

Discussion Paper No. 16

August 1994

URBAN DECENTRALISATION : A CASE STUDY OF THE KALYANI TOWNSHIP

Nandita Dasgupta

764
34
830
BRARY



CENTRE FOR URBAN ECONOMIC STUDIES

DEPARTMENT OF ECONOMICS, UNIVERSITY OF CALCUTTA

DISCUSSION PAPER NO. 16

August, 1994

URBAN DECENTRALISATION : A CASE STUDY OF THE KALYANI TOWNSHIP

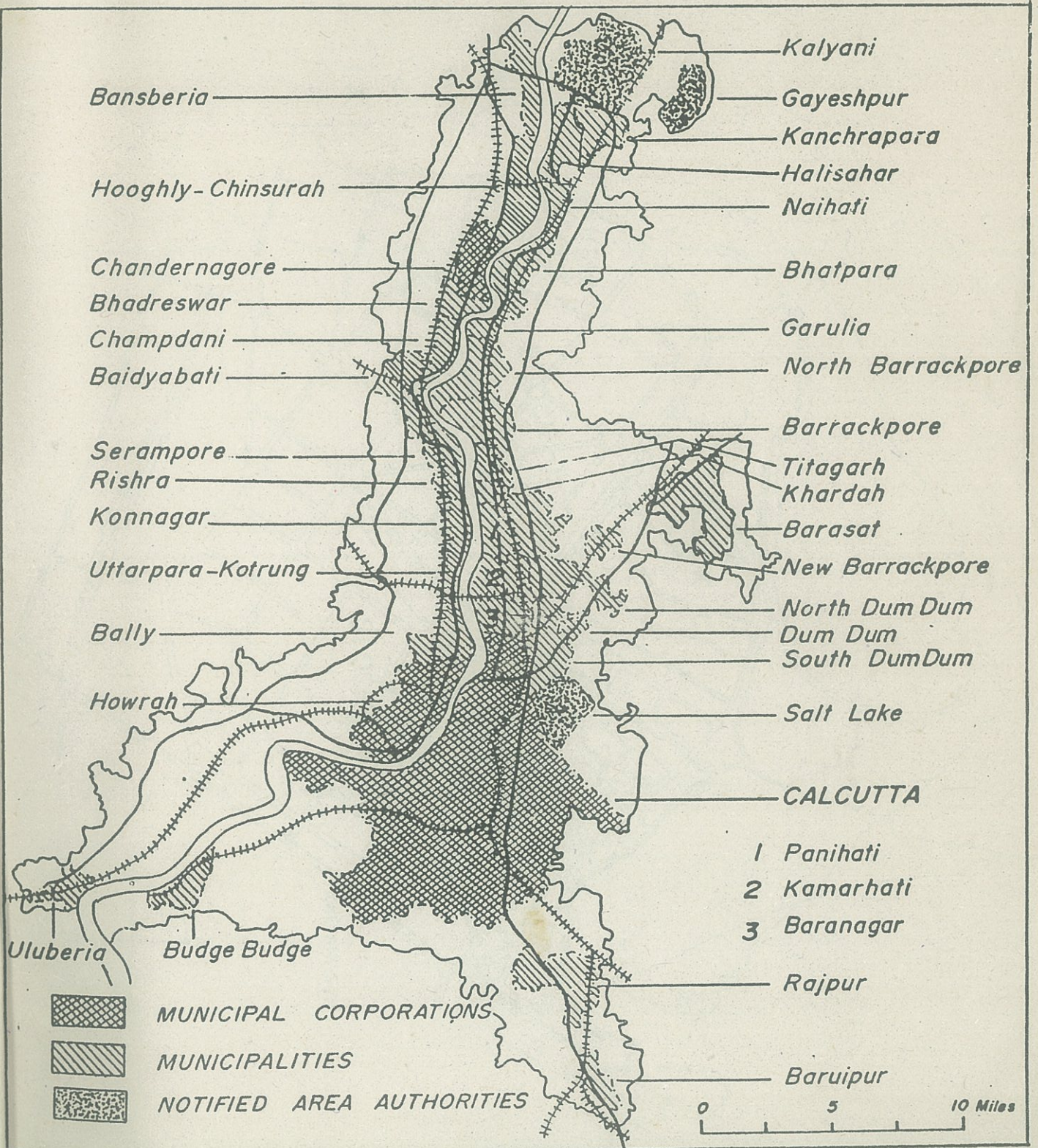
Nandita Dasgupta



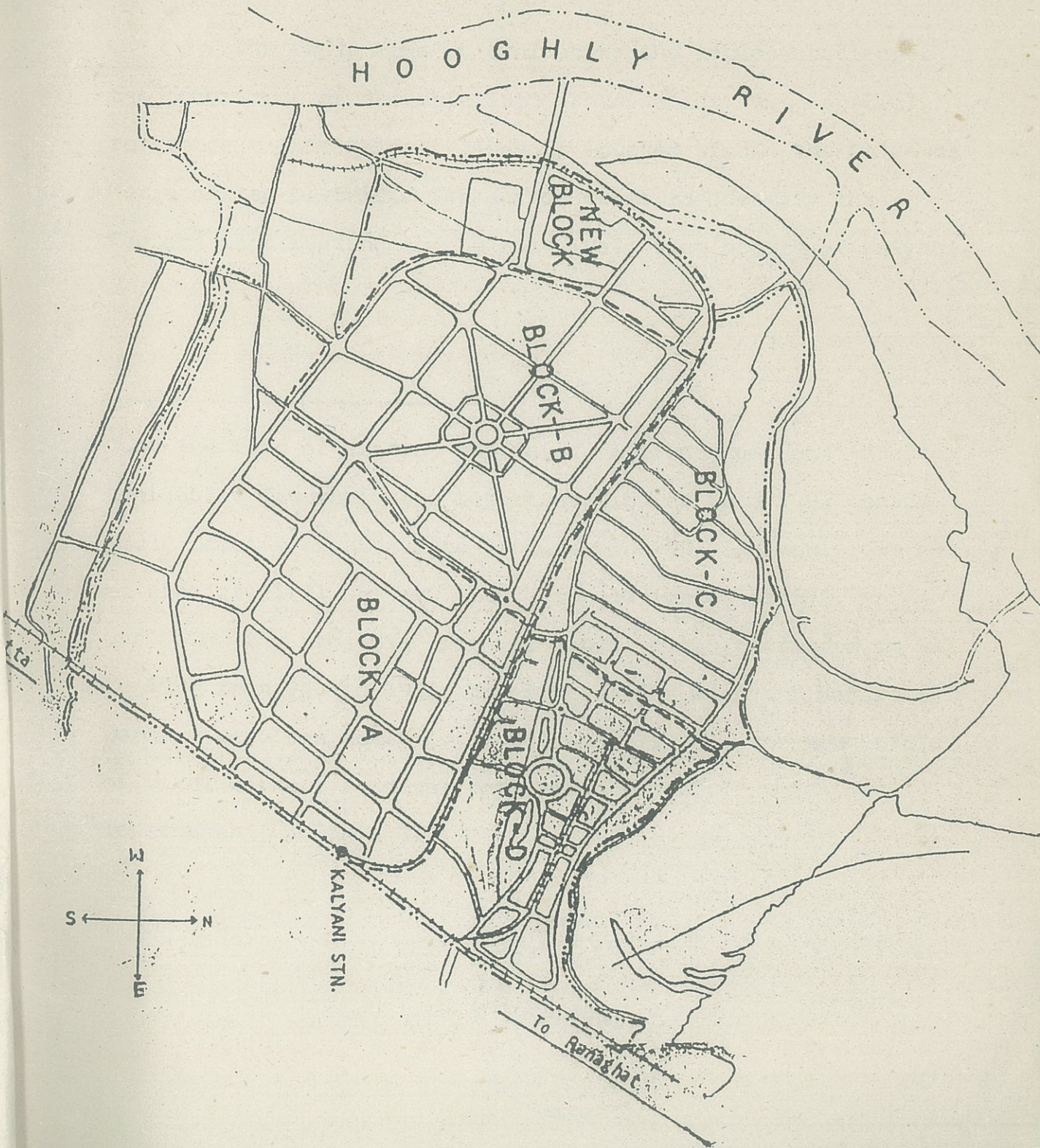
Centre for Urban Economic Studies
Department of Economics
University of Calcutta
1, Reformatory Street
Calcutta - 700 027
INDIA

The author teaches in the Department of Economics,
Bethune College, Calcutta

CALCUTTA METROPOLITAN AREA



Kalyani Notified Area



ABSTRACT¹

The paper aims at evaluating the implementation of the programmes of decentralised urbanisation, with special reference to the Kalyani Township located within the Calcutta Metropolitan District. The author tries to identify the factors contributing to the relatively slow growth of Kalyani.

¹ At the time of writing the paper, 1991 census data were not available. However, some important figures from 1991 census would provide an upto date picture. In 1991, Kalyani Town had an area of 21.91 sq. km. with a population of 55,579, which was below the projected figure. Gender ratio increased to 927 in 1991 from 860 in 1981. The figures for main and marginal workers were respectively 15,264 and 57. Thus the percentage of total workers to total population was 27.75 which was lower than that in 1981.



URBAN DECENTRALISATION : A CASE STUDY OF THE KALYANI TOWNSHIP

Nandita Dasgupta

I. INTRODUCTION

Throughout the Third World there has been a well marked tendency for most economic activities, most forms of social infrastructure, most decision making and consequently a large chunk of the urban population to be concentrated in a few metropolitan cities, so much so, that the main foci of power becomes located within them.¹ This process of spatial or geographical concentration of economic activities makes such urban centres a more attractive place to live in, which encourages rural-urban migration and also migration from the less developed urban settlements in the peripheral region in favour of the focal city, until the critical effects of overgrowth (via, excessive traffic congestion causing delay and additional expenses, pollution, deteriorating amenities like high land values, high rents, excessive building costs, inadequate provision of services for large segments of the population and declining social cohesion², among others) creep into the system, making urban problems very acute. Development plans formulated for such metropolitan cities usually take the view that their population should no longer be allowed to increase by any substantial amount and that there ought to be spatial dispersal of the relevant economic variables from the metropolitan core.³

Section II of this chapter endeavours to deal with the conceptual issues relating to decentralisation. Section III makes brief survey of the decentralisation strategy of urbanisation as envisaged in the basic development Plan (BDP),⁴ while Section IV concentrates on a brief evaluation of the implementation of the programmes of decentralised urbanisation, with special reference to the Kalyani Township

located within the Calcutta Metropolitan District (CMD).

II. CONCEPT OF DECENTRALISATION : MAIN ISSUES

Planning for urban decentralisation implies several priority policy issues, such as the following :

policies to restrict migration to metropolitan cities;
policies to influence location of industries, decongestion of cities and redistribution of population;
policies for the establishment of new and/or satellite towns as counter-magnets to the growth of big cities.

All these policies share in common the wish to control and restrict the growth of the larger cities and to stimulate the expansion of the economies of smaller urban centres in the peripheral areas. Spatial deconcentration, thus, broadly encompasses the twin aims of population and employment deconcentration.

We take the view that population dispersal without the decentralisation of economic activities, cannot be viable. A new settlement, which is purely residential in character, and is without an economic base would require daily commuting to the work place by its residents, at a high cost in terms of travelling time and transport fare. This might seriously undermine the planned objective of population dispersal.

The objective of employment deconcentration from major cities can be pursued in a variety of ways; e.g., by prohibiting the location of new economic activities in the largest urban centres or making those expensive by way of taxes and various charges or through incentives to location (e.g., tax incentives, provision of infrastructure, construction of industrial estates, etc.) in the peripheral regions. It may seek to relocate existing economic activities to smaller urban centres, and it may also effect dispersion of governmental

activities in the new towns. This deconcentration of economic activities helps both to reduce regional disparity between the metropolis and its hinterland both physically and economically; and to effect decongestion in the metropolitan cities.⁵

While effecting employment deconcentration, a major stress is given to the location of manufacturing activities in the new towns, although manufacturing employment seldom accounts for the largest source of employment in the metropolitan cities.⁶ Various reasons may be put forth to explain this emphasis on manufacturing activities :

(i) although service sector plays an important role in the larger cities, most services are consumer-oriented and thus closely tied to the population of the cities. These population-serving activities are not greatly amenable to locational control, though these might be influenced by internal metropolitan planning;

(ii) manufacturing firms are more mobile, judged by the number of firms and employment, the distance of the move and the range of new locations selected, compared to establishments in the service sector (viz., government departments and institutions like courts, banks, etc.), the latter having a limited scope of relocation;

(iii) manufacturing employment is likely to have a greater multiplier effect (for example, by way of the emergence of ancillary companies whose presence lowers its own operation costs) on the local and regional economy than a similar employment expansion in the service sector.

While it is agreed that population deconcentration and employment dispersal complement each other, their practical implementation is not easy.⁷ According to Jakobson and Prakash, Indian planners today admit that the decentralisation efforts have failed, that the concentration of industries of all scales has continued in the large cities

and that regional disparities have increased rather than decreased.⁸

The implementation of the policy of dispersal and decentralisation involves a considerable initial outlay of public capital and the diversion of resources, primarily financial resources, for infrastructural development (e.g., land development, housing, roads, bridges, factories, hospitals, schools, offices and so on). The initial investment by the government sets the scheme apace. Now, for the successful sustenance of the economy therein, is the need for private capital, generally in the form of investments in private manufacturing units. Durgapur, the steel town in West Bengal, can be cited as a case which has attracted such private capital investments by the large and small scale manufacturing units of different types. Table 1 shows the capital contributions by the large scale production units of the Durgapur town. Planning involves direct or physically identifiable benefits of investment on one hand; while, on the other, new values are created which constitute the indirect or physically unidentifiable gains of investment. Thus, implicit in the decentralisation policy, are general social and cultural gains, which transcend monetary terms of valuation.⁹

III. THE BASIC DEVELOPMENT PLAN AND THEREAFTER

The Basic Development Plan of the Calcutta Metropolitan District, keeping the objective of decentralisation in mind, contemplated that the initial renewal and growth effort within the CMD would be concentrated on two major areas - the Metropolitan Centre (metro-core comprising the existing industrial, commercial and service-core in Calcutta and Howrah plus areas at their fringes) and the Kalyani-Bansberia area,

approximately twentyfive miles to the north, located on both sides of the river Hooghly. The binodal plan was expected to dilute the centripetal attraction of the metro-core and to promote Kalyani-Bansberia as the counter-magnet. This proposed new urban centre was too far from the metropolitan centre to encourage daily commuting but close enough to enjoy some of the external economies available there. The relatively compact form of the recommended new settlement was deemed to be essential for creating an urban image, in order to attract families that would otherwise settle in or around the metropolitan centre. BDP also took up the issues of the development of the Salt Lake City in the marshy lands of East Calcutta and Kona in West Howrah; the former was proposed to be a residential township for the upper and middle income groups.

By 1976, that is within ten years of the publication of BDP, there took place a policy shift from the binodal strategy towards a multinodal one, as confirmed by the proposed Development Perspective and Investment Plan (DPP, 1976) of CMDA. This shift may be partly attributed to the poor rate of development of Kalyani, while several other municipal centres were growing fast, and thus proving more effective in dispersing population from the metro-core. The multicentre framework, as a proposed metropolitan structure of CMD, consisted of partially self-contained units connected by strong linear corridors of transportational movement. It was assumed that river crossing facilities would be available at various locations, so that trans-river movement could take place, thus helping the emergence of a number of twin-centres (one of them being Kalyani-Bansberia). These centres would make available specialised institutional service facilities

for commerce, finance, wholesale trading and other business activities, along with local administrative offices and would also act as the District Centres,¹⁰ providing major organised community facilities. These new composite centres were envisaged to forge new link between the two banks,¹¹ thereby facilitating balanced and harmonious development.

DPP also planned the dispersal of activities within CBD to some desired locations in close proximity of the CBD to deal with the problems of unbalanced growth within the metro-centre. The three major centres proposed by DPP were as follows :

(i) the CBD itself, which the Calcutta-Howrah city core stretched on both banks of the river and connected only at a single point, by Rabindra Setu (Howrah Bridge);

(ii) the Salt Lake metro sub-centre as a strong focal point of governmental activities, where a large part of the existing central and state government offices, scattered all over the city, were to be concentrated;

(iii) the Kona business centre (West Howrah), which was proposed as a new transportational and wholesale facility centre of the CBD, with a modern truck terminal. Kona's proximity to the two National Highways and the new Hooghly Bridge made it an appropriate location in this regard. Expansive storage facilities were planned to be built at Kona to relieve the Burrabazar area of CMD, at least partially, of bulk storage.

Within five years of the publication of the DPP, another document was prepared by CMDA, the Perspective Plan and Action Programme for CMD (PPAP, 1981).¹² This plan proposed a set of 'satellite -centres' around Calcutta and Howrah such that further intensification of population and activity would be possible in the small urban areas of CMD,

and, thus a limited degree of decentralisation from the metro centre would be effected. Such sub-centres, which included Kalyani, were contemplated to be self sufficient with no great necessity for the population to commute to CBD for the services they sought.

IV. THE KALYANI TOWNSHIP

The development of Kalyani was first mooted in the early fifties, as a well-designed, self contained satellite town, presumably with the following objects :

(i) to divert a part of the massive migration towards the city of Calcutta, particularly of the refugees, which added to the already heavy burden on its services and equipments;

(ii) to attract and absorb a substantial proportion of the surplus population flowing out of Calcutta;

(iii) to help with the dispersal of industries;

(iv) to accommodate some of the state government offices, and, thus, to bring about at least a partial decentralisation of certain administrative functions.

The Basic Development Plan incorporated Kalyani within the CMD with some modifications, the most important of which, as stated earlier, was its status as an important node, along with Bansberia across the Hooghly river, in the projected binodal structure of CMD.¹³ By then, Kalyani township had already been nourished with an infrastructure capable of supporting a substantial growth. The comprehensive development plan of the new town synthesised various elements of civic life into a workable order for creating a sound physical, human and socio-economic environment. The package of elements included the following :

(a) land use zoning, (b) transport and communications,

(c) power, water supply, drainage and sewerage, (d) industrial and commercial activities, (e) community services and facilities, (f) housing and (g) employment.

We are now discussing these in turn.

(a) Land use

The Government of West Bengal selected for development, in the early fifties, an abandoned US army base (then known as Roosevelt City) lying at the northern fringe of CMD, within the jurisdiction of Haringhata Police Station under Ranaghat subdivision of Nadia district.¹⁴ The total land area readily available here for constructing the proposed township was quite sizeable; of over 4000 hectares (ha). As the land was already requisitioned under Defence of India Rules and West Bengal Land Development Act of 1948, there was no need for any further legal formalities to be completed for the take-over and development of the area. An area covering some 2500 ha around the erstwhile Roosevelt City was encircled by a good concrete road built during the war, portions of which are still to be seen on the ground. Some more land over and above the already possessed good land was acquired from the neighbouring villages to set up the Kalyani township.

Since the land was already processed, the reclamation and development were relatively low, as also the land selling price after development. The major part of the land within the Kalyani township being government owned, the total amount spent on compensation paid for acquiring the land was relatively small. The government ownership of the land in Kalyani helped to keep the land price under control. This low land cost was one major reason why the new township was developed in this particular place.

The cost of land development was so low that the government could offer residential land in the sixties at Rs. 500 to Rs. 600 per cottah in Block B and Rs. 1100 to Rs. 1200 per cottah in Block A of Kalyani. No wonder, that all the residential lands of Kalyani have long been sold out. The official escalation of price for the resale of the land is only 10 per cent of the original price, while it is reported that, unofficially, transfers of residential lands are taking place at more than 20 times the authorised price. This may be a rough indicator that Kalyani has the capacity to attract more urban population now.

The new town of Kalyani was expected to have an areal coverage of some 4000 ha. and a total population of about 2,00,000. Of the total area of the scheme, so far the Kalyani Notified Area (KNA) contains 2914.48 ha., while the total population of Kalyani, as per 1981 census, was no more than 38,334, which is less than one-fifth of the projected population.¹⁵

The original plan for Greater Kalyani (4000 ha.) allowed for a density of 50 persons per hectare, and the net residential density would have been around 200 persons per hectare. However, the gross density, actually stood at only 13 persons per hectare as per 1981 census (Table 2), and the net residential density turned out to be 113 persons per hectare. While Kalyani was expected to be a rather low density town; the actual density was even lower. The rate of accumulation of population was even lower in the earlier phase : by 1971 Kalyani could attract only 7000 and about another 15,000 by 1971-1976.¹⁶

What may be the plausible reasons for such low density in Kalyani? One major reason is that the current rules of building construction in Kalyani do not permit raising of

multistoreyed buildings.¹⁷ Further, there was a strategic error at the time of the sale of plots; instead of selling the land near the mass transit system (Kalyani station) first, and then penetrating inwards along with the development of internal transport, the land was sold simultaneously all over the township, without first creating intra-township transportation facility. This dearth of communication facilities was instrumental in discouraging settlement in Kalyani in accordance with the projections made in BDP. Another error was that the plots were not sold on a priority basis, i.e., to say, first to the householders already engaged in local employment and therefore willing to settle in Kalyani; it was sold out to any person who could afford the price. Now, with values soaring up at Kalyani, like in any other places within CMD, many of the owners of land are engaged on speculation for purpose of sale. They are generally not inclined to reside there because of its distance from the metropolitan core and lack of adequate transport facilities within the city and between these two nodes. It is also worth mentioning that many of the plots sold out at Kalyani were rather large; with the restriction on cooperative housing schemes their individual owners cannot afford to build houses covering a good part of such big plots, given the increasing costs of construction. This may be a major reason for the low township density for the first three decades. However, now with Bansberia-Kalyani Expressway being nearly complete, which would link Kalyani on the east bank of Hooghly with Bansberia on the West side, and the railway line having entered Kalyani (upto Kalyani-Simanta Station), the location has become somewhat more attractive to the commuters. With growing congestion in the metrocore, rising land values in the peripheral regions (like Sodpur, Kamarhati, etc.) and gradual improvement in the inner road transport connections, population density now seems to be on the increase in Kalyani, albeit somewhat slowly. The projected population data in

Table 2 indicate that population density per hectare can potentially rise between 1991 and 2021 A.D.

It will be seen from Table 3 that, as it is planned, the largest share (26.48 per cent) of town area would eventually be devoted to residential use. Yet it is too low a share for any large town.¹⁸ Even then a very small percentage (only 15.54 per cent) of the total land devoted for residential purposes had been developed and occupied by 1985 (Table 3). On the other hand, a very large amount of land (22.79 per cent) is planned to be left as open space comprising parks etc., forest land and water bodies. Some 15.68 per cent of the area is marked for industrial use, while as much as 11.89 per cent of land would be used by educational establishments. Utilities like roads and railways would take 9.02 per cent of the area, leaving hardly 2.48 per cent of land for commercial use. It can be pointed out that commercial land use should normally account for 4 per cent to 6 per cent of the total developed area of a new town.

There are many other oddities in-built in the present land use structure of the town. For example, in Block A, which was initially planned as a purely residential area, many industrial units (e.g., gas bottling plant of Indian Oil Corporation) were in trade, thus vitiating the environment and inhibiting residential growth. Besides, most surprisingly, in the heart of Block A a large plot of land is now occupied by a dairy farm spread over 30 hectares of open space. Such large farms in the primary sectors of the economy should normally be outside the limits of a town. Block A, being closer to the railway station, has a greater prospect of residential development, than Block B, which is, apart from being quite far from the Railway station, is weakly linked with the other mass transit facilities of Kalyani.

What is ultimately required is a more balanced land use pattern with a view to lifting Kalyani from the present level of low profile, moribund township to at least a medium size city with multiple functions instead of leaving it as a disjointed structure of four so called planned blocks (A, B, C, D) having no economic integration between them.¹⁹

Let us now compare Kalyani's experience with that of the Salt Lake City in this regard. So far as Salt Lake is concerned, land use irregularities have come up in a different way. The BDP in 1966 had planned Salt Lake as a residential township whereas the DPP in 1976 decided upon shifting the incremental government activities to the new urban centre of Salt Lake. This shift in land use has created several problems for the Salt Lake city some of which are as follows :

(i) the huge group of people, communicating daily to Salt Lake to work at the establishments located there, were not accounted for in the original plan;

(ii) since roads were built in conformity with the requirements of a residential township, this change in the land use pattern, leading to a continuous flow of heavy vehicles to and from Salt Lake, is telling upon the road conditions of this township;

(iii) because of the increased population pressure during day time, the ground water level is gradually falling;

(iv) the traffic congestion at Ultandanga (the entry point to Salt Lake), caused by the movement of commuters to and from Salt Lake, is costing heavily in terms of time, energy and welfare loss.

(b) Transport

Lack of reliable and rapid transit facilities has been held as being largely responsible for the slow growth of the township from the very initial phase of development.

The original plans did not spell out the needs of the internal transport system. Currently, buses, bicycles, cycle-rickshaws and autorickshaws are being used for travel. There is only one bus route (No. 27) with approximately 14 buses which ply from Kanchrapara railway station to Kalyani. Another but route (No. 22) operates between Jaguli and Kalyani, catering, to some extent, to the internal population of the latter.²⁰ A regular and frequent intra-township bus service, connecting the residential block B to the main railway station, would make the latter more attractive, while more passengers would make these routes more profitable for the private operators.²¹ Only a few autorickshaws have been plying in Kalyani, because of lack of regular demand.

The development of the Kalyani township, as the second node of a binodal plan structure, immediately calls for transportation links (railway and road linkages) between Kalyani and the Calcutta Business District. Train connections from Sealdah Station to Kalyani Main Station, have improved since the mid-seventies, owing to the electrification of locomotives. There are nearly 57 trains per day from Sealdah to Kalyani Main Station between 3.40 a.m. and 11.40 p.m. The same number of trains ply to Sealdah via Kalyani Main Station between 4.21 a.m. and 11.36 p.m.²² However, of these, only the Sealdah-Kalyani Simanta trains move into the township, via Silpanchal (industrial area) and Ghoshpara stations. The construction of a branch-railway line through the heart of the town to its western extremity (Kalyani Simanta Railway Station) did not help much in terms of intra-town transportation as it runs between the residential sectors of the town (Blocks A and B) on the one hand and the educational and industrial sectors (Blocks C and D) on the other.

Table 4 shows the figures for the flow of travellers from Sealdah Station to the four different stations in Kalyani for January and February, 1989.²³ The relatively high figures of passengers to the Kalyani Main Station show how important this station is to the neighbouring settlements, e.g. Gayeshpur. It also shows that many travellers intending to enter the township alight at Kalyani Main Station and then takes some other conveyance, rather than depending only on the Kalyani Simanta train. The total figures show that anything between 120 to 150 thousand commute per month. Approximately 4971 passengers commuted daily to Kalyani in January 1989 while the figure of February was 4557 on an average. As against that the daily numbers of passengers commuting to Chakdah, a neighbouring subdivisional town on the north, were, on an average, 414 and 337, respectively, in January and February, 1989.

A new road-bridge was proposed in the BDP of CMD to be built across the Hooghly between Bansberia and Kalyani - the third after the bridges at Howrah and Bally on the 85 Km. stretch between Kalyani and Budge Budge on the river Hooghly - which would connect the eastern and western halves of the Kalyani-Bansberia centre and, thereby stimulate development in this centre. This proposed bridge would provide a direct roadway connection between Kalyani and the western half of CMD, thus reducing by nearly 64 Km. the road length between Kalyani and all locations in the north Grand Trunk Road corridor, including the Asansol-Durgapur industrial complex.²⁴ It was conceived to be a two-lane facility initially, with a capacity of approximately 23,000 vehicles per day (both directions combined), and was recommended for construction during the 4th plan period (1969-1974) to facilitate the early development of Kalyani. The bridge,

including the highway over it, was to have been completed by 1976 as per plan. But its construction was delayed, hampering the prospects of Kalyani; the road bridge construction has just been completed.

With the road bridge and several truck terminal points, Kalyani can serve as an efficient point of collection and distribution for its hinterland, i.e., Nadia and Murshidabad, not only with respect to the local products but also with respect to the goods and raw materials coming from the rest of India across the Hooghly. These goods, instead of coming via Calcutta for redistribution, could then be directly moved to Kalyani for redistribution in the region. The Food Corporation of India (FCI) godown at Kalyani, too, is expected to function more efficiently with the opening of the bridge.

(c) Power, water supply, drainage and sewerage

BDP had proposed that Kalyani should be offered at least equal and, if possible, preferential treatment (in relation to the metropolitan centre) in the provision of power. The then existing price structure was recommended to be changed to make power available at the same rate to Kalyani as in the metropolitan core.²⁵ At present, power is supplied to Kalyani from the Bandel Power Station from across the Hooghly river by the West Bengal State Electricity Board and from Calcutta Electric Supply Corporation. But, the recommendations of BDP as regards the price of electricity has been ignored, thus prejudicing the industrial growth of Kalyani.

Supply of fairly good quality ground water is adequate. Existing water supply facilities in Kalyani are planned to supply about 180 litres (40 gallons) of water per capita per day. No new scheme is under way to augment

this water supply; the water resources is actually under-utilised because Kalyani has not yet reached the targetted level of population growth. The existing water distribution system is, however, three and half decades old and requires replacement or thorough overhauling in the near future.

Kalyani has a well designed underground sewer system and also a separate storm-water drainage system. The sewage affluent is given biological treatment through biofiltration before its final disposal into the Hooghly river. However, the contemplated expansion scheme for sewerage system is yet to be taken up and the sewage treatment plant is not functioning properly, especially due to the recent rise of the Hooghly water level, following a greater discharge of water from Farakka Barrage. As a result, the sewage of Kalyani is being treated only partially before being discharged into the Hooghly river, thus adding to its pollution. Furthermore, continued under-utilisation has resulted in the siltation of the sewerage lines.

(d) Community services and facilities

Educational facilities : Though as much as 12 per cent (346.49 ha.) of the land area is earmarked for educational use, the educational facilities actually available at Kalyani are far from adequate for a growing town. There are two recognised nursery schools, one of which is being run by the Kalyani University, though more and more (unrecognised) nursery schools are now coming up within residential areas. Nine primary schools are known to exist in the town. While there are four high schools, one being at the Higher Secondary level. However, the standard of schooling is not high, Kalyani is fortunate to have a full-fladged university where one can have higher education both at honours degree and post-graduate levels. The Kalyani University (lying in Block C), has been allotted 301 ha. of land, less than one-third of which

(97.12 ha.) has been put to some use, including the residential hostels and living quarters. The remaining two-thirds of the university area are either lying vacant or are under unauthorised occupation by encroachers and squatters.

Formal educational institutions apart, quite a number of technical and vocational training centres of varying types are also located in Kalyani, especially in Block B. Such institutions include an Industrial Training Centre for vocational education, a training college for school teachers, an Orientation Training Centre of the state government, a Regional Telecommunication Training Centre run by the Telephone Department, a sewing training institution, a wood industries training centre and Netaji Subhas Cooperative Training College and Aurobindo Bhawan.

Medical facilities : Kalyani is fortunate to have more than adequate medical facilities, having two big and modern hospitals (both in Block A) and several health clinics. The general hospital (Jawaharlal Nehru Memorial Hospital) is a pretty large one, having some 550 beds and being served by 61 doctors. The other one is the 205 - bed Employees State Insurance Hospital especially set up for industrial workers, served by 16 attending physicians. The two hospitals not only meet the medical requirement of the local population but also draw patients from far and near. Besides the two hospitals, there are 16 health clinics or dispensaries having 10 beds and also four private nursing homes, two of them being located in Block A and two in Block B. In relation to the population of Kalyani, the medical facilities appear to be more than adequate.

Recreation facilities : BDP (1966-86) recommended as a potential major recreation space a major park area in Kalyani on swampy land south of Kalyani township and the extension of the Eastern Metropolitan by-pass to the proposed Kalyani Bridge. It was proposed to be extended to the low lying land

along the river Hooghly north of the proposed Kalyani Bridge.

Kalyani has more parks and open spaces than any other town in West Bengal. It has a provision of 110 hectares of organised open space, mainly located in the planned residential section (Block A and B) of the town, which can be used for various recreational purposes. The area under parks and playgrounds, however, comes to 34.57 hectares.²⁶

A beautiful picnic garden has been laid out in Block B, which is used not only by the townsfolk, but also by parties visiting all the way from Calcutta. There are six playgrounds and three large parks for use by the residents at sector or block level, while there is a provision for as many as 82 parks to serve as the neighbourhood open space for recreation. Some of the park are ill-maintained and some exist on paper only, especially in Block A. Blocks C and D do not have much of parks.

Though facilities available for indoor games are rather negligible, there are nine club houses at Kalyani. Besides, there is one library, namely, Kalyani Public Library. Though there is one public auditorium for indoor cultural performance, no cinema hall exists within Kalyani proper, although there is one outside Kalyani near the main railway station. One swimming pool has been built in Kalyani, but there is no organised water-based recreation at present.

(e) Industrial and commercial activities

Kalyani was built as a manufacturing-cum-service town. Therefore, parallely to a well designed tertiary sector, it was expected to have an organised industrial sector. At the time of the formulation of the BDP Kalyani provided an excellent industrial location.

Certain incentives were suggested by the BDP for attracting industries to Kalyani. One proposed measure was the establishment of a State Industrial Development Corporation. The state government itself showed the initiative by setting up a state-owned spinning mill at Kalyani (and expanding it further at a later date) and also a wood industries unit. Such initiative attracted some more industries into the new township.

Over the years, some industrial activities have been developed in and around Kalyani. Though no mining activity as such is carried out in Kalyani area, the sands and silts available from the bank of Hooghly river are extensively used in making bricks, both under private and public sectors. The West Bengal Brick and Tile Board owns some of the brick kilns at Kalyani.

There are some 30 medium sized industrial units in Block D. None of these is operated by the town authorities themselves, though some of the units are government undertakings. There are a few small scale industrial units in the industrial estate of Kalyani. The possibility of developing Kalyani as a centre of agro-processing industries was not considered in the plans for Kalyani.

The commercial base of Kalyani is poor, involving a limited number establishments (Table 5). As per 1971 Census, hardly 744 persons in Kalyani town were engaged in petty trade. The goods sold, both in the formal and informal sector, are mainly of consumer type. Kalyani could not grow as a wholesale centre for any commodity.

(f) Housing

No formal housing was provided to the construction workers in Kalyani, not even temporary hutments during the construction phase. As a consequence, quite a few unplanned

squatter colonies had sprung up within the new town of Kalyani during the period of construction of the township. Nor any provision was made in the town plan for the service population, including manual workers, domestic servants, washermen, sweepers, scavengers and others. They come from the older settlements and squatter colonies within the town and some come from the surrounding villages. Some 40 per cent of the working population belonging to the informal sector have also found their accommodation in squatter colonies, as also in the older village settlements falling within Kalyani Notified Area.

However, for the industrial workers, there are some, though inadequate, housing estates within Block D; 25 low income group housing estates with 8 dwelling units in each. Industries in Block D were not permitted to construct residential quarters on their land. Due to lack of housing facility, some 10 to 12 thousand workers commute to Kalyani daily from the surrounding areas. If sufficient residential accommodation is offered to the industrial workers, the population of Kalyani would shoot up immediately. This is equally true of the non-industrial employees employed in different institutions at Kalyani.

Most of the families in Blocks A and B are living in self-owned accommodations; only a small percentage of population is in rented accommodation in these two residential sectors. There is a lack of required tenantable houses for the middle class, although a good deal of demand exist.

If we consider the status of occupancy in the residential plots of the main residential tracts of the town, i.e., Blocks A and B, the picture is really grim: hardly 27.79 per cent of the plots has so far been occupied as indicated in Table 6. Paradoxically, while most of the township is still lying empty, at the same time there is a great demand for accommodation for local industrial workers and

and service holders working in Kalyani.

In the main residential Block B, the plots are of fairly large size, often varying from 337 square metres to 1,349 square metres (5 to 20 cottahs) each. If the owners are allowed by the Government to dispose off a part of their land to others, it would meet the considerable demand for land that exists in Kalyani. But the current regulations do not permit private or direct transfer of land from one owner to the other. However, clandestine transactions of transfer of ownership are going on. If some arrangement could be devised for easy transfer of land from the present plot holders to the needy ones, or bifurcation of plots, and normal market forces were allowed to operate within a certain controlling mechanism, then more and more houses would come up at Kalyani and thus help to solve the accommodation problem. If need be, present restrictions regarding resale of holdings would have to be removed or suitably modified, accelerating rapid transfer of land to those who are in urgent need of building residential houses or other establishments in Kalyani.

In many cases, persons working in Kalyani maintain two establishments, residential quarters allotted to them by their employers at Kalyani and their own home elsewhere where they actually live with the family. One of the major reasons behind this tendency is that Kalyani lacks really good schools to cater to the needs of the middle class urban population.

(g) Employment

In 1981, the work force at Kalyani consisted of 11,914 workers of which 11,495 were main workers and 419 remaining ones were marginal workers largely in the informal sector (Table 7). This working force constituted 31.2 per cent of total population in 1981 as against 30.5 per cent in 1971.

To attract more population it would be worthwhile to examine ways of expanding employment opportunities. The state government initially had the plan of shifting certain government offices to Kalyani. However, Kalyani has recently been made a sub-divisional town in the Nadia district, thus necessitating the shifting of certain government offices from Ranaghat. Some more offices in Kalyani now would help increase the employment opportunities which, backed by good housing schemes, would boost Kalyani's population.

In this connection it may be worthwhile to compare the characters of urban growth of Kalyani with certain other towns in the Nadia District. Table 8 reveals that, although Kalyani is a planned township, yet the population size of the neighbouring refugee town, Gayeshpur, is higher. Gender ratio (per thousand males) is however, lower in Kalyani relative to Gayeshpur, thus exhibiting the migrant character of the population of Kalyani. The population level of Kanchrapara (a railway town), is more than double that of Kalyani. Halisahar (another industrial town) has a still higher population level. It remains a paradox why Kalyani town, with its abundant infrastructural facilities, could not grow like Kanchrapara or Halisahar.

The relatively higher rate of urban growth of population in Kalyani over 1971-81 provokes optimism about the future of Kalyani. With the completion of the bridge over the river Hooghly, there is a fair chance of Kalyani developing as an important nodal point in the CMD. (Bansberia, on the other bank of the Hooghly river, should also be developed parallelly). For this the following needs would have to be satisfied : (1) cheaper internal transport; (2) provision of a truck terminal; (3) development of agrobased industries; (4) good schools attracting better types of students; (5) expansion of housing schemes (including vertical expansion); (6) thorough overhauling of water supply, drainage and sewerage systems (including sewage treatment and disposal systems); and (7) development of commercial activities.

NOTES

1. Alan Gilbert and Josef Gugler, Cities Poverty and Development : Urbanisation in the Third World, London, 1982.
2. Bertrand Renand, National Urbanisation Policies in Developing Countries (A World Bank Research Publication), Washington DC, 1981.
3. Gilbert and Gugler, op. cit.
4. Calcutta Metropolitan Planning Organisation, Basic Development Plan for the Calcutta Metropolitan District 1966-86, Calcutta, 1966.
5. Gilbert and Gugler, op. cit.
6. Renand, op. cit.
7. Gilbert and Gugler, op. cit.
8. L. Jakobson and V. Prakash (1974), 'Urban planning in the context of a new urbanisation', in Leo Jakobson and Ved Prakash (eds.), Metropolitan Growth : Public Policy for South and Southeast Asia, New 1974.
9. Town Planning Institute, Report on Planning in the London Region, London, 1956.
10. Calcutta Metropolitan Development Authority, Development Perspective and Investment Plan (1976) for the Calcutta Metropolitan District, Calcutta, 1976.
11. Ibid.
12. Calcutta Metropolitan Development Authority, Perspective Plan and Action Programme for the Calcutta Metropolitan District, Calcutta, 1981.
13. Calcutta Metropolitan Planning Organisation (1966), op. cit.
14. Centre for Study of Man and Environment, Kalyani : An Environmental Assessment Report, Presidency College, Calcutta, 1985.
15. Ibid.

16. Calcutta Metropolitan Development Authority, Structure Plans for Calcutta Metropolitan District, 1982, p. 6.
17. Centre for Study of Man and Environment, op. cit.
18. R.L. Muni Chakravorty, A Project Programme for Revitalising Kalyani and its Environs, prepared for the Government of West Bengal, Department of Public Works (Metropolitan Development), (unpublished), 1982.
19. Centre for Study of Man and Environment, op. cit.
20. The information given here on the internal transport system of Kalyani has been obtained on the basis of informal interviews.
21. Information is obtained from informal interview with the local residents.
22. Eastern Railway, Suburban Time Table, November, 1988.
23. Office of the Booking Collector, Sealdah Station, March, 1989.
24. Calcutta Metropolitan Planning Organisation, Traffic and Transportation Plan for Calcutta Metropolitan District, 1966-86, Calcutta, 1967.
25. CMDA, Basic Development Plan, op. cit., p. 51.
26. Adopting the recommendation of the Committee on plan projects (Town and Country Planning Organisation, Government of India, 1975) of 1.62 hectares of open space for a population of 1000 persons, Kalyani should now have 17.35 hectares of open space (see Centre for Study of Man and Environment (1985), p. 60).

TABLE - 1

CAPITAL INVESTMENT BY CERTAIN PRIVATE SECTOR LARGE SCALE
INDUSTRY UNITS OF DURGAPUR, 1981

(unit : Rs. '000)

Name of the enterprise	Fixed capital (closing)	Physical working capital (closing)	Working capital (closing)	Depreciation
Phillips Carbon	13324	27961	93445	1844
East India Pharmaceutical	3509	785	800	691
Durgapur Cement	60449	16957	3288	8500
ACC Vickers Babcock	44850	197819	183916	3248
Sankey Wheels	10908	25576	10896	1069
Jessop Iron Foundry	21122	4571	3462	φφ

φφ Figure not available

Source : Office of the Bureau of Applied Economics and
Statistics, Government of West Bengal.



TABLE - 2
POPULATION GROWTH IN KALYANI

Year	Population			Decadal increase (%)	Density (persons/ hectare)
	Male	Female	Total		
Actual population					
1951	-	-	311	-	-
1961	2952	1664	4616	1384.24	2
1971	10310	8124	18310	299.66	6
1981	20575	17705	38280	109.07	13
Projected population					
1991	34760	30240	65000	69.80	22
2001	49470	43530	93000	43.08	32
2011	63500	56500	120000	29.03	41
2021	79000	71000	160000	25.00	51

Sources : Census of India, 1981;

Report of Center for Study of Man and Environment (1985).

TABLE - 3

LAND USE TYPES (EXISTING USE AND FUTURE PROVISIONS IN KALYANI NOTIFIED AREA)

Sl.	Land use	Developed and occupied (ha.)	Vacant and under-developed (ha.)	Total area (ha.)	Percent to town area	Percent to total area developed so far
1.	Residential	119.95	651.91	771.86	26.48	6.90
2.	Industrial	229.38	227.71	457.09	15.68	13.20
3.	Commercial	41.30	30.96	72.26	2.48	2.38
4.	Hospital	43.02	-	43.02	1.48	2.48
5.	Educational	129.48	217.01	346.49	11.89	7.45
6.	Public and semi-public uses	54.67	21.29	75.96	2.61	3.15
7.	Roads and railways	263.00	-	263.00	9.02	15.14
8.	Open spaces	636.00	28.33	664.33	22.79	36.61
9.	Rural settlement	104.41	-	104.41	3.98	6.01
10.	Unauthorised occupation	115.05	-	115.05	3.98	6.68

Sources : R.L. Muni Chakravarty, A Project Programme for Kalyani and its Environment, prepared for the Government of West Bengal, Dept. of Public Works (Metropolitan Development), by Indian Institute of Technology, Kharagpur, 1982;
Report of field survey (1984-85) by the Centre for Study of Man and Environment.

TABLE - 4

MONTHLY FLOW OF PASSENGERS FROM SEALDAH STATION TO KALYANI

From Sealdah Station to	Rail fare	Passenger flow (PCT+MST+QST) ^φ	
		January '89	February '89
Kalyani	4.00	120353	107337
Kalyani Silpanchal	4.00	27541	15125
Kalyani Ghoshpara	6.00	981	2063
Kalyani Simanta	6.00	3238	3066
Total		15,4113	12,7591

φ PCT - Passenger car ticket; MST - Monthly season ticket;
QST - Quarterly season ticket.

Source : Office of the Booking Collector, Sealdah Station.

TABLE - 5

COMMERCIAL FACILITIES AT KALYANI

Type	Local body	Government	Others	Total
Shopping centre	-	1	-	1
Retail market	3	1	-	4
Wholesale market	-	-	1	1
Warehouse (FCI)	-	1	-	1
Total	3	3	1	7

Source : Kalyani Notified Area Authority, as quoted in the report of Center for Study of Man and Environment, 1985.

TABLE - 6

THE STATUS OF OCCUPANCY IN THE RESIDENTIAL PLOTS OF BLOCKS A AND B OF KALYANI

Block	Number of occupied plots	Number of vacant plot	Total number of plots
A	381	2,229	2,610
B	1,830	3,516	5,346
Total	2,211	5,745	7,956
Percent to total	27.79	72.21	100

Sources : Report of Center for Study of Man and Environment (1985);
Office of Kalyani Notified Area Authority.

TABLE - 7

WORK PARTICIPATION IN KALYANI TOWN

Year	Main workers	Marginal workers	Total workers	Percent to total population
1971	φ	φ	5,590	30.53
1981	11,495	419	11,914	31.12

φ In 1971 there was no such classification.

Source : Census of India (1971, 1981).

TABLE - 8

URBANISATION IN SEVERAL TOWNS AROUND KALYANI

Name of town	District	Size class	Population (1981)	Percentage change in population during 1971-81	Gender ratio, 1981 (female/1000 males)
Kalyani	Nadia	III	39,257	109.07	860
Gayeshpur	Nadia	III	41,667	93.69	954
Krishnanagar	Nadia	II	98,141	14.13	962
Kanchrapara ^φ	24-Paraganas	II	88,798	12.73	840
Bansberia	Hooghly	II	77,020	24.73	808
Halisahar	24-Paraganas	II	99,366	44.21	768

^φ Excluding outgrowth.

Source : Census of India, 1981, Series 23, West Bengal, District Census Handbooks, Nadia and 24-Parganas Districts.

CENTRE FOR URBAN ECONOMIC STUDIES

Discussion Paper Series

1. Solid Waste Management in Calcutta Metropolis - Pabitra Giri and Sulipi De (May, 1992).
2. Waterlogging and Issues Relating to Drainage in Calcutta Metropolitan District - Arpita Bhattacharyya (June, 1992).
3. The Structure and Working of an Urban Labour Market in India : A Survey of Two Residential Locations in Calcutta - Asis Kumar Banerjee (July, 1992).
4. Evolution and Growth of Municipal Towns in Calcutta Metropolitan Area - Mahalaya Chatterjee (August, 1992).
5. Wholesale Market : Study of a Market in Calcutta - Projjwal Sengupta (September, 1992).
6. Thika Tenancy in Bustees of Calcutta : A study - Swati Ghosh (October, 1992).
7. Aspects of Goodsflow in Calcutta Metropolitan Area - Pabitra Giri (November, 1992).
8. Housing in Calcutta : Problems and Policy Issues - Nipa Ghosh (December, 1992).
9. The Metro Rail of Calcutta : A Study - Kuntala Lahiri (January, 1993).
10. Passenger Transport in Calcutta Metropolitan District - Sudeshna Sen (February, 1993).
11. Consumption and Income in Calcutta Metropolitan Area - Indrani Chakrabarty (March, 1993).
12. Some Aspects of Calcutta Port - Arun Prasad Sen (April, 1993).
13. Metropolitan Growth and Demographic Changes in Calcutta - Pabitra Giri and Shukla Bhaduri (May, 1993).
14. Urban Environmental Issues : A Study of Calcutta - Ashis K. Ghosh (January, 1994).
15. Calcutta Port : Problems and Prospect - Sachinandan Sau (July, 1994).

