CHAPTER - 10

EMPIRICAL FINDINGS : A RESUME

1. In Delhi, between 1948 and 1989, about 93,000 acres (4,30,598 bighas) constituting about 25.4% of the total land of Delhi have been acquired for public purposes under plan and non-plan schemes.

2. In 1955, the Delhi Development Authority was established to execute the 'Master Plan' of Delhi and effective land acquisition for the planned development of Delhi started from the year 1959.

3. Out of the total land acquired in Delhi from 1948 to 1989, 94,033 (22%) bighas were acquired under non-plan schemes and 3,36,565 (78%) bighas were acquired under Plan Schemes.

4. For the analysis purposes, the land has been distinguished as 'Plan' land that was acquired for the DDA for planned development of Delhi and non-plan land that was acquired for public departments like PWD, Education Deptt., Flood Deptt., Health Deptt. etc. for public purposes like roads, schools, drain, hospitals etc. which were not part of the 'Master Plan'.

   Temporally, the time periods were taken as 1948-58 (non-plan period), 1959-89 (plan period), 1959-69, 1970-79 and 1980-89, the first, second and third decades of planned development respectively.

   Spatially, Delhi was divided into seven regions viz. Delhi region (DL), Shahadara region (DS), Mehrauli East region (ME), Mehrauli West region (MW), Narela Region (N), Palam North Region (PN), and Palam South Region (PS).
EMPIRICAL FINDINGS: A RESUME

5. Temporally, in general, the total, plan and non-plan land acquired declined from the period 1959-69 to the year 1970-79 and then increased in 1980-89 thus making a half cycle with peaks in 1959-69 and 1980-89 and trough in 1970-79.

The maximum of 1,97,594 bighas of total land was acquired in 1959-69 followed by 1,64,675 bighas in 1980-89 and 68,327 bighas in 1970-79.

In case of plan land, the maximum of 1,47,123 bighas of land was acquired in 1959-69 followed by 1,39,372 bighas in 1980-89 and 50,070 bighas in 1970-79.

Within the period 1980-89, the maximum land of 95,257 bighas was acquired after the amendment of L.A. Act in 1984 and in case of non-plan land, the maximum of 50,471 bighas were acquired in 1959-69, followed by 25305 bighas in 1980-89 and 18257 bighas in 1970-79.

6. Spatially, in the period from 1948 to 1989, maximum land of 93,424 bighas of land was acquired in PN followed by 87,101 bighas in ME, 71,405 bighas in N, 69,776 bighas in MW, 59,823 bighas in DS, 37,826 bighas in PS and 28,317 bighas in DL.

7. Regionally, Plan and Non-Plan land was acquired in all the regions. Except in PS, the proportion of Plan Land has been greater than the Non-plan land. The Plan land was acquired above average in ME, MW, PN and N regions whereas it was below average in DL, DS and PS regions.

8. The growth rate of total land acquired for the period 1948-89 was 6.44%. For Non-Plan Land it was 30.19% p.a. for the period 1948-58 and for Plan Land it was 6.44% for the period 1959-89. During the Plan period, the growth rate of Plan though positive was very low (0.49%) whereas that of Total and Non-Plan land was negative.

9. During the Non-Plan period, DS, ME, MW, PN & PS regions except Delhi and Narela experienced negative growth rates whereas during the Plan Period all the regions registered negative growth rates with variation among them.
10. In Non-Plan period the land acquisition in all the regions has remained low generally below 500 bighas per year. During Plan period (1959-89), it ranged among the regions from 800 bighas in Delhi to 3000 in PN. In the three decades of Plan development, the average was highest in the first decade followed by third and second decades.

11. The absolute area acquired in Delhi regions has varied being maximum in PN and ME, followed by N,MW,DS,PS and Delhi with 47% coefficient of variation.

12. On the average, 2022 bighas of land has been acquired per village with 146% CV among 352 villages of Delhi. There has been high variation in respect of land acquired among the regions and among the villages within a region.

Spatially, there was greater uniformity among the villages under Plan Schemes. Except PS, absolute land acquired under the Plan Schemes was around 75% of the total land.

13. In Delhi, a total of 3277 awards were drawn during the period from 1948 to 1989 with 88 awards per year. During Non-Plan period (1948-58), 153 awards were drawn with an yearly average of 17 awards whereas during the Plan period (1959-89), 3094 awards with an yearly average of 100 awards were drawn.

1442 awards in the period (1959-69), 621 in the period (1970-79) and 1032 in the period (1980-89) were drawn.

1621 awards were drawn under Non-Plan and 1656 awards under Plan Scheme from 1948 to 1989.

Total no. of awards were more uniformly distributed as compared to the Plan as well as Non-Plan awards

14. The area per award steadily increased in the first decade, fluctuated in the second decade and increased in third decade. The average size of award was around 100 bighas and it was around 200 bighas in case of Plan Schemes.
15. Regionally, the average time taken per award was greater than 2000 days in DS, ME, & PS. Under Plan Schemes, it was 2572 days as compared to 845 days under Non-Plan Schemes.

Temporally, the average time per award showed a downward trend during Non-Plan period with an average of 747 days whereas during Plan period it increased from 1/2 year to 8 and 1/2 years with an average of 5.4 years.

16. It took 13.20 days to acquire one bigha of land on the average from 1948 to 1989. In regions DL, DS, ME and N it took more than average while in MW, PN, PS it took less than average. Further, it took longer time i.e. 13.75 days to acquire one bigha under Plan Schemes than under the Non-Plan Schemes i.e. 11.75 days.

17. The total compensation assessed in Delhi from 1948 to 1989 for the acquisition of 4,47,671 bighas of land was Rs.337.32 crores out of which Rs.293.82 crores were assessed for 3,36,564 bighas of land under Plan Schemes and Rs.43.50 crores for 1,11,107 bighas for Non-Plan Schemes. In other words, 87% of the total compensation was assessed for Plan Land.

Regionally, maximum compensation was assessed in ME (83.05 cr.), followed by PN, MW, N, PS, DS and DL (Rs.14.08 cr.). Temporally, the compensation during the period (1948-89) showed increasing trend. The compound growth rate of total compensation was 16% for the entire period and only 8% during the Plan period (1959-89).

18. The rate of compensation for Delhi over the period (1948-89) increased steadily and was Rs.4,912 per bigha on the average. It was Rs.818 per bigha during Non-Plan period and Rs.6365 per bigha during Plan period.

The average rates during the periods 1959-69, 1970-79 and 1980-89 were Rs.1,945, Rs.3,994, and Rs.13,597 per bigha respectively.

During the Plan period (1959-89), the average rate for Plan Land was Rs.6365 and Rs.5817 per bigha per non-plan land.
19. The averages of overall period showed very high rates in DL and ME regions as compared to other regions. The difference between the highest and lowest was almost 12 times. During the Plan period, the rates were higher in the regions DL, ME and PN as compared to DS, MW, N and PS.

20. The pattern of periodic average rates of compensation among Delhi regions that emerged during four decades of acquisition was that differences were large in the first decade and declined in the second decade with planned development but again grew larger in subsequent two decades.

21. The rates in DL, DS and N were lower than the average C Rates of Rs. 7535 per bigha of Delhi as a whole while those in ME, MW, PN and PS were above the average with highest of Rs. 9535 in ME. The CV was only 28%.

The average rates under non-plan schemes were higher in DL, ME, MW and N than the average of Rs. 3915 for Delhi as a whole. The CV was 37%. The average rates were higher in ME, MW & PS and lower in D, DS, N and PN than the average of Rs. 8730 for Delhi in case of Plan land.

22. Whereas the nominal rates during the period (1948-89) increased from Rs. 257 per bigha to Rs. 24,328, the real rates increased from Rs. 313 to Rs. 3588 only. During the Plan period (1959-89), the nominal rates increased from Rs. 1896 to Rs. 18,328 as compared to real rates from Rs. 2017 to Rs. 3588 only.

23. The growth rate of nominal C Rate was 9.12% during 1948-89 as compared to 3.19% of real rates. During the Plan period of 1959-89, growth rate of nominal rate was 9.03 as compared to that of real rate of 1.86%.

24. During the entire period (1948-89), the average real rate of Rs. 1,628 was about 1/3rd of the nominal rate of Rs. 4912. During the Plan Period (1959-89), the average real rate at Rs. 1866 was even less than 1/3rd of the average nominal rate of Rs. 6,365.
25. For the entire period (1948-89), the highest growth rate was registered in PN region while lowest in MW region. During the Plan period, the variation in growth rates among regions fell considerably with highest of 14.03 in ME to the lowest of 0.04 in MW.

26. During the Plan period, the regional averages in C Rates ranged from Rs. 61,852 in DL to Rs.4662 in PS region. Within the Plan period, the regional averages increased during the three successive decades with increasing variation among them.

27. Over the period from 1948 to 1987, the nominal rates of compensation and market value both increased with fluctuation. Up to 1954, they coincided and thereafter started diverging with rate of compensation becoming greater than MV Rate. The MV Rate per bigha increased from Rs.360 in 1948 to Rs.20,917 in 1987, i.e. almost 58 times.

28. During the Plan period (1959-89), the two rates showed increasing trend. The estimated MV rate increased from zero in 1962 to Rs. 14,500 in 1987, while the C Rate increased from zero in 1961 to Rs.23,000 in 1987. Within Plan period, the two rates showed declining trends in the first decade, the C Rate declined while MV rate increased in the second decade, and both the rates increased in the third decade.

29. The MV rate constituted about 61% of the C Rate and the behaviour of both the rates was more or less similar.

30. During the entire period (1948-89), the growth rate of MV rate was 9.21% and that of C Rate was 9.08%. During Plan period (1959-89), these rates were 9.38% and 8.91 respectively.

   In the first decade, both the rates registered negative growth rates of -2.2% and -3.06%, in the second decade positive at 3.9% and 2.31% and in the third decade at 9.6% and 9.01% respectively. The growth rates were low and less than 10%.

31. The MV rate and C Rate increased over time from 1948 to 1989 in all the regions although the rate of increase was not same in all the regions. The rates were higher in DL, and ME regions, low in DS, and very low in MW, N, PN and PS. The rates were not only unequally distributed over regions but generally within regions also.

32. The estimated real MV Rate increased from Rs.1000 in 1948 to Rs.3000 in 1987 showing an increase of Rs.50 per annum as against the increase from Rs.1000 in 1956 to Rs.12,500 in 1987 showing an increase of Rs.360 per annum in case of nominal MV rate.

33. During the Plan period, the estimated real MV rate increased from Rs.1100 in 1959 to Rs.3,000 in 1987 showing an increase of Rs.65 per year. In the first decade (1959-69), and second decade (1970-79), the real MV rate showed a declining trend whereas in the period 1980-87, it showed a constant trend.

34. The real C Rates almost always remained higher than the real MV rate and in general, the trends were same in the two i.e. increasing over entire period and plan period, constant over non-plan period, declining over the first and second decade of plan period. During the period 1980-84 and 1980-87, the two showed opposite trends but negligibly.

35. In all the regions of Delhi, the MV rate and C Rates showed increasing trends. The rates showed little increase up to late Seventies and only towards the end of second decade these rates showed some visible increase.

The rates were high in DL region. In N, PN and PS, the estimated MV Rate and C Rate did not even reach Rs.10,000 per bigha in 1987. Spatially, these rates were unequally distributed over villages within regions.
36. The MV Rate and C Rate were not very high in Delhi. Similarly the growth rates were also low in the first two decades of Planned development and became higher only in the third decade. Initially, the MV Rate grew unequally among the regions but in the third decade, it started growing at relatively more uniform rate in all the regions of Delhi.

The patterns of rates and growth rates were almost similar in case MV Rates were taken either with reference to the date of notification u/s 4 or the date of award.

37. The weighted average L & DO rate (90% residential + 10% commercial) increased from Rs.15,715 in 1955 to Rs.62,090 in 1969 to Rs.1 crore, Rs.2 lakhs per bigha in 1988. The estimated weighted average for Delhi increased from zero in 1964 to Rs.38 lakhs in 1988.

The real weighted L & DO rates, on the other hand, increased from Rs.21,236 in 1955 to Rs.16.16 lakhs in 1988 showing 77 times increase over a period of 34 years or Rs.47,000 per year.

For the Plan period (1959-88) the nominal weighted average L & DO rate for Delhi was Rs.13.64 lakhs per bigha with Rs.2.47 lakhs per bigha as its real counterpart.

Zone wise, the central zone had the highest average of Rs.19 lakhs per bigha followed by 10.17 Lakhs in South, 8.18 Lakhs in West, 5.87 Lakhs in North, 3.30 Lakhs in East and 2.30 Lakhs in Outer Delhi. During the same period, the Central Zone had the highest growth rate of 24% followed by 18.17% in South, 18.14% in West, 16.57% in North, 14.7% in East and 12.46% in Outer Delhi.

38. LAC circle-wise, the L & DO rates in Central zone increased to more than Rs.60 lakhs per bigha and to Rs.11 lakhs in Outer Delhi. For whole Delhi, the weighted average rate increased to about Rs.30 lakhs per bigha in 1988 from Rs.12 lakhs in 1983 and Rs.14 lakhs in 1986.
39. The average MV Rate and C Rate by the LACs were Rs.4290 and Rs.6450 per bigha for the period 1959-88 as compared to the weighted average L & DO rate of Rs.13.64 lakhs.

The real MV rate and C Rate for Delhi increased from Rs.1790 and Rs.2220 in 1957 to Rs.2050 and Rs.3700 in 1988 respectively as compared to increase in L & DO rate from Rs.22,300 to Rs.16.6 lakhs.

The average MV rates and C Rate for Delhi for the period from 1957 to 1988 were Rs.1260 and Rs.1790 respectively as against the L & DO rate of 2.47 lakhs. The L & DO rates for Outer zone increased from Rs.21,000 to Rs.11.36 lakhs per bigha in 1988.

40. The average L & DO rate of Delhi were 318 times of the MV rate assessed by the LACs. The real L & DO rates were 196 times the real LAC MV Rates. Even the average L & DO rate of Outer Delhi was 54 times the average MV Rate assessed by the LACs.

41. Regionally, the average L & DO rate of Central zone was 12.0 times of the DL average LAC rate; L & DO rate of South Zone was 9 times the LAC rates of ME & MW; the average L & DO rate of North Zone was 47 times of LAC MV Rate of N Region; the average L & DO rates of West Zone were 215 times of LAC MV Rates of PN and PS regions and the average L & DO rate of Outer Delhi was 12.5 times of LAC MV Rate of DS region.

The L & DO rate of Outer Delhi (Rural Delhi) was even 2.5 times of LAC MV Rates of Delhi city; 9 times of East Delhi; 20 times of South Delhi; 18 times of North Delhi and 60 times of West Delhi.

Whereas the L & DO rates of regions during the period from 1959 to 1986 grew at a rate from 12.5% to 24%, the regional LAC rates grew between 5% and 14%.
42. The total interest was Rs.20.34 crores out of Rs.301 crores of compensation for the 3,32,456 bighas of land constituting 6.6% of the total compensation. The estimated proportion of interest in compensation increased from 4% in 1959 to 19% in 1989.

43. Interest per award showed declining trend during non-plan period. During Plan Period, the estimated value of interest increased from zero in 1962 to Rs.2.2 lakhs in 1986 or Rs.8150 per year.

Interest per bigha was Rs.611 during the period 1948-89. It showed declining trend during non-plan period and increasing trend during Plan Period.

44. Over the entire period, the proportion of interest in compensation was 4.1% in DL; 11.7% in DS, 3.2% in ME, 3% in MW, 18.4% in N, 7.7% in PN and 1.2% in PS.

45. The interest u/s 4 showed the pattern similar to that of total interest up to 1984, when the L.A. Act was amended.

The estimated days u/s 4 per award increased from 240 in 1957 to 2100 in 1988 whereas the days u/s 4 per bigha increased from 6 in 1959 to 20 in 1988.

The interest u/s 34 showed increasing trend from 1964 onwards. It increased from zero in 1984 to 1,55,000 in 1989. The estimated days 34 per award increased from 80 in 1984 to 630 in 1989 and days 34 per bigha increased from 1 in 1985 to 7 in 1989. The interest u/s 34 was relatively higher in DS and PN regions.

46. Spatially, the compensation awarded by LACs varied from Rs. 57.50 in MW to Rs.3.85 lakhs in DL whereas that awarded by ADJ varied from Rs.440 in MW to Rs.23.22 lakhs in Delhi.

Temporally, the LAC and ADJ rates showed increasing trends during 1957-60 and 1960-62; declining trend during 1963-70 and again increasing trend from 1970 to 1985.
The real LAC and ADJ rates, on the other hand, during the same periods showed respectively declining, increasing, declining and declining trends. In general, the real LAC & ADJ rates showed declining trend from 1957 to 1985.

The real total compensation awarded by LACs and ADJs also showed, in general, a declining trend from 1957 to 1985.

47. From 1957 to 1971, spatially, the LAC rates varied from Rs.50 in MW to Rs.13,000 in DS whereas the HC rates varied from Rs.300 in MW to Rs.40,000 in N region.

During the same period, temporally the two rates registered increasing trends. The estimated LAC rate increased from Rs.2000 to Rs.3000 while HC rate increased from Rs.6000 to Rs.9500.

In case of CRates also, the two rates registered increasing trends. However, the increase in LAC C Rate was very low compared to HC rate. Whereas the LAC C Rate increased from Rs.5000 in 1961 to Rs.6000 in 1971, the HC rate increased from Rs.40,000 to Rs.73,000.

The real LAC rate stayed at 3000 during 1961-71 while HC rate increased from Rs.10,000 to Rs.15,000. Similarly, the real LAC C Rate increased from Rs.2000 to Rs.3000 as compared to real HC C Rate from Rs.25,000 to Rs.45,000 per bigha.

48. Whereas the MV Rates assessed by the LACs and ADJs were Rs.4026 and Rs.15,565 respectively, the total compensation on these rates worked out to be Rs.7226 and Rs.41,514 per bigha.

The MV rate assessed by ADJ was 3.86 times of LAC MV rate whereas the C Rate of ADJ was 5.74 times of LAC C Rate. Thus, the increase in MV rate from LAC to ADJ was only 286% as compared to 474% increase in respective C Rates.

49. The MV rates of ADJ and HC were Rs.6710 and Rs.10,750 respectively as compared to their C Rates of Rs.25,504 and Rs.43,406. The HC MV rate was 1.6 times the ADJ MV rate while the HC C Rate was 1.7 times the ADJ C Rate.
50. The MV rates of LAC and HC were Rs.3167 and Rs.10,750 respectively as compared to their C Rates of Rs.3890 and Rs.4161. The HCMV rate was 3.9 times of the LAC MV rate while the HC C Rate was 11.35 times of the LAC C Rate.

The increase in C Rates from LAC to ADJ and from ADJ to HC was much larger than the increase in respective MV rates.

51. The average LAC Award had about 93% of the sub-total comprising market value, solatium and additional amount under section 23(I-A), and only 7% as the interest component.

In the ADJ Award, the same sub-total declined to about 44% and interest component increased to 52%.

In the HC award, the sub-total further declined to 37% and interest component increased to 63%.

52. In the first sample, the growth rates in MV rates of LAC and ADJ were 6.16% and 6.53% respectively while those in C Rates were 6.51% and 4.29%

The growth rate in the same period from 1957 to 1985 in UNMCPI was 6.5%. The growth rates in real MV rate and C Rate of ADJ were -0.32% and -2.07% respectively.

In the second sample, during the period from 1957 to 1971, growth rates in MV rates of LAC, ADJ and HC were 13.3%, 10.5%, and 12% respectively while in C Rates the same were 13.1%, 7.4% and 9%.

In the third sample, the growth rates in MV rates of LAC and HC were 13.7% and 14% respectively while those in C Rates were 13.3% and 11.4%. The price index during the same period was 5.41% lowering the real rates.
53. On the average, it took 6 and 1/2 years from the date of notification u/s 4 (date 4) to the date of award. For taking over the possession of land, it took 7 years from date 4, 18 years for ADJ for making judgment from date 4, and 20 years for LAC office to remit the amount in the Court from date 4.

In the second sample, the same four stages took 5 years, 5 and 1/2 years, 21 years and 24 years respectively.

54. On the basis of actual total compensation and enhancement data available from DC Office and Land & Building Office from 1971 to 1989, the projections were made for the period from 1990 to 1995.

As per the DC Office the estimated average enhancement would increase from Rs.0.4 crore per year to Rs.1 crore per year during 1990-95 as compared to same from 0.1 crore to Rs.2.9 crore per year in case of L & B Office.

The projections showed that in future, the enhancement per year would be higher than the total compensation in a particular year.

The growth rates in total compensation calculated from the data complied from the Awards, from DC Office and from Land & Building Office were 16%, 10% and 8% respectively whereas the growth rates in enhancements from two Offices were 18% and 17% respectively showing that in any case the growth rate in total enhancement was greater than that in total compensation.

55. Econometric analysis of average MV Rates for the period from 1948 to 1987 and distance from the CBD, i.e., Connaught Place depicted that MV Rates were inversely related to distance and they declined at an increasing rate as one moved away from CP. The results were in conformity to distance-decay function.

The MV Rates relating to years 1959, 1969, 1979 and 1984 had a significant relationship with the distance from CP but the nature of relationship was different from that of average MV Rates for the period from 1948 to 1987. In all these four years, the MV Rates were inversely related to the distance from CP for a major
portion of area. However, as one moved away from the CBD towards the periphery of Delhi, the MV Rates assumed a positive relationship with distance.

Regression analysis of time dummies in respect of pooled data of above four years of 1959, 1969, 1979 and 1984 yielded that the intercepts for 1969, 1979 and 1984 were significantly different from that of 1959. However, the difference between the intercept of 1959, on the one hand and those of 1969, 1979 and 1984 on the other, went on declining with passage of time. It implies that though MV Rates were higher significantly in 1969, 1979 and 1984 as compared to those of 1959, the increase in them went on declining with successive years.

Regression analysis of pooled data Real MV Rates for years 1959, 1969, 1979 and 1984 showed that the intercepts of 1969, 1979 and 1984 differed significantly from that of 1959. However, interestingly they successively depicted downward shifts. It implies that as far as Real MV Rates are concerned, they went on declining as compared to those of 1959.

The above results may be seen in sharp contrast to a high increase in L & DO Rates over these years in the wake of fast urbanisation of Delhi.

Regression analysis yielded that the C Rates were inversely related to distance from the CBD. However, they declined with an increasing rate as one moved away from the CBD.

The average time taken to draw an award for the period from 1948 to 1989 was found to be inversely related to distance from CP. It implies that it took relatively more time for the State to acquire land falling near to the CBD than the one located near the periphery. It showed that the State incurred avoidable costs as the opportunity cost of land near the CBD is higher than that of land away from it.
59. Regression analysis of regional dummies in respect of average MV Rates for the period from 1948 to 1987 yielded that there was not much regional differentiation. Only in case of N region MV Rates were significantly different from the average MV Rates of base DL region. However, all other regions except ME regions had a tendency to have lower MV Rates than Rs.4464 of base DL region.

60. In respect of average C Rates for the period from 1948 to 1989, regional differentiation was found significant only in case of ME region from the base DL region. In all other regions, C Rates were not significant and had a tendency to be lower than Rs.6230 of base DL region. Interestingly, MV Rates of ME region were found to be significantly higher by Rs. 5626 than the base DL region.