled during 1970's. The un-irrigated land more or less remained same but more area was brought under cultivation in 1981. In 2002 survey, irrigated land has shown a rapid increase covering more than 631 acres and has doubled its area from 1961-2002. The main reason for this unusual increase is tube wells. The number of tube-wells increased from nil in 1961 to 100 in 2002 and 114 in 2015. However, the un-irrigated area has decreased from 643 acres in 1981 to 304 acres in 2015. This is due to improvement in well irrigation particularly tube well.

CROPPING PATTERN

The area under crop cultivation in the village occupies a major portion of the total geographical area of the village. The principal crops are ragi, paddy and maize. Maize was a newly introduced crop to the village during 1970's. This is a remarkable change in the cropping pattern of the village because the area under maize was nil in 1958-59 and it increased to 108 acres in 1978. In 2001-02, however areas under maize decreased to 67.35 acres but in 2014-15, it has increased to 120 acres. Although paddy is an important wet land crop but its cultivated area has fluctuated due to successive droughts and silting of tank.

Table 5 – Harvested areas of principal crops in Aralamallige

Crop name	1958-59 (acres)	1977-78 (acres)	2001-02 (acres)	2014-15 (acres)
Paddy	203.3	40.5	98.12	43.0
Jowar			8.13	12.08
Maize		108.3	67.35	120.0
Ragi	355.8	416.3	342.38	380.44
Sorghum	82.1	4.3		
Field beans	57.1	7.3		
Horse gram	35.0	3.7	8.15	
Tur			1.30	
Red gram	3.5			
Buller			45.38	
Loba			46.24	
Vegetables	20.0		151.5	190.66
Flowers	1.9	1.2		
Sweet potato			10.15	
Onion			75.10	44.0
Mustard		1.2	1.20	
Niger			4.00	
Groundnut	4.3		2.00	
Sugarcane	119.2	106.7	130.15	Nil
Areca nut	10.8	14.2	26.10	20.0
Coconut	2.2	4.1	46.35	41.0
Mulberry	0.8			
Plantain	0.3		40.35	33.0
Casuarinas	47.5	28.1	19.30	
Eucalyptus		3.2		
Others	3.9			
Total	947.7	739.1	1123.25	884.18

Source: Census, monographs and field survey

Among commercial crops sugarcane ranks first and more or less it has maintained consistency in its cultivated area. [See table]. The cultivation of vegetables, potato and onion has been increasing recently and crops grown are sold in Doddaballapura and Bangalore City markets. The area under plantation crops is also rising from decade to decade. The area that was occupied by Casurina and Eucalyptus is largely converted into plantation. This diversified cropping pattern is due to the accessibility of the village to the nearby metropolitan city like Bangalore which demands plantation as well as commercial crops.

LAND USE PATTERN

The large part of the village territory is composed of the plains and its slopes whereas; the low lands are drained by the Arkavathi River. The land use pattern is divided into 6 categories wherein more than 50% of its land is devoted for cultivation. If we look at the table there is no significant change in land utilized pattern of agriculture. But area under barren land is increasing very rapidly and this is due to monsoon failure, non-availability of perennial water source and farmers slackness towards farming.

Table 6 – Land use pattern

Category (in acres)	1961	1981	2002	2015
Cultivated land	1031.32	1070.38	1088.00	980.00
Land covered by orchard and plantations	56.10	92.22	38.43	29.00
Pastures and grazing land	201.00	130.00	54.63	64.15
Barren and cultivable land	33.00	65.22	274.00	250.00
Cultivable land but put waste by growing miscellaneous trees	518	472	514	524
Village sites including streets	22	31	38	49.18

Source: Census, monographs and field survey

The land devoted for pasture and grazing has decreased from 201 acres in 1961 to only 54.63 acres in 2002. This trend indicates that villages are not giving importance to animal husbandry and dairy farming. Wasteland used for growing miscellaneous trees is also more or less remaining same. Thus, land use pattern in the village has not changed drastically except in the category of barren land. Further, pasture and grazing land which was a major portion in the land use pattern declined sharply to only 64.15 acres in 2015 thereby reducing the dairy activities and animal husbandry.

MODERN FACILITIES OF AGRICULTURAL ASPECTS

Information pertaining to modern agricultural facilities was collected through field survey and it is given in the below table.

Table 7 – Modern facilities of agricultural aspects

Name of the facility	Numbers
Number of co-operative societies	01
Veterinary hospitals	01
Tractors	04
Tillers	04
Pump sets	114
Milk diary	01
Fertilizer shops	01
Poultry farms	03
Vegetable shops	02

Source: Field survey

The village has a co-operative society to meet the financial requirement of the village people engaging in agricultural and non-agricultural activities. Villages are practicing modern methods of agriculture using tillers and fertilizers, tractors etc. there are four tractors and two tillers in the village. A veterinary hospital has been established to help the people who are rearing animals and keeping poultry has subsidiary activities. The only irrigational source in the village till 1981 was a tank but now more than 114 tube wells are drilled and cultivation is possible year long. A milk dairy is collecting milk with good remunerative price i.e. Rs. 24 per liter (in 2014) there by helping villagers to meet their daily financial requirements.

STRUCTURAL CHANGES IN THE VILLAGE — AN ANALYSIS OF SOCIO-CULTURAL ASPECTS

Any region's modern outlook and progressive momentum depends upon socio-cultural development of that particular area. Aralamallige village in terms of socio-cultural aspect is not far behind. Here an attempt is made to analyze some of the socio-cultural aspects of the village

LITERACY LEVEL

Table 8 – Literacy level

Total Literacy (in %)	1961	1981	2002	2011
Total Literacy	32.36	61.55	63.45	77.90
Male	49.74	60.71	73.09	84.80
Female	13.52	39.64	54.15	70.60

Source: Census, monographs and field survey

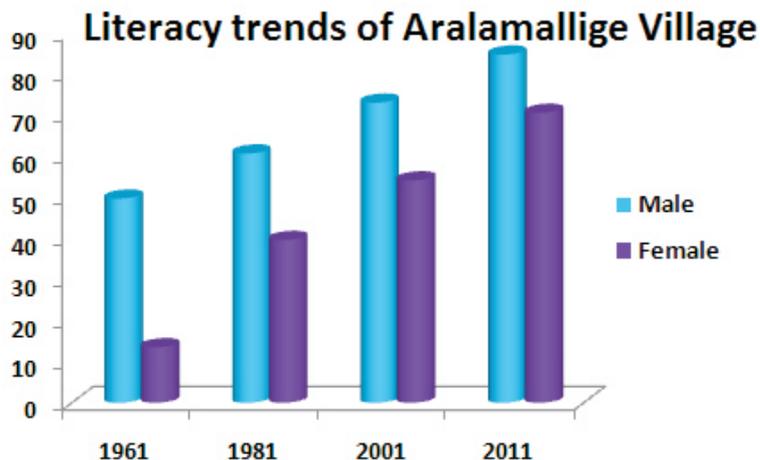


Fig 2 – Literacy trends

The above table clearly shows that the literacy level is also increasing decade by decade thereby improving socio-cultural conditions of the village. The literacy rate which was only 32.36 in 1961 has been doubled to 63.45% but slightly less than the district average i.e. 64.70. Even female literacy has also registered a rapid increase from 13.55% in 1961 to 54.35% in 2001. This is a phenomenal growth and the percentage has equalized with district, state and the national average. As far as male literacy concerned it was 49.45% in 1961 and increased to 73.09% in 2001 almost same that of district average i.e. 73.99%. In 2011, the literacy level drastically increased to 77.90% at the same time female literacy which was just 13.52% in 1961 sharply increased to 70.60% in 2011. This increase in literacy level may be attributed to increase of infrastructural facility in the field of education like Anganawadis, Ksheerayojana, Operation Block Board, etc which have encouraged the people to enroll their children to schools.

EDUCATIONAL STATUS AND INSTITUTIONS

Table 9 – Number of students enrolled in schools and colleges

Students	1961	1981	2001	2015
Primary	176	314	320	311
High School	25	103	271	314
PUC	01	03	57	89
Graduates	Nil	02	13	20
Post Graduation	Nil	Nil	Nil	8
Others	Nil	04	01	Nil

Source: Census, monographs and field survey

The village had only one primary school with 119 boys and 57 girls in 1961. In 1981 school going children increased to 314 out of which 205 were boys and 109 were girls. The primary school was upgraded to higher primary [Middle] school during 1980's. In 2001, one more primary school was opened. Till 1994 high school studying students of the village were traveling to Doddaballapura town to pursue their education. In 1994, two Anganawadies, and one high school was established to meet the

increasing demand of education. Even PUC students and graduates were increased in 2001 [See Table]. The only negative aspect of the village in terms of higher education was that no one had completed post graduation course till 2001 but in 2015 there were 8 post graduates in the village.

EDUCATIONAL INSTITUTIONS

Table 10 – Number of educational institutions

Institutions	1961	1981	2001	2015
Anganwadies	Nil	Nil	02	02
Primary Schools	01	01	02	02
High Schools	Nil	Nil	01	01
Colleges	Nil	Nil	Nil	Nil

Source: Census, monographs and field survey

DEMOGRAPHIC ASPECTS AND STRUCTURAL CHANGES

The population of the village found at the time survey was 1869 persons out of that 918 males, 951 females leaving in 456 households.

Table 11 – Demographic aspects

Category	1961	1981	2001	2011
Household	230	320	456	569
Population	1282	1651	1869	2264
Males	655	866	918	1093
Females	627	785	951	1171

Source: Census, monographs and field survey

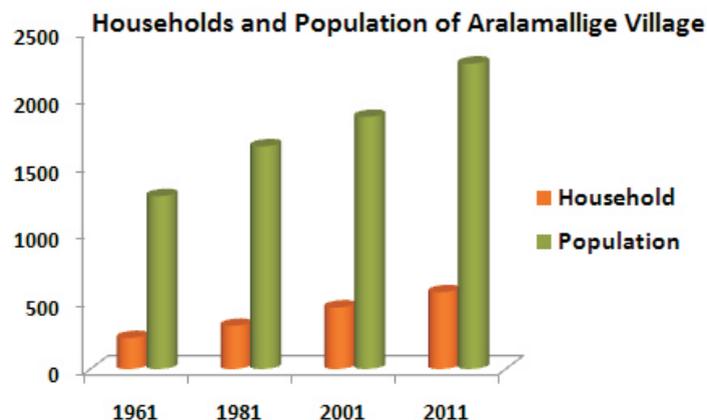


Fig 3 –Households and population growth

In 1961 the total population was 1282 of which males were 655 and females 627 with total households of 230. The population of the village has almost doubled in a span of 50 years thereby indicating population explosion. Similarly, the number of households has also shown increasing trend

from 1961 (230) to 2011 (569).

POPULATION GROWTH

Table 12 – Decadal growth of population

Year	1951	1961	1971	1981	1991	2001	2011
Population	1010	1300	1436	1651	1798	1869	2264
Decadal growth in %		28.71	10.41	14.97	8.90	3.95	21.13

Source: Census, monographs and field survey

The above table shows the population growth rate of the village from 1951-2011. The growth rate was 28.71% during 1951-61 which was higher than the state average i.e. 21.57%. During the subsequent decades from 1961-71 to 1981-91 the population growth rate has fluctuated from 10.41 to 14.97. In 2001 survey the growth rate is 3.95% and it is lowest in comparison with past 5 decades. Whereas, in 2011 the population growth rate has abnormally increased to 21.13% due to migration activities from surrounding hamlets and other small villages.

CONCLUSION

Change is a law of nature and it is a continuous process both in terms of time and space. The economy of Aralamallige village is not exception to the above said rule and this can be seen in the preceding analysis of the structural changes in many aspects. As pointed out in the foregoing analysis the rural elements like land holding size, land use pattern, cropping pattern, irrigation facilities, literacy and the educational status have undergone drastic changes over a period of time. The changes in terms of agricultural aspect and socio-cultural aspects have significantly contributed to the development of the village. The agriculture which was subsistence during 1961 has changed into commercial and mixed one. The influence of liberalization can be easily traced out in the economy of Aralamallige village both in terms of positive and negative aspects ultimately, however, leading to the structural change of Aralamallige village.

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