Equilibrium Of The Settlement Pattern In India

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The very title of this paper suggests that the settlement pattern in India is in a state of equilibrium and has remained so over a period of time. At the very start it might be useful to define what we mean by the word 'equilibrium' and for this purpose I have preferred the meaning given in the Chambers Twenty-first Century Dictionary. Equilibrium has different meanings in physics and chemistry, but I prefer the more general meaning given by the dictionary in which equilibrium is defined as "a state of balance". It is from this angle, therefore, that the subject will be approached.

The table below gives the total population of India,

Census Year	Total Population	Total Urban Population	Proportion of Urban Population
1901	238,396,327	25,693,125	10.8
1931	278,977,238	33,138,184	11.9
1951	361,088,090	61,986,721	17.2
1991	846,421,039	215,771,612	25.5
2001	1,028,737,436	286,119,689	27.8
2011	1,210,569,573	377,106,125	31.2

Source: 1. General Population Table A-4 Part-II 2001 (India &States)

2. Primary Census Abstract – Data Highlights-India – Series 1-2011

As will be seen, between 1901 and 2011 the total population of India has increased more than five-fold whilst the urban population has increased by about 17 times. Despite this as a proportion of the total population the urban population has increased by only about three fold in these 110 years. Undoubtedly the growth of urban population as compared with the total population is higher than the growth of rural population in percentage terms, but a three-fold increase in the percentage of urban population is not by itself alarming and is certainly not indicative of a skewing of the settlement pattern in which rural settlements are decaying and that at their cost massive urbanisation is occurring in India. In fact the census of India of 2011, the primary census abstract, states that the percentage growth of urban population indicates a 3.4 percent growth as compared with the previous decade, which is certainly not indicative of any massive rural to urban migration.

In 1985 the Government of India set up the National Commission On Urbanisation with Charles Correa as Chairman. I was its Vice Chairman. This is the first ever such a Commission

to be set up anywhere to take a total over view of urbanisation and to suggest a national policy in this behalf. In order to understand the urbanisation scene in India a good point of reference is the report of the National Commission On Urbanisation which was presented to the Prime Minister on 12th August 1988, though an interim report had been submitted to the Government of India as early as January 1987. The National Commission On Urbanisation was constituted by the Government of India on account of what the preface to volume-1 of the report states in the following words, "Future historians may well decide that the crucial phenomenon of our times is the massive urbanisation that is engulfing the third world. Even in the span of the last two decades towns and cities all over Asia, Africa and Latin America have been doubling and tripling in size. India, which has the second largest population in the world, is central to this phenomenon. It is indeed encouraging that for the first time the Government of India has appointed a National Commission to look into these issues". (NCU Report Vol. I page 2) The Commission noted that there was a significant difference between the pattern of urbanisation in India and that in Latin America and much of South East Asia. In 1981 the total number of urban settlements in India was 3301, whereas the rural settlements numbered approximately 5.5 lakhs. At the same time no urban settlement could be defined as a primate city such as Bangkok or Mexico City because no single city dominated the whole country. Mexico City has almost one-fourth of the population of Mexico. In India, by contrast, as against the urban growth rate of 46.2 percent in 1981, the growth rate of the then existing twelve metropolitan cities was less than 30 percent during the decade 1971-1981. It is the medium size towns which showed the highest growth rate. Though the tables relating to the population break-up of urban India have yet to be released by the Registrar General for the 2011 census, the picture prevailing in 1981 has not significantly changed in 2011. The only real difference is that many of the cities which were just below the one million mark have reached the one million mark and their number increased from 12 to 18 in 1991, 35 in 2001 and 53 in 2011. This only reinforces the point that it is the medium towns which have shown a consistently high growth rate and have become metropolitan in the process.

The issue can also be looked at from another angle. The census classification of urban settlements is metropolitan, or million plus, class-I ranging from 1 lakh to 10 lakhs, class-II ranging from 50,000 to 1 lakh, class-III from 20,000 to 50,000, class-IV from 10,000 to 20,000, class-V from 5,000 to 10,000 and class-VI from 3,000 to 5,000. The 53 metropolitan cities contain 19.24 percent of the total urban population of India. However, as a proportion of the entire population of India the 53 metropolitan cities account for just 6 percent of the total population. Therefore, in the total settlement pattern of India the metropolitan cities still only represent a very small proportion. In this behalf there is not much change between what prevailed in 1981 and what we find today.

There is another factor which we must take into account when we look at the share of urban population in the total population. About 7.5 percent of the urban population lives in towns ranging from class-VI to class-IV, that is, from 3000 to 20,000 population which represents about 2.5 per cent of the total population. When we deduct this from the total urban population, which is necessary because most of these towns are either linked with agriculture directly or provide marketing and other services to an agricultural hinterland which makes them more rural in character than urban, then the picture alters further. If we take their population into account and deduct it from the total urban population because even today such towns are semi-rural or semi-urban, then even today the actual urban population is only about 28 percent of the total population . At the macro level, therefore, one could safely state that India's population is

well distributed in a hierarchy of settlements ranging from the smallest hamlet and village right up to mega metropolitan cities such as Delhi and Bombay.

This picture is in sharp contrast with how things developed in China after the Revolution. China embarked on a deliberate policy of industrialisation, largely based on the secondary or manufacturing sector and by definition the Chinese model of development made industrialisation conterminous with urbanisation. A great deal of investment went into urbanisation, with people being actively encouraged to migrate from agriculture to manufacture and other urban activities. Today more than sixty percent of the people of China live in cities and towns. China also followed a deliberate policy of directing investment to provinces and autonomous regions which showed the maximum promise of industrialisation and it never had the equivalent of the Finance Commission that we have in India in which weightage is given to backward States and backward areas in the matter of allocation of non-plan central funds and sharing of revenues between the Centre and the States. Instead of promoting equity between different regions, through various programmes China welcomed migration of people from very backward regions to the cities so that the balance tilted heavily towards urban centres.

The governing philosophy in India is and has always been totally different from that in China. The National Commission On Urbanisation did comment as under,"Urbanisation involves two closely related factors. The first is the people—work relationship in rural areas, in which land is the essential medium—and which is right now so critically balanced that any addition to the population must inevitably push people out of agriculture into non agricultural occupations. The second is the fact that only urban settlements can offer substantial non agricultural employment and absorb the migrants who are moving out of an agricultural economy". (NCU Report, Vol.I, page 2). In this context the National Commission On Urbanisation, in setting out its philosophy, stated, "It is from this perspective that the Commission has examined the crucial issues and conceptualised the strategic thrusts needed for the next few decades --- without, in any way, questioning or preempting the development and reform which must be carried out with the greatest urgency within rural India itself ".(Report of NCU, Vol.I Page 3) Thus as early as 1985-88 the very Commission set up to study urbanisation and suggest a long term national policy in this behalf was acutely aware of the fact that rural India itself needs to be strengthened so that there is a continuity and continuum between rural and urban India to the mutual advantage of both. The Commission did suggest urbanisation as a means of siphoning off surplus rural population, but never as a means of actively encouraging migration from rural to urban areas, thus emptying rural India. The urbanisation policy, therefore, has to work in tandem with our policies of rural development. In other words, there is a definite appreciation of the fact that our settlements have a certain equilibrium which must be strengthened and not disturbed.

I shall return to the main hypothesis that there is an equilibrium in the settlement pattern but before doing do I would look at why rural India is still so important in our settlement picture. In many of the countries where either primate cities have developed or where there is a deliberate move towards urbanisation one would find that what lies behind between rural to urban migration is an iniquitous system of land tenure and holdings. In Mexico, for example, the ordinary peasant, or peon, held land entirely at the pleasure of the feudal lord of the hacienda and was no better than a serf in medieval England or Tsarist Russia. He, therefore, did not have a visceral relationship with the land that he tilled and, therefore, was quite happy to migrate to a town which offered him a better life. In China peasant proprietorship as enshrined in the ryotwari system in India did not exist and the peasant was entirely at the mercy of the landlord or, in

Russian terminology, the Kulak. That is why when the Revolution occurred in China it was the land lord who was persecuted to the point of death, just as the Kulak as a class was liquidated in the Soviet Union. Except for the Bengal Presidency where Cornwallis, through the Permanent Settlement, introduced an iniquitous Zamindari system, the rest of India practised ryotwari or where there was Malguzari, or Jagirdari, the tenant was still protected by law. This was further reinforced in the early 1950s of the last century as a part of land reforms when Jagirdari, Zamindari, Malguzari, etc., were abolished and the tiller of the soil became its owner. I am not trying to read into the situation a spiritual relationship of the farmer with the land, but the fact of ownership did create a vested interest in which the farmer would like to hang on to the land and use it to earn a living. That is why the approximately 5.5 lakh villages in India form such a powerful constituency that at policy level government is bound to promote what the National Commission on Urbanisation refers to as "development and reform within rural India".

Equilibrium, therefore, comes from the factum of rural India being the most populous entity in India, which had stagnated in the past, but which has now attracted policy attention at the highest level. The continuum is promoted because clusters of villagers need market centres where the produce can be traded and these market centres, in turn, become the service centres which provide services to agriculture and to other activities in rural India. Where the marketable surplus is huge as in the Punjab, the market centres, or mandis, developed into multi activity urban centres which have a defined hinterland and where there is mutual interaction to the benefit of both mandi town and the villages it serves. Between mandi town and the next order of towns ranging from a population of about 50,000 up to just short of a million, there is a definite link on account of agro based industry, banking and other services, education and health facilities and administrative infrastructure. The relationship of the district headquarters, tehsil and block headquarters, the market villages and the village settlement is visible, pronounced and very much alive. A good example of this is the National Capital Region which includes Delhi and towns and villages in an area of approximately 38,000 square kilometres, covering the States of Haryana, Uttar Pradesh and Rajasthan, besides the Union Territory of Delhi. The NCR was envisaged as a kind of protective envelope for Delhi which would, by ensuring the growth of a number of small and medium level towns, safeguard Delhi from excessive growth. What is forgotten is that the region itself is agriculturally prosperous and contains a large number of small and medium towns which has a viability of their own. Sonepat, Hapur, Alwar and Meerut would have survived even without NCR because they each have a hinterland which they service and with which they interact. The money spent on developing NCR could probably have been better spent in developing towns in those areas where there is economic backwardness and from where substantial migration takes place to large cities such as Delhi. Whereas the rural hinterland of the NCR is still vibrant, the NCR plan has actually resulted in on the one hand increasing the density of Delhi and on the other strengthening the gravitational pull of Delhi so that it has drawn cities such as Gurgaon and NOIDA into the mass of Delhi. This defeats the very purpose of the NCR plan. Despite this the 38,000 square kilometres of the National Capital Region still show traces of the basic equilibrium of settlements in India.

In the dynamic situation in which India finds itself there are number of forces and counter forces which are operating simultaneously and which are impacting the settlement pattern. The National Rural Employment Guarantee Scheme under the National Rural Employment Guarantee Act has been designed to give upto a hundred days unskilled wage employment per family per year to anyone in the rural areas seeking employment. Almost a lakh crore rupees per annum are being spent on this programme. I do not want to enter into the flaws of the

programme, which are manifold, but it has had one major effect in States such as Bihar from where there was migration of labour in search of employment to States such as the Punjab, which are starved of agricultural labour. By providing some semblance of wage employment in the villages NREGS has sharply impacted the migration pattern and today rich farmers in States such as the Punjab have to go to rural Bihar in order to cajole the landless and the marginal farmers to come and work as farm hands. This has certainly pushed up wages. Even in Madhya Pradesh in the more prosperous agricultural districts farm labour is difficult to find. It is too early to make any study of the overall impact of NREGS and its long term implications because there is wide variation in the number of people employed, but if the programme is restructured to create permanent assets in the villages, such as minor irrigation works, soil conservation and water conservation works, water harvesting, etc., it will certainly reduce rural-urban migration. These are the priority works suggested in the programme, but because the scheme is employment centric rather than works centric no meaningful works are undertaken. In fact in districts such as Jhabua, Dhar, Mandla, etc., which are tribal and from where annual seasonal migration is the normal feature, aggressive watershed development and management programmes in the past have increased fuel and fodder availability, raised the water table in wells, substantially increased irrigation at micro level and reduced seasonal migration. The ridge to valley treatment of hill features, vegetation and water conservation methods have all been beneficial to the environment. This has kindled hope in the villages, which show a degree of vibrancy which was hitherto missing and this is the road along which we should travel.

There are two other schemes which have also had a beneficial effect in retaining the importance of rural India in our settlement hierarchy. The first is the Pradhan Mantri Gramin Sadak Yojana which has dramatically improved road connectivity in rural India. The second is the rural electrification programme carried out in States such as Gujarat and Madhya Pradesh, where separation of the agricultural feeder from the normal feeder has ensured quality power at subsidised rates for the prescribed number of hours for lift irrigation and other agricultural purposes, while guaranteeing twenty-four hours normal power supply to every village, but for which there are metered charges. The availability of twenty-four hours power supply does not merely improve the agricultural picture. In many States guaranteed power availability has encouraged small scale industry to locate in villages. One example of this is Bhavnagar District in Gujarat where, in about 180 villages, households have installed diamond cutting lathes and other equipment, thus collectively making Bhavnagar District the biggest diamond cutting centre in the world. The activity is industrial, but carried out by agriculturists and the settlement picture remains undisturbed because the village is viable and people live there. Here is an example of small scale industrialisation not automatically leading to urbanisation, but nevertheless providing non agricultural jobs to villagers.

There is another factor which is having a definite impact on the settlement pattern and that is education. Unfortunately the village is too small an entity to host institutions of higher learning unless, of course, it be fortunate like Pilani to attract the Birlas to set up the Birla Institute of Technology and Science, an institution on par with an Indian Institute of Technology. Even here some change is visible, for example, the location of the Jaypee Institute of Technology in Raghogarh in Guna District of Madhya Pradesh. Raghogarh is a very small town in Guna District but the Jaypee Group preferred to locate in this place. But by and large children who want to go in for higher education have unfortunately to leave the village for a town where a good college is located. Very often these children do not return to their parent's occupation of agriculture and they are the ones who permanently migrate to cities. This is a phenomenon

which we can neither stop nor should stop. Whereas NREGS may as a stopgap measure check distress migration to the cities it cannot stop the movement of the educated young to urban areas.

The next question which arises is what should be the destination of migration. The first time educated would still be at the stage where after a basic degree they would like a job. It is unlikely that their interest would lie in research, academics or fine arts. This is where the hierarchy of settlements and the equilibrium have an important part to play. Because India does not have primate cities there is no single city which dominates, but the mega metropolitan cities do have some characteristics of a primate city, that is, they do not have a definite hinterland. The National Capital Region is not the defined hinterland of Delhi where, for example, about half a million people working in the garment trade have migrated from Eastern Uttar Pradesh. Are Azamgarh, Balia and Ghazipur the hinterland of Delhi? Obviously not, but yet they contribute labour to Delhi. Hapur does not. Similarly if the city of Bombay were to be set physically adrift from the mainland it could survive like the island city of Singapore in which the world would be its hinterland. In fact the entire Shiv Sena movement gains strength from the fact that Bombay does not have a hinterland and the Shiv Sena, in a bid to protect the Maharashtrian roots of the city, resents this fact and wants Maharashtra to be the hinterland of the city and the others to be kept out. And yet these huge metropolitan cities are very much a part of the entire settlement picture, representing as they do just six percent of the population of India. But it is the other ninety-four percent who are also accommodated in the settlement pattern and unless there is equilibrium they will virtually become the exploited and the mega metropolitan cities will be the predators and the exploiters. This is a very important factor in determining our settlement policy for the future which, by implication, means the entire economic policy and the employment policy.

By itself rural India has the capacity to be self sufficient, provided the following things are done:- (1) Substantially upgrading the existing irrigation infrastructure and then adopting means of massively increasing irrigation through a hierarchy of projects ranging from the village pond, dug well, tube well, micro and minor irrigation works and all the way up to mega projects like dams on the Narmada. (2) Stabilising power supply and ensuring twenty-four hours power supply to villages, but on a full tariff basis so that there are adequate returns on the power supply. (3) A massive input into improving school education, vocational education and technical education, together with encouragement to rural students to enroll in colleges specialising in Humanities, Social Sciences and the Liberal Arts. (4) Improving the network of rural communications, development of market villages and towns, strengthening of mandis, location of industry which adds value to agricultural produce in the mandi towns. (5) Strengthening the rural credit system so that the service town and farmers in its command both mutually benefit.

One important addition is the improvement of the IT and ICT infrastructure whereby there is a very substantial penetration of mobile and land line telephony into rural areas. Internet, communication technology and connectivity thereby have created an information highway which has joined different levels of settlements together as surely as an all weather road does. For personal communication, for accessing information, for seeking advice on a whole range of issues, for accessing market intelligence and accessing technology IT and ICT have together brought all Indians so close together that the gap between village and city has narrowed. One's physical presence in a city is no longer required for going about one's normal work and this is a major contributor to maintaining a settlement equilibrium.

There are some factors which are likely to bring about a change in the settlement equilibrium. India is beginning to realise that if it is to maintain and strengthen its strategic global economic strength, then its manufacturing sector has to evolve, develop and grow to an extent where it can compete with the European Union and with countries such as China. One step in this direction is the conceptualisation of the Delhi-Mumbai Industrial Corridor , which largely impacts the States of Haryana, Rajasthan, Gujarat, Maharashtra and Uttar Pradesh, as also the Union Territories of Delhi, Dadra and Nagar Haveli, Diu Daman and very marginally the States of Madhya Pradesh and Uttarakhand. The total area under the influence of the project is estimated to be 4, 36,486 square kilometres. The project is located along a 1,483 kilometres long dedicated rail freight corridor (DFC) largely from north to south on the western side of India, with an area of influence of about 150 kilometres on both sides of the DFC. As the concept paper states, "High impact market driven nodes are proposed to be identified along the corridor to provide transparent and investment friendly policy and facility regimes under which integrated investment regions and investment areas would be set up. These regions are proposed to be self sustained industrial townships with world class infrastructure, road and rail connectivity for freight movement to and from ports and logistics hubs, served by domestic and international air connectivity, reliable power, quality social infrastructure and provide a globally competitive environment conducive for setting up businesses". (Department of Industrial Policy and Promotion, Ministry of Commerce and Industry – DMIC Concept Paper August 2007, para 7, page 6) This is the concept, but in reality what is likely to happen is an unregulated ribbon development along improved roads and railway tracks in which in the growth nodes land would be provided, which would be built upon, though not necessarily in a planned manner. In almost every new industrial township whereas the infrastructure for the industry may be of a reasonable standard, generally township development for people other than those working in the industries is highly unsatisfactory and what we have is a massive proliferation of Soweto type slums, or the Favelas of Rio de Janeiro. What could happen, however, is that these new nodes or townships could eat into cultivable village land, finish agriculture and seriously disturb the settlement equilibrium, at least within the region in which such development takes place. In other words, there is no guarantee that the present settlement equilibrium will not be seriously disturbed in the near future, especially because we as a nation seem to be totally incapable of taking a holistic view of anything and then preparing a complete plan.

I have already given five small suggestions on how rural India can be self sufficient and, therefore, sustainable. A rural settlement is generally in consonance with the environment because the scale of the settlement is not sufficiently large to cause widespread environmental damage. Urban settlements, on the other hand, are large enough in scale to enable man to seriously change the environment through human intervention, largely hostile intervention and because an urban settlement converts land from cyclical and seasonal agricultural use to a one time urban use in which brick and cement replace the tilled soil, the impact cannot be reversed. In terms of service requirements, in dense urban settlements the requirement is of complex composite services, whereas in a rural settlement these services can be household based and they are not very extractive in terms of a call on natural resources. When the settlement equilibrium is disturbed the problem of servicing the city becomes so difficult that ultimately every city in India becomes a disaster zone. This does not mean that we cannot industrialise or urbanise in a manner which takes note of the environment and protects it, but it does mean that going by our experience we just do not plan or manage in this manner.

In fact if at the macro level there is still a basic equilibrium of settlements, at the regional and at the mili level and at the intra city micro level there is a very serious imbalance. So much so that in practically every major city in India we have a parallel existence of two cities. The first is a planned city for which there is a development plan or master plan. That probably covers about thirty per cent of the city. There is a parallel unplanned city of the unauthorised construction, the slums, the unserviced segments, which lie outside the ken of the planning process and where the people have helped themselves to land because the State has failed to provide. When interventions take place in such a situation they are bound to be ad hoc and almost totally politics driven. The prime example of this is the unauthorised colonies of Delhi which, at every election, are regularised, no development takes place and five years later they are regularised again. However much the National Commission On Urbanisation may talk about settlement equilibrium, the fact remains that this equilibrium is seriously endangered in our large cities and this has denied the people equity. A society which lacks equity cannot be said to be balanced and, therefore, more than equilibrium in spatial distribution we need equity in city planning and city administration.

One naturally likes to end on an optimistic note. The National Commission On Urbanisation was able to identify twenty-four urban corridors or spatial urban region, further divided into forty-nine Spatial Priority Urbanisation Regions (SPUR) which are well distributed throughout India. The Commission also identified 329 cities and towns, generally in the small and medium category, which have a potential for growth and have been designated as Generators of Economic Momentum (GEM). These are evenly distributed throughout the country, they are located in one or another SPUR and if planned investment is done they would be able to grow in tandem with the rural hinterland which they serve. In other words, the Commission has given a blueprint for urban growth which supports and enhances the basic equilibrium of the settlement pattern. Perhaps the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is partly a result of the concerns expressed by the National Commission On Urbanisation, but whereas the programme aims at enhancing the infrastructure of the existing towns, it does not go far enough in encouraging urbanisation in the manner suggested by the Commission.

In closing, the last point. Ultimately all activities take place on land and, therefore, anything which disturbs the land use pattern automatically disturbs the settlement balance. Sad to say India does not have a national, a State or a meaningful city land use plan. For example, in India sixty percent of its land is arable, thirty percent either under forest or is fit for afforestation and about ten percent is uncultivable waste. A sensible land use policy would try to retain this balance and design land use in a way that there is minimum disturbance of agricultural land and land which either is or potentially can be under forest. By accident Gujarat has moved towards a sensible land use policy in that much of the industry is now being attracted by districts such as Kutch where land does not have an opportunity cost because it is unsuitable for alternative purposes and, therefore, its conversion to industrial or urban use has the minimum impact on the environment. This is in sharp contrast with what happened in the past in which great chunks of fertile land in central and south Gujarat were given over to industry. Once we have a land use policy in place maintenance of the settlement equilibrium would become much easier.

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