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An Assessment of Inclusiveness in the Urban Agglomeration of Kochi City

The need for a change in approach of urban planning

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Abstract

Population growth in Kochi city is low by any standard of urban agglomerations. Low fertility and thereby a fall in the child population, increase of share and growth of main workers contributed by an increase in labour force participation among females, lowering of share and growth of marginal workers, are all positive factors, whereas non-decline of non-workers, high rate of growth of the slum region are the matters of concerns. All these evidences call for a change in approach of urban planning in Kochi City. However, public health measured by Infant Mortality Rate is showing significant improvement in Kochi city compared to state average.

Introduction

In today's interconnected world, over half of the world's population lives in urban areas, in which population growth will be rapid in the urban areas of developing countries, averaging 2.4% per year during 2000 - 2030 (Brunn et al, 2003). However, urbanization in India has been occurring, though slowly but matching with other developing countries and the proportion of the population in urban areas has been 31 per cent based on the 2011 census. Consequently, turn around in cities and its dynamism will be critical to India's future economic growth, which needs a change in the policy paradigm of state and the strategy must focus more on urban areas. The resulted strategy, therefore must include study each urban agglomeration in a careful manner so as to benefit all people who reside in urban area in an equitable manner.

Kochi city is the main urban agglomeration in Kerala and the city has been witnessed both big-bang and small developmental projects during the last one and half decade. Various developmental projects in Kochi city are International Container Trans-shipment Terminal, Info-

Park, LNG Terminal, and Metro-Rail Project. Because of huge investment and it resulted scale benefit in and around the city would have improved the standard of living of people through employment generations, ease of access to various basic facilities of life such as health, education and sanitation. In India, all layers of government, including centre, state and local authorities have formed various urban strategies and thereby announced many development projects with the intention of urban development. In the public sphere, development projects in the urban area are now miss-appropriately used as a measure of development without exploring much into the link between the projects implemented and its resulted standard of living of the people. From a development perspective, it is to be noted that along with the attainment of the objective of the project, the benefit of projects both direct and indirect benefit must pass on to people, especially to poor people and marginalized communities in the urban area.

This paper is an attempt to make an assessment of inclusive growth of urban agglomeration in Kochi city by comparing various development indicators mainly using census data and the data from registration department. The paper is divided into five sections. Introduction about the paper is followed by a second section i.e 'profile of Kochi city' which discussed the geographic and socioeconomic characteristic of Kochi city. The third section is engagement with literature discussed various issues in the literature and followed by data and methodology of the paper. The Fifth section is titled as 'Developments in Kochi City: A Comparative Analysis', which constitute data analysis and interpretation and finally followed by a conclusion.

II) Profile of Kochi City

The urban population in India is growing at an alarming rate and it now constitute around one third of the total population. The urban population in India has increased by 5 times as opposed to the population growth of 2.5 times during the last 5 decades and it is estimated that about 800 million Indians will be living in the cities by 2045 (Chakrabarti, 2001). The number of metropolitan areas in India grew from 5 in 1951 to 23 in 1991 and has approximately grown to 60 by 2011.

The Ernakulam district contributes the highest portion of Kochi city space. Kochi urban agglomeration mainly falls under two taluks of Ernakulam District — Kochi and Kanayannur Taluks. Kochi city contributes 14.47% to the state's GDP, out of which construction and manufacturing together contribute 37.01 % and trade, tourism and hospitality together provide another 20.03 %. Kochi is recognized as one of the seventeen major industrial cities of India as per the World Bank report on the Doing business Group.

Kochi city is the largest urban agglomerations in Kerala, in which facilities offering by the city are not less than or even can compare and compete with other metropolitan cities in India. The city of Kochi is the second largest city in Kerala and, is also a part of an extended metropolitan area, which is the largest urban agglomeration in the State. Kochi city is classified as a B-1 grade city by the Government of India and the city also ranks first in terms of the arrival of the international and domestic tourists in Kerala. Some of the unique features of Kochi city are ease of availability of electricity, attractive tourist locations, access to banking and other financial facilities, proximity to various transportation facilities such as a major port, international container trans-shipment terminal, harbor terminal and an international airport, which accelerated the industrial growth in the city and in the neighboring district. Main business activity in the city includes construction, shipbuilding, transportation & shipping, seafood and spices exports, chemical industries, information technology' (IT), tourism, health services, and banking.

In recent years the city has witnessed many small and heavy investment, thus making it one of the fastest-growing second-tier metro cities in India. The Kochi Port currently handles export and import at its terminal in Willingdon Island. The International Container Transshipment Terminal operates out of Vallarpadam, is India's largest transshipment terminal. Kochi Port Trust also plans to build an Outer Harbour near Puthuvype. Upon completion it will be the largest port in South Asia. The IT and ITES related industries are growing up in Kochi. Availability of cheap bandwidth through undersea cables and lower operational costs compared to other major cities in India has been to its advantage.

III) Engagement with literature

Inclusive growth has become a buzzword for development. Inclusiveness — a concept that encompasses equity, equality of opportunity, and protection in market and employment transitions — is an essential ingredient of any successful growth strategy (Commission on Growth and Development, World Bank, 2008). In India, the approach paper of twelfth five year plan clearly points out that the growth oriented policies should be combined with policies ensuring broad based per capita income growth and must benefit all section of the population, especially those who have deprived.

Inclusive growth is the appropriate perspective which can be used to make a scale for an assessment of urban agglomerations of Kochi city, in which issue of employment generation, access to various services such as health, education and sanitation, will have to be assessed in detail to see whether there has been any connection between the growth of Kochi city on one hand and the wellbeing of the people on the other. There is an increasingly unanimous view that growth by itself is not a sufficient condition for improving the welfare of the people and generally observed that growth will not benefit all people equally, rather some deliberate actions need to deliver the fruit development to all sections and sectors. Therefore, addressing life in India's cities is clearly not an elitist endeavor, but rather a central pillar of inclusive growth.

In India, it is estimated that cities could generate 70 percent of new jobs created in 2030, produce more than 70 percentage of Indian GDP, and drive a near fourfold increase in per capita incomes across the nation (Sankhe, Shirish, et al., 2012). If so, it can be also expected that the people who have close to cities would benefit and enjoy improved access to jobs, market, and the urban infrastructure. It is often argued in the literature that large cities exceed the optimum size, therefore development efforts should be directed to medium and small size cities (Mera, 1973). City size and cost of delivery of services are related each other and it must be noted that the cost of delivering basic services would be cheaper in concentrated population centers than in sparsely populated areas. Cities are also vital to the funding of development because they generate the lion's share of India's tax revenue. Urban development of India in a sustained manner would benefit the millions of rural Indians who live in proximity to cities will directly benefit. However, the cities themselves are not just place of equality and welfare. The majority of urban

citizen lives in the bottom segments and earn only a meager income which is just enough to sustain their livelihood in cities.

Based on the above review of literature, it can be expected that the urban agglomeration can contribute at least two ways for development. First, productivity will be higher in Kochi city because of huge investment and its scale effect. Second, scale benefits in cities through investment can significantly lower the cost of service delivery.

IV) Data and Methodology

Kochi city is part of Ernakulam District, located in the State of Kerala and the district consist of seven taluks such as Kunnathunadu, Aluva, Paravur, Kochi, Kanayannur, Muvattupuzha, and Kothamangalam. Kochi urban agglomeration represented by the Kochi Municipal Corporation falls in Kochi and Kanayannur Taluks and therefore is counted under both the taluks. Therefore, we have taken both Kochi and Kanayannur taluk as a proxy region for Kochi urban agglomerations because of data availability and its comparison. We have used two census namely Census 2001 and 2011 for the analysis. To assess the health status of population, we use the data of vital statistics published by the Registration Department of Kerala.

V) Developments in Kochi City: A Comparative Analysis

It has been expected that the urban agglomeration in Kochi city has resulted a fall in fertility, an increase of employment both in terms of quantity and quality, an improvements in health and other basic amenities of life. The growth of Kochi city in terms of population during 2001 - 2011 has been worked out as 4.77% (Table 1), that follows Kerala's trend in population growth, which is calculated at 4.91 %. It is to be noted that the Indian Census 2011 reported a massive migration to urban area since Census 1921 (Sainath, 2011). Given the high rate of migration to urban area, the population growth in Kochi city is low by any standard of urban agglomeration and the fall in population growth could be due to three possible reasons. First, the city might not have generated enough incentives for the people, especially those who live nearby to migrate to

cities. Second, with the development of the city might have led to a distress migration from urban to rural area, especially people of lower middle and low income household. Third, high daily commute to Kochi city and the reason is that they may not have sufficient income to have a permanent settlement within the city (Goswami et al 2015). This high daily commutation to Kochi city is not an unnoticed phenomenon as various literature on urbanization in India have noted that more and more people staying outside the cities and commuting everyday for work and work related purposes (Mohanan 2008; Chandrasekhar 2012; Bhagat 2011).

Table 1: Total Population in Kochi City

	Kochi 2001	Kochi 2011	% Growth
Person	1294762	1359618	4.77
Male	638460	669615	4.65
Female	656029	690003	4.92

Table 2: Total number of Household in Kochi City

Kochi 2001	Kochi 2011	% Growth
287430	338628	15.12

Table 3: Population in the age group 0-6

Population in the age group 0-6	Kochi 2001	Kochi 2011	% Growth
P	140393	123488	-13.69
M	71735	63116	-13.66
F	68658	60372	-13.72

Table 4: SC & ST Population

		Kochi 2001	Kochi 2011	% Growth
SC	P	95949	95664	-0.3
	M	46977	46847	-0.28
	F	48972	48817	-0.32
ST	P	2547	4775	46.66
	M	1295	2409	46.24
	F	1252	2366	47.08

Table 5: Literates

	Kochi 2001	Kochi 2011	% Growth
P	1094327	1198322	8.68
M	549958	594699	7.52
F	544369	603623	9.82

Table 6 : Non Workers

	Kochi 2001	Kochi 2011	% Growth
P	847733	843696	-0.48
M	288795	289452	0.23
F	558938	554244	-0.85

Table 7 : Slum Population

	2001	2011	% Growth
No Household	1594	2556	37.64
Population	5184	11377	54.43

Table 8: Infant Mortality Rate

	Kochi	Kerala
2009	8.92	6.84
2010	6.62	7.42
2011	7.12	7.53
2012	1.55	8.02
2013	2.57	7.22

Table 9: Workers

	Kochi 2001					Kochi 2011					% Growth of Main Workers between 2001 & 2011	% Growth of Marginal Workers between 2001 & 2011	% Growth of Total Workers between 2001 & 2011
	1) Main Workers	% Share	2) Marginal Workers	% Share	Total Workers	1) Main Workers	% Share	2) Marginal Workers	% Share	Total Workers			
P	382273	85.51	64756	14.49	447029	460120	89.18	55802	10.82	515922	16.92	-16.05	13.35
M	306175	87.49	43763	12.51	349938	350253	92.13	29910	7.87	380163	12.58	-46.32	7.95
F	76098	78.38	20993	21.62	97091	109867	80.93	25892	19.07	135759	30.74	18.92	28.48

Table 10: Composition of Main Workers

	Kochi 2001									Kochi 2011								
	i) Cultivators	% Share	ii) Agricultural Labourers	% Share	III) Household Industry Workers	% Share	IV) Other Workers	% Share	Total	i) Cultivators	% Share	ii) Agricultural Labourers	% Share	III) Household Industry Workers	% Share	IV) Other Workers	% Share	Total
P	2797	0.73	3891	1.02	9053	2.37	366532	95.88	382273	2471	0.54	4641	1.01	6952	1.51	446056	96.94	460120
M	2363	0.77	2968	0.97	6945	2.27	293899	95.99	306175	1976	0.56	3500	1.00	5195	1.48	339582	96.95	350253
F	434	0.57	923	1.21	2108	2.77	72633	95.45	76098	495	0.45	1141	1.04	1757	1.60	106474	96.91	109867

Table 11: Composition of Marginal Workers

	Kochi 2001									Kochi 2011								
	i) Cultivators	% Share	ii) Agricultural Labourers	% Share	III) Household Industry Workers	% Share	IV) Other Workers	% Share	Total	i) Cultivators	% Share	ii) Agricultural Labourers	% Share	III) Household Industry Workers	% Share	IV) Other Workers	% Share	Total
P	719	1.1	4345	6.7	2240	3.5	57452	88.7	64756	811	1.5	1898	3.4	1247	2.2	51846	92.9	55802

M	468	1.1	2316	5.3	932	2.1	40047	91.5	437 63	377	1.3	1103	3.7	500	1.7	2793 0	93. 4	299 10
F	251	1.2	2029	9.7	1308	6.2	17405	82.9	209 93	434	1.7	795	3.1	747	2.9	2391 6	92. 4	258 92

Average number of household has reduced in Kochi city in the period between 2001 and 2011 from 4.5 to 4.1, which is not significantly different from Kerala state where there was much reduced from 4.7 to 4.2 under the same period. Though the size of household came down, however the growth of the number of households is significant at 15 % (Table 2). While coming to child population, it can be expected that the child population in the city would be abysmally lower due to the low fertility rate among females who have employment opportunity and thereby the high opportunity cost of childbearing in the urban area (Sato et al, 2005). Kochi city showed an absolute decline of child population in 2011 as compared to 2001. The rate of decrease of the child population, therefore is at 13.69 % (Table 3), which is quite relatively a high rate of decline as compared to Kerala's child population showed only a decline of 8.44 %. Though there are many reasons for the decline of fertility, but the decline of fertility must be associated with increase of labour force participation among females (Bloom et al, 2009). This is quite well reflected in the data where the total workers among females has increased by 28 % whereas among males has increased only by 7% (Table 9).

It is quite surprising that under the period of observation, SC population in the city has shown an absolute decline by 0.30%, whereas in Kerala's decline of SC population is by 0.70 % (Table 4). With this data at hand, it can be expected that with the development of the city, may force, especially the people in the underprivileged and marginalized community out of the city and tend them to move into suburban areas (Watson, 2009). The loss of traditional livelihood of people with the development of the city might force them to sell off their land due to the appreciated land price. However, the absolute decline of SC population, both in the city and also in the state can mainly attribute to the change in the SC classification occurred in the state during the observation period and that may be the reason why there is an absolute decline of SC population. Under this period, some of the SC categories changed their caste to ST status and it is clearly reflected in the data that the ST population increased by 46.66% as oppose to the normal increase of 4.77 % (Table 4).

As per the census definition, worker means those who have worked for at least one day during the reference year. Total workers consist of main workers and marginal workers, in which main

workers means who have worked more than 6 months in the reference period and marginal workers means who have worked less than 6 months a year in the reference period. The increase of job availability might have been improved in the city due to implementation of various small and big-bang projects in Kochi City. In Kochi City, the proportion of main workers is improved from 85.51 % in the 2001 census to 89.18 % in 2011 (Table 9). The proportion of main workers in the city is relatively high as compared to Ernakulam district, is in the first place in the proportion of the main workers in the state accounts 84.88 % of main workers. As regards to the growth of the main workers in the observed period is 16.92 % where the growth is primarily contributed by the increase of main workers among females that increased by 30 % (Table 9). On the other hand, main workers among males increased only by 12.58% (Table 9). Increase of job availability, decline of fertility, participation of educated females, low family size, are the factors for the increase in the labour force participation among females. On the contrary, the share of marginal workers declined from 14.49 % to 10.82 % under the observed period (Table 9). Along with the share, the growth of total marginal worker has also declined by 16.05 % where the growth of marginal workers among male workers declined by 46.32 % (Table 9). But marginal workers under females are increased by 18.92 % (Table 9). These all are positive signs as far as employment situation is concerned. But the growth of marginal workers among females is a concerning factor given the high rate of employment generation in the city.

But there are certain questions yet to find answers such as-- has there been any improvements in generation of high class employment in the city space?. At first sight, the inclusiveness of employment in Kochi city has been satisfactory, which is also reflected in the data that the decrease of non workers by 0.48 % (Table 6). However, the trend is not uniform between male and female workers. Surprisingly, the percentage change of non workers among male workers has marginally increased by 0.23 %. On the other hand, non workers among female workers have decreased by 0.85% (Table 6). This relative improvement in the non workers among females is consistent with our observation about the increase of female labour force participation in the city. Nevertheless, the extent of inclusion in the case of employment has to be improved because the amount of absolute non workers is 847733 in the 2001 census which is declined only to 843696

in 2011 census (Table 6). This unchanged number of non workers can be attributed to two reasons, First, process of developments in the city may not have generated enough employment opportunity could be the reason why a large number of labors keep away from the labour market. Second, generated employment opportunities in the city may not be matching with the skill requisite for the job.

The main workers consist of cultivators, agricultural laborers, household industry workers and other workers. Same classification is with regard to marginal workers. Both main and marginal workers along with the category of 'other worker' dominated in the total work force and improved its share in the observed period. Under main workers, the share of 'other worker' is improved from 95.8 % in the 2001 census to 96.9% in 2011 census (Table 10). The share and the number of cultivators, agricultural laborers, Household Industrial labour, are low in census 2001, which is quite normal in a thickly populated urban space and declined further in the 2011 census. Same trend is following in the case of marginal workers. Under marginal workers, the share of 'other workers' is at 88.7% in 2001 census and increased its share to 92.9 % in 2011 census (Table 11).

Slum creation is an inevitable outcome of some unplanned city development. Both numbers of population and number of household in the slum region of Kochi city have shown an increase in the observed period, in which the percentage growth of households lived in the slum area showed an increase by 37 % whereas the number of the population lived in urban area increased by 54.43% (Table 7). Because of the nature of development of Kochi City requires more labour, especially manual labours, which are often migrate from other states, mostly West Bengal, Bihar and UP and these migrants usually settled in small tents nearby the work place. Another reason for the slum creation also is due to marginalization and deprivation which means that with the development of the city and consequently lose of their livelihood may force them to form some temporary settlement for their livelihood.

Infant mortality rate is the best available yardstick to measure the population health in a given area and it is defined as the number of deaths in children under 1 year of age per 1000 live births

in the same year. We use data on Infant mortality from 2009 to 2013 and it shows that except in 2009, the infant mortality rate in Kochi city is higher than state average. The difference of IMR rates between Kerala and Kochi city is showing significant difference especially in 2012 and 2013 (Table 8).

Conclusion

Cities are about more than just economic growth and higher incomes - they perhaps offer the best promise or a higher quality of life for the large number of Indians. Therefore, assessing the inclusiveness of urban agglomeration is much indeed effort needed for improving the welfare of the people live in cities. Urban agglomeration in Kochi has witnessed many big-bang and small development projects over the last one and half decade, which prompted to check how far these development projects benefited the people by way of employment generation and thereby enhanced the living standard of people who live in the city. Population growth witnessed in Kochi city is quite low by any standard of urban agglomerations and it indicates high daily commute to city due to the high cost of living in cities. Lowering fertility and thereby a decline in child population, increase of share and growth of main workers contributed by the increased labour force participation among females, lowering of share and growth of marginal workers, are the favorable factors which need further investigation. However, the growth of the city has not been able to reduce the number of non workers may be due to the miss match of the nature of generated employment and the skill requisite of people. City growth also witnessed slum creation which is evident both in terms of the number of people and household lived in slum and it is an inevitable outcome of some unplanned city development. However, the situation of public health measured by IMR is showing systemic improvement of health situation in Kochi city than the state average.

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