Agro Economist - An International Journal

Citation: AE: 5(1): 35-41, June 2018 DOI: 10.30954/2394-8159.01.2018.6

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Dynamics of Urbanization in Fringe-Villages and Related Consequences - Analysis of Sub-national Primary Survey

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ABSTRACT

As India is primarily an agrarian economy; the impact of urbanization on fringe villages has a novel connotation. In fact, over the year's urbanization in India has impacted both rural economy and agricultural cropping pattern significantly, creating a peripheral melting pot of transfusion of urban characteristics across fringe villages, setting the process of de-villagisation. Against this backdrop, the study has tried to explore the impact of urbanization on agriculture and rural economy through field surveys and personal interviews in the select fringe villages. The study finds that in the surveyed fringe villages, urbanization spill-over is bringing transformation in the agricultural production pattern away from traditional foodgrains (Rice, Wheat, etc.) towards high-value agricultural commodities (HVCs) and allied activities. Significantly, on an average, almost 32 per cent of crops in the fringe villages near cities were found to be devoted to vegetable production as compared to a meagre 2.8 per cent at the National Level. Further, 13 per cent of cropping in fringe villages was found to be devoted towards fruits (against the national average of 1.3 per cent). It was found that escalated prices of land holdings near the fringe villages are affecting the pace of adoption of high value agricultural activities creating a predicament of whether to sell the land to private parties; wait for worthy acquisition by Government or its agencies or invest in high value farming which have their own risk (like perishability, lack of infrastructure support for storage, marketing, etc.). The momentum of urbanization and its inter-linkage with villages (especially fringe villages) will decide pace of de-villagisation in rural economy. If the emerging trend is not counterbalanced by faster adoption of agricultural infrastructure to remote villages and requisite restriction is not placed on unauthorized construction near fringe villages, an unabated de-villagisation will continue to harm overall balance of rural economy.

Keywords: Agriculture, villagisation, urban, rural, regional

"Urbanization is a process of switch from spread out patterns of human settlements to one of concentration in urban centers. It is a finite process ... a cycle through which nations pass as they evolve from agrarian to industrial society" (Davis, 1965). The characteristics of the transition, however, are not uniform across geographies. They are mostly the outcomes of diverse socio-economic setting. Urbanization impacts all the sectors of economy, though, at varying degrees.

Generally, it is associated with heightened economic activities along the nodes of extending urban centers. As the population becomes more and more urban, the adjoining rural area comes under 'urban zone of influence' which impart some distinct urban characteristics in rural populace. Over time the urbanization mostly subsumes the rural populace attributes usurping along the agricultural land for industrial activities or for the settlement purpose.

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Ultimately, they metamorphose primary activities into secondary/tertiary economic activities which are also accompanied by significant change in socioeconomic character.

Generally, the dietary preferences of urban populace are more diverse corresponding to their higher income and purchasing power. Urban demand for High Value Crops (HVCs) and agricultural allied products create a lucrative market near to the farmers of the fringe villages. Thus, the synergy between the urban demand for agricultural produce and 'near' availability of HVCs and allied products make 'fringe villages' a focal point for inflexion of urbanization.

India has also been integrated to the process of urbanization. In fact, pace of urbanization and its spread has increased over time with its impact being quite discernable in the settlement pattern, shift in gravity of economic activities, location of infrastructural projects, migration pattern, occupational choices, access to the banking services, etc. making study of urbanization process a special interest providing insights into dynamics of economic development in urbanized milieu. It may be noted that the growth drivers in India in post liberalization are mostly located in urban area. This has repercussions for redistribution of income and wealth. Historically, planners took the recourse to industrialization as agrarian economy had stagnated for long period, as found out by Tolley, 1984; Henderson, 2002 & Oluwasola, 2007. The industrialization efforts triggered a geographically dispersed chain of urbanization nodes.

Overall, the pickup in pace of economic development especially in the last decade has hastened urbanization process creating potential of integration of regional economies. It is pertinent to examine the dynamics of interactions between forces of urbanization and agricultural economy in a holistic manner, discerning the factors responsible for perceived structural change and also understand the impact of urbanization on agricultural economy. In this regard, this paper endeavors to illuminate the process of urbanization with emphasis on its consequences on agricultural growth, structural pattern and its causality to emerging agricultural production pattern. Accordingly, this study attempts to provide an estimate of cropping pattern in select 'fringe villages' through survey. How process of Urbanization in fringe villages leads to diversified cropping pattern and other dynamic impacts of urbanization on the socio-economic structure in the fringe area is examined. Further, the paper also tries to highlight pattern of urbanization, urban problems and related policy issues which have implication for rural economy based on views of various stake holders.

METHODOLOGY

In order to analyze the impact of urbanization on agriculture in a real setting, the survey was undertaken in villages within influence zone of large city. Two sample city, Jalandhar (Punjab State) and Gurgaon (Haryana State) were chosen to carry out the survey. The select fringe villages were identified with the help of Town and Planning department and Municipal corporation office and was set within range of 1 to 25 Km range from the city. Villages have been chosen on two separate routes from cities to have different topographies and socio-economic attributes of the respondents. For survey in Jalandhar, villages on Jalandhar-Amritsar and Jalandhar-Ludhiana routes were chosen. In Gurgaon, villages on Gurgaon-Faruknagar and Gurgaon-Jaipur routes were chosen. The on site assessment of agricultural land was done to take note of agricultural cropping pattern. Select villagers including Sarpanch's (Village head) were interviewed. Altogether, twelve villages were covered with seven villages (Bilaspur, Sidhravali, Panchgaon, Chandu Gaon, Dhankot, Sultanpur and Sukhrali) in Gurgaon and five villages (Khazurala, Kotkalan, Sura, Noosi and Bidhipur) in Jalandhar. A total 100 respondents with 50 each from both cities replied to the questionnaire. In addition, the paper draws information from existing literature and secondary data.

RESULTS AND DISCUSSION

Impact of urbanization on Agriculture in India: A Macro picture

The consumption patterns in India have diversified in recent time moving towards high-value agricultural commodities (HVCs) such as fruits, vegetables, dairy, poultry, fish, and processed food. This shift in demand is underpinned by sustained income growth and urbanization. Notably, the variables

such as provision of banking facilities, better power per capita availability and increased level of per capita income are associated with urbanized area. The relationship between these basic characteristics of urbanization were tested as dependent variable in cross section regression framework (for twenty one major states), which shows statistically significant and positive relationship for per capita income at 10 per cent level of significance. This positive association between urbanization and economic development level of states explains the pivotal role of economic growth drivers (urbanization) causing improved growth performance (Fig. 1).

Agriculture sector which in 1950-51 was the mainstay of the Indian economy with more than 50 per cent contribution to GDP has seen sharp decline in its share, marking a significant shift towards more urbanized 'services sector' dominated economy (Table 1).

The expanding urbanization, higher economic growth and changes in the tastes and preferences seem to be affecting food basket with a bias towards high-value food commodities. Responding to higher demand, the production of high value products has also grown (Table 2). In contrast, foodgrains production has almost remained stagnant. Highvalue commodities have considerable potential for value addition, and therefore can generate higher employment and income opportunities, especially in processing and marketing of value added products.

Significantly, the high value agricultural allied activities like, dairy, eggs and livestock's has grown at accelerated pace to create a virtuous cycle of moderating CPI, higher purchasing power, balancing extant protein deficiency and creating employments of semi-skilled farmers and laborers. India has witnessed voluminous increase in horticulture production over the last few years. Significant progress has been made in area expansion resulting in higher production (Fig. 2).

Urbanization with its increased demand for land, labour and high value agricultural product has brought significant changes in agricultural and country's economic structure. In the metropolitan areas, the absorption of agricultural labour into non-agricultural activities has provided alternative income generating avenues. The diversion of rural labour has removed some of the pressures from the extant disguised employment in the villages. Also, reallocation of factor of production

Table 1: Sectoral Share in GDP and Urbanization- analyzing the relationship (Per cent)

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11
Primary	55.3	50.8	44.3	37.9	31.4	23.9	14.4
Secondary	10.6	13.2	15.5	17.4	19.8	20.0	20.0
Tertiary	34.1	36.0	40.2	44.6	48.8	56.1	65.6
Urbanisation	17.3	18.0	18.2	23.3	25.7	25.8	31.2

Source: CSO and Census, GOI.

Table 2: Comparison of growth of High Value Products with Food Grains (Per Cent)

Period	Milk	Potatoes	Food Grains	Eggs
1985-86 to 1989-90	16.8	41.7	13.7	25.3
1990-91 to 1994-95	18.4	14.4	8.6	22.7
1995-96 to 1999-00	18.3	31.2	16.3	11.8
2001-01 to 2004-05	14.8	5.1	0.8	23.5
2005-06 to 2009-10	15.9	53.0	4.6	29.4
1985-86 to 2009-10	156	251	45	271

Source: Agriculture Statistics at Glance.

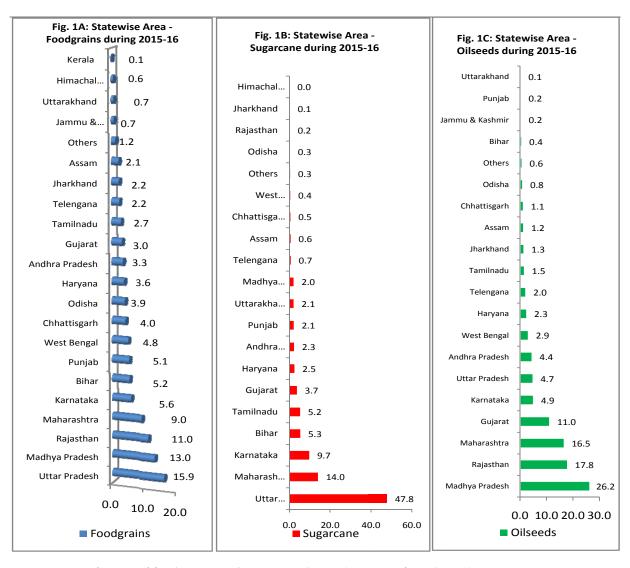


Fig. 1: State wise preference of food grains and commercial crops(Per cent of Total Area)

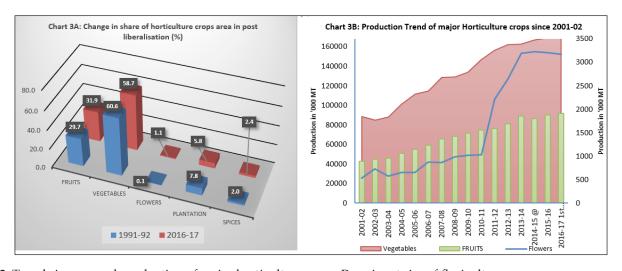


Fig. 2: Trends in area and production of major horticulture crops-Prominent rise of floriculture

leads to progressive mechanization and feasible amalgamations of farm land so as to benefits them from economies of scale. However, one should also guard for the scenarios where urban development lead to excessive rural fragmentation and rising land prices, which may hinder progressive farming. Since agriculture is a major user of rural space, it is essential that the urban-induced transformations of agricultural structures are monitored, so that more rational planning and strategies may be employed.

Urbanization & cropping pattern

The villages close to cities are supposed to be arteries supplying the essential agriculture and allied products. The cropping patterns in the surrounding areas of cities are more suitable for those agricultural products which have low shelf-life and cannot be effectively transported from hinterland. However, due to advent of cheaper and faster means of transportation and advance freezing technology, the classical notions of agriculture pattern has started withering. Notably, the prevailing incentive system of crop procurement and minimum support prices in India has emerged as the main factor determining the preference for cropping pattern. In fringe villages also, the traditional crops like Wheat and Paddy dominates as farmers are not sure of the marketability of alternate agriculture crops/products as they are also part of greater ecosystem influenced by assured procurement, marketability and returns on traditional crop.

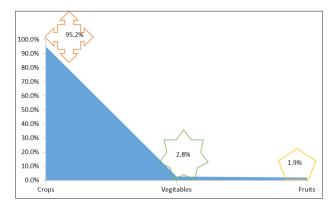


Fig. 3: Percentage of Gross Area Sown-All India Source: Author's calculation using State of Indian Agriculture 2015-16.

As per the latest available estimates for All India crops, gross area sown is 95.2 per cent as traditional agriculture relies predominantly on cropping of foodgrains and commercial crops. The vegetables area in total sown area is at 2.8 per cent and fruits at 1.9 per cent indicate the latent potential for diversification in India (Fig. 3).

The result of the survey shows a robust and lasting impact of urbanization on the cropping pattern in fringe villages on fringe villages and has impelling research value (Fig. 4). Given the fact that vegetables find ready market in surrounding city markets, almost 32 per cent of crops have been found to be devoted to vegetable production. This shows the impact of urbanization on cropping pattern mainly due to availability and proximity of market in urban areas to the villagers and their products/services. The survey finding that 13 per cent of cropping is devoted towards fruits points towards the pull of cities market impacting cropping pattern as most of the fruits are consumed in urban areas (being costly). Besides urban demand, a well-developed infrastructure (roads, electricity, cold storage, processing, input markets, information sources, etc.) in urban areas encourages farmers to diversify towards high-value perishable food commodities. For perishable commodities whose markets are not spatially integrated due to high transportation costs, the growing demand is largely met by urban and urban-surrounded districts, while cereals can be procured from locations farther away from urban centers.

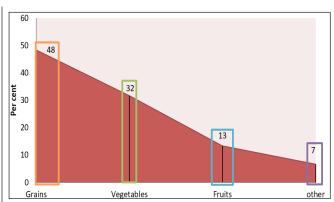


Fig. 4: Aggregate Cropping pattern in survey region

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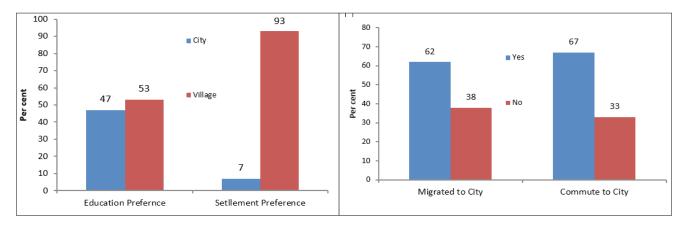


Fig. 5: Aggregate Preference chart for schooling, settlement, migration and commutation

Socio-economic effects of urbanization

Impact on Education

Almost all respondents acknowledged the positive influence of urbanization on the quality and availability of education. In fact this was termed as 'bridge of opportunity'. Forty seven per cent of villagers were sending their children in schools located in cities (Fig. 5). Thus, there was greater integration between villages and cities through education of children of villagers.

Mobility

Commutation is another parameter which indicates the extent of integration of villages with cities. As much as 67 per cent respondents were commuting to cities for different reasons. The fringe villages which have advantage of near distance and integrated urban life were impacted in different socio-economic ways. Migration: The level of migration also tells the urban-rural linkage and the opportunities that urbanization creates for rural people. As per the survey, family member from 62 per cent of residents have migrated to city. Mobility and migration are closely interrelated with livelihood diversification. Rural to Urban migration is a response to diverse economic opportunities across space.

Preference for settlement

Villages had universal appeal for a permanent home within villages has an emotional attachment and nostalgia. This survey reveals that 93 per cent of respondents prefer to stay in village for permanent settlement seems to be an outcome of complex dynamic force of economic, sociologic, cultural, emotional, administrative, etc., convenience and benefits. The prospective 'laldora' status makes any city-bylaws inapplicable. This they may leverage by renting business. The close knit family/relative structure provides them sociological security. Being attached to house of fore father gives them sentimental attachment to settle in their ancestral village itself.

CONCLUSION

The urbanization has impacted all contours of the economy with agriculture sector seeing the maximum impact. Within agricultural economy, urbanization impacted the fringe villages the most, creating a peripheral melting pot of transfusion of urban values across fringe villages which have set the process of de-villagisation. Urbanization is an important determinant with higher purchasing power of demand for creating higher demand for HVCs and explains the reasons for the above findings. Thus, increased pace of urbanization will definitely change the structure of cropping at rapid pace as nearby villages shift to HVCs and allied activates. The finding in the study is pointers toward the trend of adoption of higher value crops which competes with the alternative demand for land from urbanized segment of economy. It is expected that the trend towards change in cropping pattern towards commercial crops, vegetables, meat products, dairying, fruits, flowers and other high value agriculture products would get further

entrenched and acquire traction to create accelerated growth in agricultural and allied activities. However, escalated prices of land holdings of the fringe village are affecting the pace of change towards high value primary activities. Mindful utilization of the resources and respecting the territories of villages would lead to a Win-Win situation with farmers gaining prosperity through various economic and sociological linkages with urbanization and cities being assured of quality food products at reasonable prices and surplus land for settlement purpose.

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