CHAPTER - 6

RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI : A SPATIAL AND TEMPORAL ANALYSIS

Market Value and Compensation

As described above the total compensation comprises the market value of the land and other payments. While acquiring the land its market value is determined by the Collector. To the market value other amounts are added to work out the total compensation to be paid for the acquired land.

In the foregoing analysis, the rates of nominal and real C Rates were analysed temporally and spatially. The C Rate indicated the average amount of compensation received by a land owner whose land was acquired over time and space.

It is important from the point of view of land owners since it determines how far the State has compensated him for his land while it was acquired for the public purpose. The compensation is more than the usual market value of the land since it comprises an allowance for the compulsory acquisition of the land or the cost for limiting the choice of the land owner to retain his land at his will and other factors such as the cost which the State has to pay for the delay and thereby inconvenience caused to the land owner as a result of the acquisition process.

To analyse the behaviour and the pattern of market value that was assessed by Collectors in Delhi while acquiring the land, the rates of market value were calculated temporally and spatially. The MV Rates are more important from the economic point of view since they indicate the market forces operating over time and space.

As the amount of market value was not separately recorded in many of the awards of land acquisition, only those awards were selected where the figures of market value were available. Out
of the total 3277 awards drawn from 1948 to 1989, a sample of 2559 awards was taken where the figures of market value were available. The sample comprised of almost 78% of the total awards to ensure the reliability of results.

Beside the pattern of market value, the relationship between MV and C Rate has been analysed temporally and spatially. The two rates are defined as follows:

\[
\text{Market Value Rate/bigha} = \frac{\text{Total Market Value}}{\text{Total land acquired in bighas}}
\]

\[
\text{Compensation Rate/bigha} = \frac{\text{Total Compensation assessed}}{\text{Total land acquired in bighas}}
\]

The market value is assessed with respect to the date of notification u/s 4. Hence the sample was arranged temporally according to the date of notification u/s 4.

Temporal Analysis

Nominal Market Value Rates (MV Rates) and Compensation Rates (C Rates) in Delhi (1948-87)

Over the period of 40 years from 1948 to 1987, the nominal MV Rates and C Rates both increased with fluctuations. The trend lines show that up to 1954 both the values almost coincided. From 1955 onwards, the two rates started diverging and C Rate became greater than the MV Rate. There was not much increase in MV rates up to 1980.

From 1981, the rates increased at relatively far greater pace as compared to last 32 years. MV rate increased from Rs.360 per bigha in 1948 to Rs.20,917 in 1987.

The estimated MV Rate increased from zero value [estimated] in 1954 to about Rs.12,000 in 1987 whereas rates of C Rate increased to Rs.20,000 in the same year.
During the non-plan period (1948-58), the trend was almost constant for C Rate while for the MV rate it increased fractionally. The estimated value of C Rate remained constant at Rs. 1500 per bigha whereas that of MV Rate increased from Rs.1000 in 1948 to Rs.1100 in 1958. The absolute value of C Rate remained higher than the MV Rate in all the years.

GRAPH 6.1

GRAPH 6.2
Nominal MV Rates and C Rates in Delhi during plan period (1959-87)

Taking the plan period as a whole, the two rates showed an increasing trend with C Rate placed higher than the MV Rate and also diverging away from the MV Rate. The rates were slow to increase up to 1980 and afterwards increased faster. The estimated MV Rate increased from zero in 1962 to about Rs.14,500 in 1987. The estimated C Rate on the other hand increased from zero in 1961 to about 23,000 in 1987.

Within the plan period during the first decade of development from 1959 to 1969, both the rates showed declining trends with C Rate placed above the MV Rate but converging. The estimated rate declined from Rs.4100 in 1959 to Rs.300 in 1969, whereas the MV Rate declined from about Rs.2300 to Rs. 1800. Thus during first 10 years the C Rate declined by Rs. 1100 and MV Rate by Rs.500.

During the second decade 1970 -79, the trend was again that of declining in the C Rate. The estimated C Rate declined from about Rs.9,000 to about Rs.,6500 in 1979. On the other hand MV Rate showed a rising trend with estimated MV Rate rising from Rs.3500 to Rs.5000. The two trends showed thus a converging tendency. However, the absolute value of the C Rate remained higher than that of MV Rate. The convergence may be due to the fact that other factors such as interest, structures etc., might have had smaller values owing to faster acquisition or acquisition of plain area etc..

The period from 1980 to 1987 showed increasing trend in both the rates with C Rate placed above the MV Rate and C Rate diverging away from the MV Rate. The estimated C Rate increased from about Rs.15,500 in 1980 to Rs. 32,000 in 1987 while the MV Rate increased from Rs.9000 to about Rs.21,000.

The period prior to amendments in a L.A. Act showed the increasing trend in the C Rate and MV Rate from 1980 to 1984 with C Rate placed above the MV Rate and diverging away from the MV Rate.

The above analysis shows that generally the C Rate has been higher than the MV Rate. Though over entire period (1948-89) and over plan period the C Rate and MV Rate showed rising
trends, over first three decades i.e. 1948-58, 1959-69 & 1970-79 the rates interestingly showed declining trend. Only during the 1980-87 they registered rising trend.
Chapter 6

RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: SPATIAL AND TEMPORAL ANALYSIS

NOMINAL RATES OF MVALUE/COMPENSATION
DELHI (1970-79)

Rs (Thousands)

YEARS

GRAPH 6.5

NOMINAL RATES OF MVALUE/COMPENSATION
DELHI (1980-84)

Rs (Thousands)

YEARS

GRAPH 6.6

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Average MV Rates and C Rates in Delhi

For the entire period (1948-89), the MV Rate was Rs. 4903 and the C Rate was Rs. 8024 bringing a difference of Rs. 3121.
The MV Rate constituted 61% of the C Rate implying that the rest of 39% was contributed by other factors such as solatium, interest, structures etc. The Solatium being constant at 15% before 1984 and at 30% after 1984 and structures etc. being a minor factor, main variations in the C Rate and MV Rate were caused by variations in the interest paid for delay in the acquisition process. [MC-8].

The following table depicts the period-wise average C Rate, average MV Rate and % of MV Rate of C Rate.

<table>
<thead>
<tr>
<th>Period</th>
<th>Average C Rate</th>
<th>Average MV Rate</th>
<th>Difference</th>
<th>MV Rate as % of C Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948-89</td>
<td>8024</td>
<td>4903</td>
<td>3121</td>
<td>61%</td>
</tr>
<tr>
<td>1948-58</td>
<td>1502</td>
<td>1039</td>
<td>463</td>
<td>69%</td>
</tr>
<tr>
<td>1959-89</td>
<td>10498</td>
<td>6368</td>
<td>4130</td>
<td>61%</td>
</tr>
<tr>
<td>1959-69</td>
<td>3533</td>
<td>2032</td>
<td>1501</td>
<td>58%</td>
</tr>
<tr>
<td>1970-69</td>
<td>7658</td>
<td>4155</td>
<td>3503</td>
<td>54%</td>
</tr>
<tr>
<td>1980-89</td>
<td>23623</td>
<td>15097</td>
<td>8526</td>
<td>64%</td>
</tr>
<tr>
<td>1980-85</td>
<td>20951</td>
<td>13102</td>
<td>7849</td>
<td>63%</td>
</tr>
</tbody>
</table>

The above analysis shows that over time, decade wise both the average MV Rate and C Rate have increased. The MV Rate constituted from 54% to the 69% of the C Rate. For the entire period it was 61%.

It may, therefore, be said that in general, the MV Rate was about 60% of the C Rate. The behaviour of both the rates were almost similar implying that the patterns of C Rate can broadly be taken to indicate the patterns of MV Rate spatially and temporally with the qualification that the MV Rate on the average was 60% of the C Rate on the average.
Growth Rates of MV Rates and C Rates in Delhi

To see how the two rates grew over time, the compound growth rates were calculated for various periods with respect to C Rate and MV Rate. The growth rates indicated the dynamism in these rates.

During the period 1948-87 the growth rate in the MV rate was 9.21 and that in C Rate was 9.08 showing that both rates grew at almost the same rate. The price index UNMCPI registered a growth of 5.64% per annum.

During the non-plan period the growth MV Rate was 7.3 while that of C Rate was 4.75 with price index growing negatively -0.25.

Taking the plan period 1959-87 as a whole, the MV Rate registered a growth rate of 9.38 compared to a little lower growth rate of 8.91 in C Rate. The price index registered a high rate of growth of 7.02 in the same period.

Within the plan period in the first decade both the MV Rate and C Rate registered respectively negative growth rates of -2.2 and -3.06 with growth rate of 6.14 of price index.

In the second decade, the growth rates were positive at 3.91 in MV Rates and 2.31 in C Rate with price index growing at 7.56.

In the third decade, the MV Rate grew annually 9.6 while C Rate grew at 9.01%. The growth rate of price index was 8.96. In the sub period 1980-85, the respective growth MV Rates rate, C Rate and price Index were 5.69, 5.93 and 9.31 respectively.

The above analysis shows that at any time the growth rate in either MV rate or C Rate did not exceed 10%. Generally the MV rate was higher than the C Rate except in the sub-period 1980-85. During the first decade of development, both the rates registered a negative growth in them.

Comparing price index growth of any time period would show that the real growth in the two rates was very low and in the first two decades the real MV Rate and C Rate would have declined, in fact.
It may be seen from the foregoing analysis of periodic averages and growth rates of C Rate and MV Rate that in Delhi not only these rates were very low in absolute values but also grew at a rate not high enough to make room for inflation that accompanied the development of land in the metropolis.

Spatial Analysis

MV Rates and C Rates in Delhi Regions (1948-87)

In DL region, during the entire period of 1947-87, the trends show that both MV Rate and C Rate were increasing. The estimated MV Rate and C Rate increased from zero in 1957 to about Rs.6 lakhs per bigha and Rs.3 lakhs respectively. The two rates diverged over time.

In DS region, over the same period, the two rates showed increasing trends with divergence. The estimated rates increased form zero to Rs.60,000 and Rs.40,000 respectively.

In ME region, the two rates showed increasing trends but that in MV Rate was low. The estimated MV Rate increased from zero in 1960 to Rs.1,00,000 while the estimated C Rate increased to Rs.4,00,000 in 1986. In ME region the trends were those of increasing in both the
rates with divergence between the two. The estimated MV Rate increased from zero in 1953 to about Rs.14,000 while the C Rate increased to Rs. 24,000 in 1984. It shows that it is only during the last three years that the rates increased at substantially high rates.

In MW region, the two rates showed increasing trends with estimated MV Rates and C rates rising from zero in 1953 to about Rs.10,000 and to Rs. 13,500 respectively in 1986.

In N region the two rates showed increasing trends but were diverging slightly. The estimated value of MV Rate and C Rate increased from zero in 1948 and 1952 to about Rs.7,500 and Rs.9,000 in 1987 respectively.

In PN region, the two rates showed rising trends with sharp divergence. The estimated MV Rate and C Rate increased from zero in 1959 to about Rs.10,000 and Rs.16,000.

In PS region, the two rates showed increasing trends with divergence. The estimated C Rate and MV Rate increased from zero in 1956 to about Rs.5000 and Rs.10,000 in 1986.

The above analysis shows that in all the regions, the MV Rates and C Rates increased overtime from 1948 to 1987 although the rate of increase was not same in all the regions. The absolute value of MV Rate and C Rate were high in regions of DL and ME, low in DS and very low in MW, N, PN and PS. The rates in general, diverged overtime implying that the C Rate tended to be proportionately greater than the MV Rate.

Spatial distribution of MV Rates and C Rates in Delhi regions (1948-87)

In DL region, over 14 villages the average MV Rate and C Rate varied substantially. The C Rate was higher than the MV Rate. The MV Rate ranged from Rs.2000 to Rs.13,500 per bigha, while C Rate ranged from about Rs.2500 to Rs.20,000.

In DS region, the C Rate was generally higher than the MV rate. There seems to be high variation among the 44 villages in respect of MV rates and C Rates rates. The C Rate and MV rate ranged from almost Rs.300 to Rs.32,000 and Rs.28,000 respectively.

The graph of ME region also showed fluctuations over 48 villages. The C Rate and MV rate varied from less than Rs.500 to about Rs.40,000 and Rs.18,000.
In MW region, over 35 villages the rates fluctuated in relatively lesser degrees. The C Rate and MV rate ranged from less than Rs.500 to Rs.28,000 and Rs.16,000 respectively.

In N region, over 75 villages except a few villages, the rates did not register very high fluctuations. The C Rate and MV Rate ranged from less than Rs.500 to Rs.15,000 and Rs.20,000 except in two villages, where rates showed up to Rs.28,000 and Rs.6,000 respectively.

In PN region, the rates over 80 villages showed not very high fluctuations though C Rate and MV rate ranged from less than 500 to Rs.28,000 and Rs.17,000 respectively.

In PS region, over 60 villages, the rates did not show high fluctuations except in 11 villages where the rates were higher. The C Rate and MV rate ranged from less than Rs.500 to Rs.23,000 and Rs.14,000 respectively.

The above analysis shows that spatially the rates were relatively varying in case of regions DS, ME and PN. However, in ME and N regions the difference between C Rate and MV rate was far greater than that in other regions.

It also implies that rates were not only unequally distributed over regions but generally within a region also.

Nominal and Real MV Rates in Delhi

To determine what actually was determined as MV rate after making allowance for the inflation occurring overtime, the real MV Rates were calculated by deflating the nominal MV Rates by the annual price-index.

The difference between the two rates also showed the inflation rate. The statistical trends were fitted to the actual rates to determine the direction and rate of change in the market value --- nominal and real.
Entire Period (1948-87)

The MV rate differed from year to year but the rate of change became high from 1970 onwards. Till then both the rates fluctuated not with much difference. After 1970, the difference in the two rates become wider and wider.

The trend lines intersected each other in 1957 and afterwards the trend in nominal rate diverged continuously from the trend in real MV rate. The trend in MV rate depicted a very low rate of change though increasing over the period from 1948 to 1987.

The estimated real MV rate increased from Rs.1000 in 1948 to about Rs.3000 in 1987 showing only an increase of Rs.2000 over 40 years or Rs.50 per annum. The estimated nominal MV rate, on the other hand, increased from Rs.1000 in 1956 to Rs.12,500 in 1987 showing an increase of Rs.11,500 over 32 years or Rs.360 per annum or about seven times that of the real rates.

The increase in nominal MV rate is low considering an increase of Rs.360 per bigha per year and that in real MV rate is extremely low at Rs.50 per bigha per annum.
Non Plan Period (1948-58)

During the non-plan period, there was not much difference between the nominal and real rates. The trends in them showed a negligible increase and ran almost parallel to each other.

The estimated real MV rate increased from Rs.1000 in 1948 to about Rs.1100 in 1958 showing a change of Rs.100 in 11 years or Rs.9 per annum while that in nominal MV rate increased from Rs.1150 to Rs.1250 showing the same change in the nominal rate.

It shows that during non-plan period the rate of change was almost same in two rates though the real rates were about 10% less than the nominal rates.

Plan Period (1959-87)

During the Plan period (1959-87), nominal and real MV Rates showed increasing trends but the increase in the real rates was very small. From 1970 onwards, the rates diverged faster. Prior to 1964, the estimated nominal MV rate was lower than the estimated real rate. From 1965 onwards, the nominal MV rates became increasingly higher than the estimated real MV rates.

The estimated nominal rate increased from zero in 1962 to Rs.15,000 in 1987 showing a change of Rs.15,000 over 25 years or Rs.600 per annum. On the other hand, the estimated real
MV rates increased from Rs.1100 to Rs.3000 showing an increase of Rs.1,900 over 29 years or Rs.65 per year.

It shows that during the plan period though the real MV rate became higher than the nominal MV Rate of non plan period but still it remained too low at absolute levels. The real rate in the year 1987 became almost 80% less than the real MV rate implying a very high rate of inflation in the year.

![Graph of Nominal & Real Rates of Market Value Delhi (1959-89)](image1)

![Graph of Nominal & Real Rates of Market Value Delhi (1959-87)](image2)
Decade-wise, during the first decade of plan period (1959-69), both the nominal as well as real MV rates showed sharp declining trends with divergence. In the year 1960, they become equal and overall started diverging. The estimated value of real MV rate declined from about Rs.2350 in 1959 to Rs.1000 in 1969 showing a decline of Rs.123 per year. The nominal MV rates during the same period declined from Rs.2250 to Rs.1800 showing a decline of Rs.450 or Rs.41 per year.

During the second decade of planned acquisition, whereas the nominal MV rates showed rising trend, the real MV rate showed a declining trend. The estimated value of nominal MV rate increased from Rs.3500 to Rs.5000 over a period of ten years showing a rise of Rs.1500 or Rs.150 per year. On the other hand, the real rates declined from Rs.2000 to Rs.1500 showing a decline of Rs.500 or Rs.50 per year.

In the third phase of 1980-87, the nominal MV Rate showed a rising trend whereas the real MV rate showed a constant trend. The estimated value of MV rate increased from Rs.9000 to Rs.21,000 showing a rise of Rs.12,000 over a period of eight years or Rs.1500 per year. The real MV rate on the other hand, remained almost constant at Rs.2000. It implies that the inflation rate almost offset the increase in the nominal rates.

In the period 1980-84, i.e the period just before the introduction of amended L.A.Act, the nominal rate shows a increasing trend while the real MV rate shows a declining trend. The estimated MV rate increased from Rs.11,000 in 1980 to Rs.15,000 in 1987 showing an increase of Rs.4000 or Rs.500 per year. The estimated real MV rate declined from Rs.3500 to Rs.3000 in 1984 showing a fall of Rs.500 or Rs.40 per year.
Chapter 6

RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: SPATIAL AND TEMPORAL ANALYSIS

**GRAPH 6.14**

NOMINAL & REAL RATES OF MARKET VALUE
DELHI (1959-69)

**GRAPH 6.15**

NOMINAL & REAL RATES OF MARKET VALUE
DELHI (1970-79)
The above analysis shows that whereas the nominal and real MV rates increased over the entire period and plan period, they showed declining trends during the first decade. Although the nominal MV rates registered increasing trends in the second decade and during the period from...
1980 to 1984 and during the period 1980-87, the real MV rates showed declining trends during the these periods except (1980-87) where the increase is negligible.

It implies that in actuality during the period from 1959 to 1984 the real MV rate declined in Delhi quite contrary to what the economic theory would have otherwise predicted. With the development of the metropolis, the declining trends in real MV rate show that market mechanism was distorted. What would have been the effects of such MV Rates on the development of Delhi may be inferred from the Market Theory.

**Nominal and Real C Rates in Delhi (1948-87)**

From the same sample nominal and real C Rates in Delhi were calculated for the various sub-periods.

Over the entire period of 1948-87, the two rates showed increasing trends. The nominal C Rate in 1958 was higher than the real rate and also increased at a higher rate than the nominal rate. The increase in real rates was not very high over the period of 40 years. The estimated value of real C Rate increased from about Rs.1500 to Rs.5000. The estimated value of nominal rate increased from Rs.2500 in 1958 to Rs.20,000 in 1987 showing an increase of Rs.17500 over 30 years of Rs.580 per year as against Rs.87 per year.

During the non-plan period (1948-58), the two rates remained almost constant and ran parallel to each other with nominal rates higher than the real rates. The estimated value of nominal C Rates remained constant at Rs.1750 while the real rate was constant at Rs.1600. The price index also remained constant during this period.

Taking the plan period as a whole, i.e., from 1959 to 1987, the two rates showed increasing trends but rate of increase in real rate was very small. The estimated value of real rate increased from Rs.2500 to Rs.4500 showing a rise of Rs.2000 over 30 years or Rs.67 per year. The nominal rate on the other hand increased from Rs.3000 in 1965 to Rs.23,000 in 1987 showing an increase of Rs.20,000 over 22 years or Rs.910 per year. The increase became sharper only after the year 1976 before which the increase in both the rates was negligible.
Within the plan period, during the first decade (1959-69) both the rates showed declining trends. The estimated nominal rate declined from Rs.4100 to Rs.3000 showing a decline of Rs.1100 or Rs.100 per year. The estimated real C Rate declined from Rs.4100 to Rs.3000 showing a decline of Rs.1100 or Rs.100 per year. The estimated real C Rate showed a decline from Rs.4100 to Rs.1900 showing a decline of Rs.2200. During the second decade also, both the rates registered a declining trend. The estimated nominal rate declined from Rs.9000 to Rs.6000 showing a decline of Rs.3000 while the estimated real rate declined from Rs.5500 to Rs.2000 showing a decline of Rs.3500.

During the third phase of 1980-87, the nominal rates registered an increasing trend while the real rate showed a constant trend at Rs.5000. The estimated nominal rate increased from Rs.15,500 in 1980 to Rs. 31,500 in 1987 showing an increase of Rs. 16,000 in eight years or Rs.2,000 per year.

During the period from 1980 to 1984 whereas the nominal rates showed increasing trend, the real rates registered a declining trend. Just before the amendments in the Act, the estimated value of nominal rate increased from Rs.16,500 to Rs.25000 showing an increase of Rs.8500 or Rs.1700 per year. The real rates on the other hand, declined from Rs.5200 to Rs.4800 showing a decline of Rs.400 over 5 years or Rs.80 per year.
NOMINAL & REAL RATES OF COMPENSATION
DELHI (1948-58)

NOMINAL & REAL RATES OF COMPENSATION
DELHI (1959-87)
Chapter 6

RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: A SPATIAL AND TEMPORAL ANALYSIS

NOMINAL & REAL RATES OF COMPENSATION
DELHI (1959-69)

Rs (Thousands)

YEARS

CRATE
CRATE
RL CRATE
RL CRATE
UNMP INDEX

GRAPH 6.21

NOMINAL & REAL RATES OF COMPENSATION
DELHI (1970-79)

Rs (Thousands)

YEARS

CRATE
CRATE
RL CRATE
RL CRATE
UNMP INDEX

GRAPH 6.22
RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: SPATIAL AND TEMPORAL ANALYSIS

NOMINAL & REAL RATES OF COMPENSATION
DELHI (1980-84)

NOMINAL & REAL RATES OF COMPENSATION
DELHI (1980-87)
Real MV Rates and C Rates

The real MV Rates and C Rates were calculated to analyse respectively the real value that was assessed for the land acquired and the C Rate that a land owner could get for his land.

During the entire period from 1948 to 1987, both the rates showed increasing trends. The estimated real MV rate increased from Rs.1500 to Rs.3000 showing an increase of Rs.1500 over 40 years or Rs.37 per year. The estimated real C Rate on the other hand, increased from Rs.2000 to Rs.5000 showing an increase of Rs.3000 or Rs.75 per year or about two times that of MV rate. It shows that although the two rates increased over time, the increase was very low.

During the non-plan period (1948-58), the MV rate and C Rate remained constant at an estimated value of Rs.1250 and Rs.1750 respectively. The increase in MV rate was negligible to make it almost constant.

Over the Plan period, both the rates showed increasing trends but remained parallel to each other. The estimated MV rate increased from Rs.1250 to Rs.3000 showing an increase of Rs.1750 or Rs.60 per year. The estimated value of C Rate on the other hand, increased from Rs.3000 to Rs.4750 showing an increase of Rs.1750 or Rs.60 per year.

Within the plan period, during first decade both the rates showed declining trends with convergence. The rate of decline in C Rate was little higher than that of MV rate. The estimated value of C Rate declined from Rs.4100 to Rs.1800 over 11 years. The estimated MV rate on the other hand, declined from Rs.2200 to Rs.1000 during the same period.

During the period from 1980 to 1987, the trends in both rates remained almost constant with the estimated C Rate declining negligibly and the estimated MV rate increasing slightly. The estimated MV rate increased from Rs.3000 to Rs.3100 over eight years or Rs.13 per year. The estimated C Rate on the other hand, declined from Rs.4900 to Rs.4800 or Rs.13 per year.

During the period prior to amendment in the L.A. Act (1980-84) the two rates showed declining trends with the almost same rate of decline. The estimated value of MV rate declined from Rs.5300 to Rs.4700 while the estimated value of C Rate declined from Rs.4300 to Rs.3700.
REAL RATES OF MVALUE/COMPENSATION
DELHI (1948-87)

REAL RATES OF MVALUE/COMPENSATION
DELHI (1948-58)
REAL RATES OF MVALUE/COMPENSATION
DELHI (1959-87)

REAL RATES OF MVALUE/COMPENSATION
DELHI (1959-69)
Chapter 6: RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: A SPATIAL AND TEMPORAL ANALYSIS

REAL RATES OF MVALUE/COMPENSATION
DELHI (1970-79)

REAL RATES OF MVALUE/COMPENSATION
DELHI (1980-84)

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The above analysis of real C Rates and MV Rates brings out the following relationship between the two.

The real C Rates remained almost higher than the real MV Rates.

In general, the trends were same in these two rates i.e increasing over entire and plan periods, constant over non-plan period, declining over the first and second decade of plan period and during the period (1980-84).

Only during the period (1980-87) that the two rates showed opposite trends but in a negligible proportion.

Thus, it can be inferred that the two rates generally varied in the same direction and the difference between the two increased overtime implying that the share of other factors like solatium, interest etc. increased in their share overtime.

Economically, it was interesting to note that whereas the rate of increase in real MV rate and C Rate was not very high, these rates declined in the Plan period up to 1984. The substantial increases in compensation due to Amended Act made these rates to show some increasing trend otherwise they were declining in general.
Nominal and Real MV Rates and C Rates

The graph pertaining to the MV rate and C Rate -- nominal and real -- during the Non-plan period shows that four rates varied almost in the same way. There was not much difference in nominal or real rates. The graph of Plan period (1959-87) shows that up to 1976 the four rates fluctuated almost in the same proportion roughly with a constant trend in them.

In other words, from 1959 to 1976, i.e., over 18 years of planned development, the real MV Rates and C Rates did not register any substantial increase, although the nominal rates deviated a little from their nominal counterparts.

From 1976 onwards, two types of changes occurred in respect of these rates. First, the nominal and real C Rates deviated increasingly from the nominal and real MV Rates. Secondly, the difference between the nominal MV Rates and C Rates became greater overtime whereas the real MV Rates and C Rates almost showed negligible increase and the difference between the two remained almost constant.
MV Rates and C Rates in Delhi Regions from 1948 TO 1987 (Village-wise)

The spatial distribution of C Rate and MV rate in DL region shows that generally the C Rate was higher than the MV rate. However, they ranged from about Rs.5000 to Rs.20,000 and Rs.13,500 over villages respectively showing that MV rate was almost 2.7 times. The proportion of MV rate also ranged from 100% to 67% of the C Rate.

In DS region, the spatial fluctuations in respect of two rates were visible with MV rate ranging from Rs.500 to Rs.20,000. The proportion of MV rate ranged to as low as 41% of the C Rate.

The graph of the ME region shows that the fluctuations in rates were not very high. Whereas the MV rate ranged from Rs.500 to Rs.19000, the proportion of MV rate was as low as 41% of the C Rate.

In MW region, the MV rate ranged from below Rs.500 to Rs.16,000 with proportion of MV rate being as low as 55% of the C Rate.
In *N region*, most of the villages registered MV rate lower than Rs.5000 with lowest below Rs.500. The highest MV rate was Rs.19,000 with proportion of MV rate being as low as 21% of the C Rate.

In *PN region* also, most of villages had MV rate below Rs.5000 ranging from below Rs.500 to Rs.17,000 with MV rate's proportion being as low as 63% of the C Rate.

In *PS region*, the MV rates in most of the villages were below Rs.5000 and ranged from below Rs.500 to Rs.14,000. The proportion of MV rate was as low as 45% of the C Rate.

The above analysis shows that within regions, the MV rates were not uniformly distributed among the villages. In general, the C Rates were higher than the MV rates. In all the regions, MV rates contributed more than 40% of the C Rate, except in case of N where the MV rate was as low as 21% in one case. Usually, the proportion was higher when the MV rate was higher.

Regionally, the MV rates whereas showed increasing trends overtime especially after late Seventies, the same were unequally distributed on the average, over villages within the regions.

### Nominal and Real MV Rates and C Rates in Delhi (As on Year of Award) (1948-89)

The MV rate is assessed with reference to the year of notification u/s 4. The earlier temporal analysis was based on the notification u/s 4. Another analysis was made by taking the MV Rate as on year of award. Another sample containing 2877 awards was drawn out of the total no. of 3277 awards.

Temporally, during the period from 1948 to 1989, both the MV Rate and the C Rate showed increasing trends with the C Rate increasing at a higher rate than the MV rate. Prior to 1954, the estimated C Rate and MV rate increased from zero in 1951 and 1952 to about Rs.15,000 and Rs.10,000 respectively. The two rates remained below Rs.5000 up to 1984. It is only after 1984, that the MV Rate and C Rate showed substantive increases. The difference between them increased over time especially after 1984.
During the Non-plan period, the MV rate being lower than the C Rate showed increasing trend with a very little rate of increase. Whereas the estimated value of compensation rate increased from about Rs.800 in 1948 to Rs.900 in 1958, the estimated MV rate increased from Rs.550 to Rs.700. There was a slight convergence of two rates. During the same period, the graph of nominal and real MV Rates showed receding fluctuations with not much difference between the two.

During the Plan period, however, the nominal MV Rate deviated away from the real MV Rate. The graph line of real MV Rate remained almost without any substantial change over the period of 31 years. Whereas the nominal MV Rate increased to about Rs.14000 in 1989, the real MV rate increased to Rs.2000 only. It shows an increase of Rs.56 per year in the real market rate which is exceptionally low.

The nominal and real C Rates also showed the same pattern as that of MV Rates during the non-plan period with little difference in them. During the Plan period, the pattern of nominal and real C Rates was similar to the pattern of MV, i.e., the nominal rate deviated from the real rate and the deviation became larger after 1984. The nominal C Rate increased from about 300 in 1948 to Rs.23,000 in 1989 whereas the real rates increased to about Rs.3500 in 1989. The rate of increase in real C Rate was only about Rs.100 per year which was again quite low.

**Real MV Rates and C Rates in Delhi (1948-89)**

The two rates showed an increasing trend almost at the same rate of increase during the Non-plan period. The estimated real MV rate increased from about Rs.600 in 1948 to Rs.800 in 1958 and the estimated value of real C Rate increased from about Rs.900 to Rs.1100.

During the Plan period, the two rates showed increasing trends with real C Rate increasing at a higher rate. The estimated real MV Rate increased from Rs.1100 in 1959 to about Rs.1400 in 1989 whereas the real C Rate increased from Rs.1200 to Rs.2500. Thus the increase in real MV rate was as low as Rs.10 per year. It shows that the increase in market value was extremely low in real MV rate over the Plan period.
Period Averages of MV Rates and C Rates in Delhi (1948-89)

For the entire period from 1948 to 1989, the average MV rate was Rs.3188 as compared to the average C Rate of Rs.4872, making MV rate 65% of the C Rate.

For the non-plan period, the average MV rate was Rs.626 and C Rate was Rs.855 making MV rate only 73% of the C Rate.

Over the Plan period (1959-89), the average MV rate was Rs.4097 as compared to C Rate of Rs.6298 making MV rate 65% of the C Rate.

Decade-wise, the average MV rate increased from Rs.1608 in 1959-69 to Rs.2639 in 1970-79 to Rs.8293 in 1980-89. The proportion of MV C Rate during the same period changed from 81% to 67% to 62%.

Within the period of (1980-89), the average MV Rates and C Rates were far higher i.e. Rs.12,759 and Rs.21,018 in 1985-89 (61%) than those of Rs.3826 and Rs.5784 (66%) in 1980-84 respectively.
The above analysis shows that in absolute terms the nominal MV rates and C Rates rates were not very high for the entire period of 1948-89. However, they were relatively higher in the Plan period than those in Non-plan period.

Over the four decades, both the rates increased but the substantial increase came only in the decade 1980-89 that too in its second half. Over time, the proportion of MV rates in the overall C Rate progressively declined from 81% to 62% during the Plan period.

It implies that during Plan period with the progression of time, the other factors in the C Rate became more important. The graph shows that the price index increased from the decade (1948-58) to (1980-89), almost five times reflecting the erosion of real value in the MV rates.

The difference between C Rate and MV rate as a proportion of MV rate i.e.,

\[
\text{C Rate - MV Rate} = \frac{\% \text{ Increase in MV Rate}}{\text{MV Rate}} \times 100
\]

showed an increasing trend from 1948-58 to 1970-79 and declined in 1980-89.

**Growth Rates of MV Rates and C Rates in Delhi (1948-89)**

For the entire period of 1948-89, the growth rate in MV Rate at 8.24 was lower than that of C Rate of 9.01.

During the non-plan period, it was higher than the C Rate, whereas during Plan-period the MV rate grew at a lower rate than the C Rate.

During the Plan period, in the first decade, the growth rate of MV Rate was higher than the growth rate of C Rate while it was lower in subsequent two decades. Within the sub-periods of 1980-89, the rate grew at a higher rate than the MV rate.

**Growth Rates of MV Rates in Delhi Regions (1948-89)**

To analyse how the MV rate grew in the various regions over different time periods, the growth rates were calculated.
For the entire period of 1948-89, the growth rates of MV Rate ranged from 9% to 11% except for MW region, where it was only 4.61.

The Non-Plan period shows unequally distributed growth rates in regions. In MW region it was 37.39% whereas in PN region it was as high as 72%.

The Plan period depicted relatively far less unequal growth in MV rate over the regions. The growth rate ranged from 8.5% to 14.22% except in MW region where it was only 4.15%.

Within the Plan period, not only the range declined from the first decade to the third decade but the absolute level of growth rate also increased with market value growing in every region at more than 16%.

Interestingly, within the third decade, the growth rates showed unequal distribution in the first and second halves in such a way that for the overall period the distribution became more uniform.

The above analysis shows that the MV Rates 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.

It is revealed that initially the MV Rate grew unequally among the regions but in the third decade the MV started growing at relatively more uniform rate in all the regions of Delhi.

The patterns of rates and growth are almost similar in case of market value being taken either with reference to the date of notification under section 4 or with reference to the time of award.

Land & Development Office Rates in Delhi

In the previous analysis, the MV Rates and C Rates were discussed temporally and spatially for Delhi as a whole and for its various regions. For a comparative analysis of the MV Rates, the rates of Land & Development Office (L & DO) released from time to time for the various zones in Delhi for the purposes of assessing annual lease rates were compiled over time and space.
The L & DO rates were available for whole Delhi zone-wise. These zones are East Delhi, West Delhi, North Delhi, Central Delhi and Outer Delhi. The boundaries of these zones do not coincide with the LAC circles.

In order to make a comparative study of the zonal rates determined by the L & DO and those determined by the LACs over the same period, the localities of L & DO rates were grouped according to the LAC circles.

The L & DO rates were available only with reference to the years 1955, 59, 61, 64, 69, 73, 77, 80, 83, 86 and 1988. As such the L & DO as well as LACs rates were calculated for these years and compared temporally and spatially.

L & DO Rates in Delhi (1955-88)

The L & DO rates in Delhi were available for commercial land and for residential land separately. However, for overall rates, the averages were taken for all the zones for calculating the rates of Delhi. These rates were calculated by taking simple averages of residential and commercial rates.

Since in any area the commercial land is not more than 10% of the total area, weighted averages by giving 10% weight to the commercial land and 90% weight to the residential land, were calculated to arrive at more authentic rates for Delhi as a whole.

In case of simple Delhi averages, the L & DO rates increased from Rs.15,715 in 1955 to Rs.65,103 in 1964 but from 1969 onwards the rates increased comparatively at higher rates. The rates increased from Rs.91,326 in 1969 to Rs.1 crore 63 lakhs in 1988. On the other hand the weighted averages increased from Rs.15,715 in 1955 to Rs.62,090 in 1969 to Rs.1 crore 02 lakhs in 1988.

Both types of rates showed increasing trends but the rate of increase was greater in case of unweighed average. The estimated weighted averages for Delhi increased from Rs.0 zero in 1964 to Rs.38 lakhs per bigha in 1988 whereas the estimated unweighed average increased to Rs.62 lakhs.
Real L & DO Rates in Delhi

The real rates after taking allowance of price index were calculated. The unweighed and weighted real rates for Delhi increased from about Rs.21,236 in 1955 to Rs.25.87 lakhs and Rs.16.16 lakhs respectively in 1988.

The increase in L & DO Rates was thus, almost 77 times over a period of 34 years or Rs.47,000 per year.

Average L & DO Rates in Delhi (1959-88)

For the Plan period, from 1959 to 1988, the average unweighed and weighted rates were calculated alongwith real rates.

As the graph shows, the average unweighed rate for whole Delhi was Rs.20 lakh and the average unweighed rate was Rs.13.64 lakh per bigha. The real counterparts were Rs.3.50 lakh and Rs.2.47 lakh respectively.
Zonal Weighted Averages of L & DO Rates in Delhi (1959-88)

To analyse how the L & DO rates were distributed over the zones, averages were calculated zone-wise. The graph shows that Central Zone had the highest average of Rs.90 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 Zone. The Central Delhi having a high density of commercial area registered high average rates.

In zones, except East and Outer Delhi, the average rates were more than Rs.5 lakhs per bigha.
Chapter 6

RATES OF MARKET VALUE OF LAND ACQUIRED IN DELHI: A SPATIAL AND TEMPORAL ANALYSIS

AVERAGE L & DO RATES IN DELHI
(ZONE-WISE) [1959-88]

Thousands

ZONES

AVERAGE RATES/BIGHA

Initial 1959 (C • 9037890) GRAPH 6.37

AVERAGE L & DO RATES IN DELHI
(ZONE-WISE) [1959-88]

Rs (Millions)

ZONES

AVERAGE RATES/BIGHA

Initial 1959 .GRAPH 6.38

146
Growth Rates of L & DO Rates in Delhi (1959-88)

To analyse the element of dynamism in the rates, the compound growth rates were calculated. The growth rates per annum registered in different zones were different during the planned development (1959-88).

The highest rate of 24% was registered in the Central Zone followed by 18.71% in South, 18.14% in West, 16.57% in North, 14.7% in East and 12.46% in Outer Delhi. In every zone, the growth rate was above 12%.

It implies that as far as the L & DO rates are concerned, the growth was substantial in all the zones. In fact, not only the absolute rates were high but they also maintained substantive growth in them. Incidentally, all the zones with higher average rates had higher growth rates respectively.

L & DO Rates in Delhi (Zone-wise)

An examination of L & DO rates in various zones shows that increase in the rates was not very high from 1959 to 1977. The increase varied from 2.5 to 12 times. After 1977, the rates increased at a very high rate to the extent of 54 to 400 times of the rates in 1959.

In fact, for the period from 1955 to 1961, the L & DO rates were same in all the zones and started growing at different rates afterwards with highest being in Central Zone.

L & DO Rates in Delhi (Circle-wise)

The L & DO rates calculated LAC circle-wise show that up to 1977 the increase was not substantial, but from 1980 onwards the rates increased in a substantial proportion.

Circle-wise the increase was highest in the Central Delhi followed by South and West. The rates were lowest in Outer circle followed by East and North. In Central region, the rates increased to more than 60 lakhs per bigha in 1988 whereas in Outer region they increased to about 11 lakhs.

For whole Delhi, the weighted average rate increased to about Rs.30 lakhs per bigha in 1988. The weighted average of Delhi increased to Rs.12 lakhs in 1983 and to Rs.14 lakhs in 1986.
Commercial and Residential L & DO Rates in Delhi (Zone-wise)

These rates are depicted zone-wise in graphs. These rates over space and time show the same patterns as the average rates taken together. Beside the fact that commercial rates were higher than the residential rates, the increase in residential rates were higher than that in the commercial rates.

A Comparative Study between L & DO Rates and LAC Rates from 1955 to 1988 in Delhi

To make a comparative study of the L & DO rates and the LAC rates in Delhi, the two rates were taken with reference to same time points and the regional units were made coincidental.

The Average Rates as Assessed by the LACs in Delhi

(Year of award): In terms of real values, the MV Rate and C Rate in Delhi increased from about Rs. 1,680 and Rs. 2,100 per bigha in 1959 to about Rs. 13,000 per bigha and Rs. 23,500 per bigha respectively in 1988 whereas the L & DO rates in Delhi during the same period increased from about Rs. 21,000 to about Rs. 112.3 lakhs.

The average MV Rate and C Rate were Rs.4290 and Rs.6450 for the period 1959-88 whereas the weighted L & DO rates for Delhi was Rs.13.64 lakhs.

In case of real rates, the MV Rates and C Rates for Delhi increased from about Rs.1790 and Rs.2260 in 1959 to about Rs.2050 and Rs.3700 in 1988 whereas the L & DO rates increased from Rs.22,300 to Rs.16.16 lakhs in 1988. The average real MV Rate and C Rate for the period from 1959 to 1988 were about Rs. 1260 and Rs. 1790 respectively. The average L & DO rates on the other hand, was Rs.2.47 lakhs.

It shows that the average L & DO rate was almost 318 times of the MV Rate assessed by the LACs. The real average L & DO rate was on the other hand, was 196 times of the LAC rates.

The analysis shows that how lowly the LACs rate were placed as compared to the L & DO rates in Delhi. It reveals unreasonably low LAC rates in Delhi.
While comparing the two rates one may make allowance for the higher rates reflected in L & DO rates since they generally show the rates of developed area. Still after making such deductions for developed land, the LAC rates were too low. In case of L & DO rates, the Outer Zone related exclusively to rural area which may be taken again as a yardstick for the comparison.

The rates of Outer Zone increased from about Rs.21,000 to Rs.11.36 lakhs in 1988. The average rate on the other hand, for Outer Zone was Rs.2.3 lakhs. It means that the average L & DO rate for rural areas was 54 times of the rates assessed by the LACs. One can take it as the lower limit since these rates related to only rural areas for the period from 1959 to 1988.

Thus, the L & DO rates can be taken to be 54 to 196 times of the LAC rates. Taking the absolute increase in the MV Rate, C Rate and L & DO rates, the MV Rate increased about 8 times, C Rate increased about 11 times and L & DO rates for Delhi increased about 487 times and L & DO rates for Outer Delhi increased about 54 times in the period from 1959 to 1988.

It again shows that not only the absolute MV Rates or C Rates were unreasonably low compared to the L & DO rates either for Delhi as a whole or for the Outer Delhi, but they at the same time registered a very low rate of increase compared to L & DO rates.

Temporal Trends in L & DO Rates and MV Rates and C Rates in Delhi (1955-86) (Year of section 4)

The estimated L & DO rates in Delhi (weighted rates) increased from zero in 1964 to Rs.36 lakhs in 1986 whereas the estimated MV Rate increased from about Rs.3000 in 1964 to Rs.16000 in 1986. On the average, the increase in L & DO rates was Rs.1.50 lakhs whereas the same in case of LAC rate was only Rs.565 per year.

The estimated C Rates during the same period increased from about Rs.7000 to Rs.27,000 in 1986 or Rs.870 per year. The estimated real MV Rate increased from Rs.1800 in 1964 to Rs.3300 in 1986 or Rs.65 per year.

All the trends and figures reveal that the absolute level, average rates and rate of increase in either MV Rate or C Rate by LACs fell far behind the L & DO rates published by Urban
Development Ministry. The gross undermining of market forces while assessing the MV Rates by LACs can be seen from the above comparative analysis.

![Graph of Real Rates of MValue/Compensation](image)

![Graph of Nominal Rates of MValue/Compensation](image)
Regional Distribution of Market Value and L & DO Rates

The regional patterns shown by the two types of rates are similar to an extent. Both the rates depicted for Delhi and over regions show rate of increase up to 1977 and thereafter register relatively higher rate of increase. The variation among the regions was visible in both the rates.

A comparative analysis of regional averages again shows that LAC rates region-wise were no match to the L & DO rates.

The average taken in case of L & DO rates pertains to the period from 1959 to 1988 whereas those in case of LAC rates pertain to period from 1959 to 1986.

The average LAC rate of DS region was about Rs.26300 as compared to L & DO rates of Rs.3.31 lakhs or about 12.5 times of the LAC rates.

The average LAC rates for ME and MW were Rs.16,000 and Rs.6700 respectively as compared to Rs.10.17 lakhs of L & DO rates of South Zone or about 9 times of the LAC rates taken together.

The average LAC rate for DL region was Rs.93,500 as compared to the L & DO rate of Central Delhi of Rs.90.38 lakhs or about 100 times of the LAC rate.

The average LAC rate for North was Rs.12,500 as compared to L & DO rates for North Zone of Rs.5,87,000 or about 47 times of the LAC rate. The LAC rates of PN and PS were Rs.3600 and Rs.4000 respectively as compared to L & DO rates of Rs.8.18 lakhs or about 215 times of the LAC rates taken together.

The L & DO rate for Outer Delhi was Rs.2.30 lakhs which pertained only to rural areas of Delhi. Even if one compare this rate with other regional rates, the difference is very high. The L & DO rate of Outer Delhi was about 2.5 times of LAC rate for Delhi city, 9 times of East Delhi, 20 times of South Delhi, 18 times of North Delhi, and 60 times of West Delhi.

It again shows that the MV rates assessed by the LACs were enormously depressed and ignored the market forces entirely. In fact, they were too low to reflect the market value actually
prevailing in any part of Delhi. Secondly, they may be said to be relatively more unrealistic in South and West Delhi.
Growth Rates of LAC Circles as compared to L & DO Rates of Comparative Zones

Even during the period from 1959 to 1986, the LAC rates did not grow at a rate compared to L & DO rates. Whereas the L & DO rates grew from 12.5% to 24%, the LAC rates in various regions grew from 5% to 14%.

Comparing region wise, the growth rate in L & DO rate of Central Zone was 24% as compared to 11.5% in Delhi region; 14.7% in East Zone as compared to 14% in East Region; 18.71% in South Zone as compared to 11% in ME and 7% in MW; 16.5% in North zone as compared to 12.5%. in Narela Region; and 18.14% in West Zone as compared to 5% and 10% in PN and PS regions respectively. In Outer Delhi, the L & DO rates grew at 12%.
The comparison reveals that in all the regions, the L & DO rates grew faster than those of LAC rates. Except in DS and Narela regions, the growth rate of Outer Delhi was higher than the growth rate of all other regions.

The L & DO rates grew relatively at a higher rate as compared to LAC rates in case of Central Delhi, South Delhi and West Delhi.
The above analysis brings out that, in general, the LAC rates were extremely low as compared to L & DO rates either for Delhi as a whole or region-wise. Even compared to L & DO rates for Outer Delhi, the LAC rates were too low to clearly indicate that they did not truly reflect the market forces prevailing in Delhi. They were especially more depressed in case of Central, South and West Delhi.

Further, the growth in LAC rates was also much behind the growth in L & DO rates. The growth was similarly relatively more depressed in Central, South and West Delhi.