Changing Institutions Among Farm Households in Rurul and Peri-Urban Gradient Around Bengaluru Metropolitan - An Economic Analysis

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Abstract

The present study was carried out with an overall objective to study the changing institutions among rural and peri-urban farming household across irrigated and rainfed situations as influenced by urbanisation. Within family as an institution, there was 50 to 60 per cent change in the joint family system, whereas, it was to the tune of 40 to 50 per cent in the case of male dominancy in the family. With respect to 'household' as an institution the change was to the tune of 60 per cent considering trust, 30 per cent each in the case of share of work and responsibility within the family members. There was 40 to 50 per cent change in the way 'marriage' was arranged when matching through brokers, relatives and was to the tune of 20 per cent when matches were made through online.There was 40 and 50 per cent change in the way tradition was carried out and festivals celebrated, respectively, when 'religion' was considered as an institution. It was found that the most of the opinion on various institutions across varied significantly as influenced by the urbanisation both in peri-urban and rural areas across rainfed and irrigated situation.

Worldwide urbanization is pervading rural areas and more so in developing countries including India. In the country, rural areas around Bengaluru are experiencing rapid urbanization process and its growth has been unprecedented. In the past two decades in India, the level of urbanization has gone up by 27.80 per cent in 2001 to 31.20 per cent in 2011 and likely to increase to greater than 50 per cent by 2050. In relative terms, rural population which was 89.14 per cent in 1901,had decreased by 20.3 per cent in the last eleven decades to about 69 per cent. On the contrary, the urban population had increased almost three fold from 10.86 per cent in 1901 to 31.16 per cent in 2011. The urban–rural ratio (an index measuring the number of urban people for each rural person) for 2011 was 0.45 (in simple terms, for 100 rural people, there were 45 urban people), with an increase of 6 per cent from the previous decade (39 in 2001), again highlighting that India is catching up fast in the process of urbanization in the recent decades (Sudhira and Gururaja, 2012). Urbanization is an index of transformation from traditional rural economies to modern industrial one. It is progressive concentration (Davis, 1965) of population in urban unit. Urbanization is a process (Davis, 1962) of switch from spread out pattern of human settlements to one of concentration in urban centres. It is a finite process of cycle through which a nation passes as they evolve from agrarian to industrial society (Davis and Golden, 1954).

According to Davis' prediction in 1962, level of India's urbanization in the year 2000 was seen to be quite successful in his estimate of urban population and its share of the total population of the country (Davis, 1962). His method was based on the classic hypothesis of universal linearstages in urban transition with a direct reference to the pattern in the USA, adjusted later by applying some logistic parameters.

Karnataka is India's 7th most urbanized State in India. As per Census 2011, Karnataka had 6.10 crore population, out of which 38.60 per cent (*i.e.,* 2.35 crore) resided in urban areas. In terms of urbanization, the state had witnessed an increase of 4.68 per cent in the proportion of urban population in the last decade. As per the Registrar General of India, for the decade 2001-2011, the absolute increase in population had been more in urban areas than in rural areas for the first time since independence. Karnataka's urban population had grown by 31.27 per cent between 2001 and 2011, compared with 28.85 per cent in the previous decade. The growth of urban population between 2001 and 2011 was also higher as compared to the growth of 7.63 per cent in the rural population. The state is expected to reach an urban population proportion of

50 per cent in the next eleven years i.e., in the year 2026 (Anon., 2011).

Peri-urban agriculture is associated with opportunities as well as risks. The opportunities include less need for packaging, storage and transportation of food, potential agricultural jobs and incomes, non-market access to food for poor consumers, availability of fresh, perishable food, proximity to services, including waste treatment facilities, waste recycling and re-use possibilities. Risks included environmental and health risks from inappropriate agricultural and aquaculture practices, increased competition for land, water, energy, and labour, reduced environmental capacity for pollution absorption.

The study was undertaken with overall objective to study the changing institutions among rural and peri-urban farming household across irrigated and rainfed situations as influenced by urbanisation. The institutions include family, household, marriage and religion.

METHODOLOGY

Bengaluru rural and Ramanagara districts were purposively selected for the research study as both the districts surround Bengaluru Urban District. Within Bengaluru Rural District, Hoskote taluk was selected representing the peri-urban area situated at a distance of around 30 km from Bengaluru city. The Ramanagara taluk was selected as rural area from Ramanagara district which is at a distance of around 50 km from Bengaluru city. Categorization of the study area as peri-urban and rural was done on the basis of connectivity to Bengaluru city by public transport system. The Hoskote taluk has good connectivity in the form of Bengaluru Metropolitan Transport Corporation (BMTC) buses, but the Ramanagara taluk does not have the same. For the selection of sample respondents for the study, the following procedure was adopted. The sample frame consists of 160 farmers from the two taluks representing 80 each from the two taluks. Thus, 80 farmers from rural region (Ramanagara Taluk) and 80 farmers from peri-urban region (Hoskote Taluk) were selected. Among 80 farmers, 40 farmers had assured irrigation and 40 farmers had dry lands. Farmers were interviewed using pre-tested schedule. The study was conducted in the year 2014 - 15.

The Mann-Whitney test, also called the Wilcoxon rank sum test, is a non-parametric test that compares two unpaired groups. The dependent variable must be ordinal scaled (rank order scaled). This test is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed.

In this study, an attempt was made to study changes in some of the selected social institutions such as family, household, marriage and religion across rural and peri-urban areas as well across irrigated and rainfed situations. With family as an institution, the impact of urbanization on joint family and male headed family was examined. Similarly household as an institution, how urbanization influences the aspects like trust within family, share of work, share of responsibility etc. can be assessed using this test. With respect to marriage as an institution, impact on match making process through brokers, relatives or online is accounted for. Similarly religion as an institution, tradition and festival were studied. Farmers were asked to perceive the change on institutions under study and express in terms of scale of 10. Zero indicating "no change" and ten indicating "complete change".

Compute the Mann-Whitney U test using the following formula :

$$U = N_1 \times N_2 + N_x \times \frac{N_x + 1}{2} - T_x$$

Where :

T_1 :   Sum of the rank for one group

T_2 :   Sum of the rank for the other group

T_x :   Larger of T_1 and T_2

N_1 :   Number of people in the group that gave the T_1 rank total

N_2 :   Number of people in the group that gave the T_2 rank total

N_X :   Number of people in the group that gave the larger rank total

Thus, obtained U value was used to arrive at Z value, as in this case, sample size was more than 20 (i.e., 80), then following formula is used :

Computation of standard deviation :

$$\sigma \qquad \times \qquad \times$$

Compute Z :

$$z \qquad \dfrac{\times}{\sigma}$$

Compare the obtained Z value and critical Z value. If the obtained Z value was greater than 1.96, then the test is signifncant at 5 per cent and if the obtained Z value was greater than 2.58, then the test was signinfcant at 1per cent.

RESULTS AND DISCUSSION

The details about general profile of sample farmers are shown in Table I. Average age of irrigated farmers in rural and peri-urban areas was 41 and 43 years, respectively, whereas, average age of rainfed farmers both in peri-urban and rural areas was 51

Table I
*General profile of sample farmers in
the study areas*

(n = 160)

Particulars	Rainfed Farmers		Irrigated Farmers	
	Rural	Peri - urban	Rural	Peri - urban
Age of the farmer (Years)	51	51	41	43
Size of the Family (Number)	5	5	5	6
Years of schooling	8	7	10	9
Illiterates (Number)	15	9	2	1
Literates (Number)	25	31	38	39
Primary School (Number)	10	13	8	11
High school (Number)	9	10	14	20
PUC (Number)	3	4	7	2
College and above (Number)	3	4	9	7

years. Average family size was six members in the case of irrigated peri-urban farmers, whereas, it was five members in rest of the three categories of farmers. Average years of schooling was highest in the case of irrigated rural (10 years), followed by irrigated peri urban (9 years), rainfed rural (8 years 0 and then by rainfed peri-urban (7 years). With respect to literacy rate, proportion of literate among sample farmers was comparatively more in irrigated situation (98% among peri-urban farmers and 95 % among rural farmers) than in rainfed situation (78 % among peri-urban farmers and 63 % among rural farmers).

Impact of urbanisation on institutions : Impact of urbanisation on institutions such as family, household, marriage and religion was statistically verified using the Mann Whitney U test and the results are summarised in the Tables II and III.

With respect to 'family' as an institution, farmers in all the categories except peri-urban categories expressed that there was about 60 per cent change in the joint family system, but it was to the tune of 50 per cent in the case of peri-urban farmers (Table II). Regarding the characteristics of male dominancy in family, farmers viewed that urbanisation has impacted to about 40 per cent change in the case of irrigated and rural situations and it was to the tune of 50 per cent in rainfed and peri-urban situation. Before urbanisation, families were mostly male dominated once and most of the siblings dwelled in a common house. As influenced by urbanisation, the siblings are drifted apart promoting nuclear family system.

Farmers viewed that urbanisation has created about 60 per cent change in the trust which family members had within themselves. There was about 30 per cent change in the sharing of work and responsibility taken within the family members. Before urbanisation the responsibility was lying with the eldest member of the family. But due to urbanisation, responsibility is shared among the younger members too. Previously household works were only concentrated by the women and there was no other exposure for the women community. Because of urbanisation, the women folk were able to take the responsibility outside the house too.

TABLE II

Median and range of scores against different institutions across sample farmers in the study areas

Particulars		Raunfed		Irrigated		Rural		Peri-urban	
		Median	Range	Median	Range	Median	Range	Median	Range
Family	Joint family	6	5 to 6	6	5 to 76	6	5 to 7	5	5 to 6
	Male dominated family	5	4 to 6	4	3 to 5	4	3 to 5	5	4 to 5
	Trust within family members	6	5 to 7	6	5 to 6	6	5 to 6	6	5 to 6
Household	Share of work	3	3 to 4	3	2 to 4	3	3 to 4	3	2 to 4
	Responsibility	3	2 to 4	3	2 to 4	3	2 to 4	3	2 to 4
	Match through brokers	4	3 to 5	4	3 to 5	4	3 to 5	4	3 to 5
Marriage	Relatives	4	3 to 5	4	3 to 5	5	3 to 5	4	3 to 5
	Online search	2	2 to 3	2	2 to 3	2	2 to 3	2	2 to 3
Religion	Tradition	5	4 to 5	5	5 to 6	5	4 to 5	5	5 to 6
	Festivals	4	3 to 5	4	3 to 5	4	3 to 5	4	3 to 5

Note: Scoring was 0 to 10. Score of 0 indicates no change and score of 10 indicates complete change

TABLE III

Results of Mann Whitney U test for different institutions

Institut-ions	Particulars	Irrigated & Rainfed	Peri-urban & urban
Family	Joint family	2.96 **	6.48 **
	Male dominated family	9.96 **	5.72 **
	Trust within family members	5.18 **	3.94 **
Household	Share of work	2.37 *	4.26 **
	Responsibility	2.96 **	1.75
Marriage	Match through brokers	2.45 *	1.15
	Relatives	1.43	4.44 **
	Online search	3.88 **	4.44 **
Religion	Tradition	7.18 **	9.81 **
	Festivals	1.87	4.29 **

Note: ** -significant at 1% and *- significant at 5%

All the categories of the farmers felt that there has been 40 per cent change in the way the marriages were fixed through brokers compared to before and after urbanisation. The change was to the tune of 40 to 50 per cent in the case of match made through relatives. However, there was no much change in the way the marriages fixed through online as a source (20%). In the event of urbanisation, farming households were exposed to completely new source of conducting marriage which is online.

It was noticed that the farmers felt that there has been about 50 per cent change in the way tradition has been followed as impacted by the urbanisation. Similarly, all the categories of the farmers felt that there has been 40 per cent change in the way festivals were celebrated when compared to before and after urbanisation. Because of the urbanisation, there has been major change in following tradition. Earlier the people used to follow the practice of their elders. But now a days, youngsters tend to check the reason for following any traditions. Similar situations were also noticed in celebrating festivals.

When opinions regarding different institutions were compared between irrigated and rainfed farmers, it was found that the opinion significantly differed in the case of 'family' as an institution with respect to joint or nuclear family system and male dominancy. When 'household' as an institution was analysed, the trust within family and the share of responsibility had significantly changed due to urbanisation. There was no significant change when 'marriage' as an institution was considered, except alliances through online. 'Religion' as an institution indicated that there was a significant change in the traditions followed. When the sample farmers' opinions were bifurcated as peri-urban and rural areas, it was seen almost all the attributes under different institutions were significant.

With respect to the view of peri-urban and rural farmers, there was significant difference between for 'family as an institution'. When 'household' as an institution was considered, there was significant difference in the view with respect to the trust and share of work within the family. 'Marriage' as an institution had significant difference as viewed by the farmers with respect to matching thorough relatives and match through online. However, the results were not statistically significant in case of match through brokers. In the case of 'religion' as an institution, there was significant difference in the view regarding the tradition and festival as influenced by urbanisation.

It is evident from the study that the urbanisation influences the institutions irrespective of either rainfed and irrigated region or rural and peri-urban region.

Urbanisation had led to nuclear family system dispersing joint family systems. The responsibilities within households have been shared across the members. It was also notable changes in the way the mapping the allowances for conducting the marriages. There has been lot of changes in the way traditions and festivals were carried out. Urbanisation had its influences on the way these institutions were performed across rural and peri-urban gradient

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