PARLIAMENTARY ELECTIONS IN BIHAR: A Spatio-Temporal Study of its Socio-Economic Correlates

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TO MY PARENTS

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C E R T I F I C A T E

This is to certify that the dissertation entitled, PARLIAMENTARY ELECTIONS IN BIHAR: A SPATIO-TEMPORAL STUDY OF ITS SOCIO-ECONOMIC CORRELATES submitted by Mr. DIPANKAR JANA, in fulfilment of the six credits out of the total of twenty-four credits for the award of the degree of Master of Philosophy (M.Phil.) of this university, is a bonafide work to the best of our knowledge and may be placed before the examiners for evaluation.

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ABBREVIATIONS USED FOR THE PARTIES IN THIS DISSERTATION

BJP	Bharatiya Janta Party
BJS	Bharatiya Jan Sangh
BLD	Bharatiya Lok Dal
CPI	Communist Party of India
CPM	Communist Party of India(Marxist)
INC	Indian National Congress
INCO	Indian National Congress(Organisation)
JAP	Janata Party(Bihar)
JD	Janata Dal
JKD	Jharkhand Party
JMM	Jharkhand Mukti Morcha
JP	Janata Party
PHJ	Bihar Prant Hul Jharkhand
SHD	Shoshit Dal
SSP	Samykta Socialist Party

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CHAPTER-I

INTRODUCTION

1. Statement of the Problem

A certain socio-economic conditions of the people of a country express the people's attitudes towards the political parties of that country in terms of exercise of their franchise. Any factor of election shows its' relationship with the existing socio-economic conditions. The electorate, or the "King-makers" of a democratic country give their support in a form of mark on the ballot paper which ultimately choose who will be the decision-maker of their country. The polling result determined the decision-maker of a country for a certain period of time. If their decision is favourable for the betterment or the development of the country then they will be backed to the office again in the next election for another tenure otherwise they won't.

It is seen that certain social groups cast their vote in favour of some particular political parties whose ideology and decisions are favourable for them. On the other hand, some social groups avoid some particular political parties whom they think not favourable for them. Sometimes a particular political party or parties are favoured by a particular social group whereas at the next time it is not. Some political parties are dominent in some particular state or

region or even in a constituency whereas they are not the same in other areas. It is seen that socio-economic conditions also determined the percentage turnout and within which what percentage of vote casted will be invalid.

The percentage figure of valid vote polled by a party and seats won or/and lost only give a rough idea about the outcome of an election. But a through analysis with the help of above information and some statistical tools tell us how the parties are taking seriously the election or how they are united against the dominant party in electoral fray or how a party enjoys its' dominance in an area over others.

With passage of time literacy, urbanization, use of mass media, etc. are on an increasing rate. All those matters influence the political conciousness of common electorates of an area. This political conciousness ultimately affect the turnout, valid votes, and, as well as their support towards the political parties. With development of a society its' occupational structure also change and with it the polling patterns and as well as party applications also changed.

In a fudal society the fudal landlords control their subjugated people to cast their vote. However, the polling

pattern and party domimance become changed when upward mobility among those oppressed people takes place.

Under Indian situation caste, language and religion biasness of the political parties get more consideration. For this economic issues get less importance. Its' result is, some parties won the seats by an inefficient candidate. This type of representation brings no development for the country as well as those social groups who supported. On the other hand, Indian electorate are very imotional. Sometime they support the relative of a stalwart. In most of the cases this type of election is highly irrational.

However, this short-sightedness is solely an Indian phenomenon. This type of wrong decisions is also taken by the Western electorates. The only difference is that their percentages are lower than their Indian counterparts. With the flourishing education, industrialization and more use of mass media, the political attitudes of the electorates towards the parties are also changing. During the pre-independence period the Indian political arena was completely dominated by the upper castes, but after independence by virtue of a number of new steps taken by the Government the backward and lower castes have also improved their economic condition which have improved their socio-economic conditions. Their political aspirations thus may also be seen to have been on a rise.

Parliamentary elections in Bihar are not an exception. So, keeping the above conditions in mind an attempt has been made in this study to analyse the various aspects of parliamentary elections in Bihar. A number of relevant variables and indicators have been taken into consideration in order to examine the socio-economic correlates of the outcome of a series of parliamentary elections. All those socio-economic variables and indicators also exhibit spatio-temporal change and thus may be seen to have some reflections on the electoral scenario in Bihar. The study is made with objectives, like : the following

1.1 Objectives of the Study

- (1) to observe the spatio-temporal change of electoral behaviour and outcomes at two points of time (1971-77) and (1977-91);
- (2) to analyse the spatio-temporal pattern of Opposition Unity;
- (3) to study the spatio-temporal pattern of party dominance; and
- (4) to examine the causes and possible socio-economic correlates of electoral behaviour and outcome.

1.2 Data Base and its' Limitation

The nature of the study leads to make it dependent on the secondary data. The electoral data for 1971 and

1977 have collected from, Election Commission reports and handbooks. The electoral data for the year 1991 was collected from press releases, provided by Patna Old Secretariat. For this, the researcher had to go to Patna for five days field trip from 15th February, 1992 to 19th February, 1992. All development and social pluralism variables were collected from census handbooks of India for 1971, 1981 and 1991. The two agriculture variables have taken from Indian Agricultural Statistical handbook for 1971-72 and 1977 to 78, The lease map of the constituencies are collected from Survey of India, 1991.

The electoral data in India provide us a good tool for the analysis of political behaviour, but it has some shortcomings. The reorganisation of the constituency boundary by Delimitation Commission makes the temporal analysis impossible.

Smallest administrative units of census handbooks never match with the smallest unit of the Election Commission - the assembly constituencies. For this development, social - pluralism variables cannot be used in electoral analysis. On the other hand, though the original voter shows the age and sex of the voter it, however, does not get any place in the results published by, Election Commission of India. It is possible for the Election Commission

to provide the number of urban and rural electorate for a constituency but they have never made an attempt. These two factors make the electoral data incomplete for socio-political and spatial analysis, because we know that the electoral behaviour of different age group and the urban and rural components are different.

Large number of Indian electorates are illiterate and educationally remain in very low profile. This phenomenon keeps them away from the criticisms and appreciation of the parties in election or to have any idea about a party from its' manifestoes. For this the clever politicians and party agents can mould the electorate's mind according to their wish. Sometimes the religious leaders raise their demand to their fellow members to cast the vote in favour of their favourite parties. This demand is also accepted by the illiterate, superstitious Indian electorates. Under this situation where the religious orthodoxy has an upper hand over more secular issues such as the economic and developmental issues, a scholar of electoral behaviour will not get satisfactory correlations for electoral data and economic variables.

Indian female electorates are educationally more backward than their male counterparts. In most of the

cases they follow the opinion of their father or husband or son while using their franchise. The illiterate electorates cannot read the candidates' name in the ballot paper and confusion arise.

Huge number of candidates in the election attract a certain percentage of vote each. This phenomenon complicates the electoral data in carrying out the analytical study. Most of the statistical tools to measure the electoral data are for the two party system and thus their application in Indian situation does not give meaningful results. For this reason in this study the swing and split values carry some percentage of error.

The anarchic situation during election time, such as booth capturing, false vote, threat from dominant groups to the voters (sometimes to the lowerer castes from upper castes) obstruct them to practice their democratic rights. For this the electoral data which is available to us does not give the real picture of electoral behaviour.

The low participation rate of the Indian electorates in the election creates another pressing problem for the scholars to examine. A candidate who get elected is really represented by a small part of the electorates. From one constituency to another this figure varies. So, this type of incompleteness raise a great problem in the analysis.

Any researcher of Indian electoral behaviour have to keep all the above limitations in mind while carrying out the research.

1.3 Hypothesis

(1) There exists a positive relationship between percentage of urban population and voting turn-out.

(ii) There exists positive correlation between percentage of literate population and voting turn-out.

(iii) There is positive relationship between percentage of non-primary main male workforce and voting turn-out.

(iv) Higher the voting turn-out, lower the level of invalid votes.

(v) There is a positive relationship between percentage of net irrigated area and voting turn-out.

(vi) There exists a positive correlation between percentage of gross cropped area and voting turn-out.

(vii) Higher the number of national parties in the electoral fray, lower will be the index of opposition unity.

(viii) Higher the number of national parties in the electoral fray lower will be the margin of victory.

1.4 Methodology

1.4.1 Selection of the Study Area and Time Period:

Choice of suitable unit of analysis is the first step for a meaningful analysis of electoral data in its socio-economic perspective. The Census of India organizes its data on the district or other smaller administrative divisions. On the other hand, Election Commission of India provides its data on assembly or parliamentary constituency levels. So, the socio-economic data of Census hardly match with electoral data. Under this condition Assembly Constituencies can be used as appropriate areal unit which provides us the ideal unit of analysis.[1]

Earlier it was decided to conduct this study for the Assembly as well as Parliamentary constituencies level but due to data constraints (as latest assembly election results were not available) the choice was narrowed down to the study of parliamentary constituencies only.

The socio-economic variables of the constituencies were collected from the districts data where these are wholly or

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1. Dikshit, R.D. and Sharma, J.C., "A Solution to the Unit -OF-Analysis Problem in the Electoral Geography of India", The National Geographical Journal of India, Vol.16, Parts 1 and 2 (March- June 1981), pp.14-18.

mainly situated.

In this study the three time periods, i.e. fifth general election in 1971, sixth general election in 1977 and tenth general election in 1991 have been considered. During those periods the number of parliamentary constituencies where elections were held were 53, 54 and 52 respectively. In the tenth general elections it was countermanded for Patna and Purnea constituencies. So, these two constituencies have not been considered for 1991 and 1977-91 periods.

According to Article 32 of Indian Constitution the fresh drawing of boundaries takes place after each census according to the size of population. Delimitation was taken place in 1956, 1966 and 1976. In 1976 the constitution was amended to postpone the next delimitation after the year 2001.[2] The last delimitation was taken place in the year 1976. This delimitation affected the comparision between 1971 and 1977 elections. However, 1971 election was taken into consideration because this year was a water divide for INC's power politics. After 1971 the INC stronghold of

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2. David, B., Lahiri, A. and Roy, P., India Decides: Elections 1952-1991, Living Media India Ltd., 1991, p.12.

Bihar was broken in terms of parliamentary seats won.

For 1976 parliamentary boundary reorganisation names of some constituencies have changed. Those are as following Vaishali (earlier Kesaria), Sheohar (earlier Pupri), Jhanjharpur (earlier Jainagar) and Arrah (earlier Shahabad). The Jamui parliamentary constituency was till 1971 election but after 1976 it was ceased to exist. In this study the name of the constituencies after 1976 is followed from 1971 to 1991. As Jamui did not exist after 1976, so it has been dropped from the study for consideration of certain variables and indicators.

After 1976 delimitation two new parliamentary constituencies were carved out from the already existing two constituencies. Those constituencies are Balia (carved out from Khagaria) and Koderma (carved out from Giridih). So, for these two constituencies analysis has done where it is possible. In maps for the year 1971 only Khagaria and Giridih constituencies are shown. After 1971 Balia and Khagaria, Koderma and Giridih shown separately.

At the outset of methodology the justification of taking 1971 general election was discussed. The sixth general election is taken into consideration because that

was the first time when INC was completely wiped out from Bihar. So, to see the nature of most strongest performance shown by the oppositions, this particular general election has taken into consideration. The tenth general election has included in this study to see the latest electoral behaviour in Bihar.

1.4.2 Choice of Variables and Indicators:

For any research work choice of variables and indicators are basic important things. The statistical handbooks provide us raw data in absolute term. This data may or may not indicate the relevant phenomenon. An indicator view as a combination of matters of fact (data) and matters of relation (theory). On the other hand, can be constructed only through a "correct sequence between factual and logical order". It is, therefore, through an appropriate transformation of the variables (which eliminates the effect of non-essential factors) within a theoretical format that an indicator can be obtained.[2]

1.4.3 The Indicators Used in this Study:-

For any electoral analysis it will be better for a researcher to classify the indicators.[3] The indicators which

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2. Kundu, A., Measurement of Urban Processes: A Study in Regionalisation, Popular Prakashan, Bombay, 1980, p.30.
3. Dasgupta, B., and Morris-Jones, Patterns and Trends in Indian Politics: An Ecological Analysis of Aggregate Data on Society abd Elections, Allied Publishers, Pvt.Ltd., New Delhi, 1975, pp.43-55.

are used in this study are given below under broad, heads and with codes within the brackets.

1. Political Indicators

Under this broad category the following indicators are used.

(i) Percentage voter turn-out to the total electorates (G_1)

(ii) Percentage of invalid votes to the total votes polled (G_2).

(iii) Percentage share of valid votes polled by different parties (G_3).

(iv) Margin of Victory or the difference in percentage of votes between winner and runners up Parties (G_4).

(v) The index of Opposition Unity (G_5).

(vi) Swing Factor (G_6).

(vii) Split Factor (G_7).

2. Socio-Economic

Again it can be divided into the following classes:-

a) Developmental Variables

(i) Percentage of Urban Population to the total population (G_8).

(ii) Percentage of literate population to the total population (G_9).

(iii) Percentage of non-primary main male workforce to the total male workforce(G_{10}).

b. Agricultural Indicators.

(i) Percentage of net irrigated area to the total geographical area (G_{11}).

(ii) Percentage of Gross Cropped Area to the total Geographical area(G_{12}).

c. 'Social Pluralism' Indicators.

(i) Percentage of scheduled caste population to the total population (G_{13}).

(ii) Percentage of scheduled tribe population to the total population (G_{14}).

(iii) Percentage of Hindu population to the total population (G_{15}).

(iv) Percentage of Muslim population to the total population (G_{16}).

Among the above mentioned indicators the agricultural and social pluralism indicators are not available for 1991. So, these two types of variables have dropped for the year 1991 from this study.

This study has done on the yearwise basis, because after 1971 election the 1976 delimitation of the constituencies brought some changes in their area as well as for the electorate size. So for this reorganisation of the constituency boundaries the electoral behaviour also changed. Suppose a particular portion of a constituency which has a particular electoral behaviour., when it will be added to another constituency, the later one's electoral behaviour will also be affected by this change. The time gap between 1977 and 1991 general election is very large. For the passing of sixty first Amendment, (28th March,1988)[1] a quite considerable number of young electorates between 18 to 21 years age group has increased the electorate size considerably. Added to this the rapidly growing population make the overall study impossible. So, the variables and indices are analysed separately for a particular year.

1.4.4 Categorization of the Indicators:

In this study, the indicators are classified for a particular year on the basis of mean and standard Deviation S.D.) As for example:-

Mean+ S.D. to Mean - very high category;

Mean to Mean - S.D. - High category;

Mean - S.D. to Mean - 2 S.D. - Low category;

Mean-2.S.D. to Mean - 3 S.D. - very low category.

Here the mean or arithmatic mean is the simple average of the different values of a variable. In case of ungrouped data, mean is the sum of all the observations divided by the number of observations.[4]

$$\text{Statistically Mean or } \bar{X} = \frac{\Sigma X}{n}$$

Standard Deviation is the positive square root of the average of square of deviations about mean.[5]

$$\text{Statistically SD} = \sqrt{\frac{(X-\bar{X})^2}{n}}$$

1.4.5 Calculation of Index of Opposition Unity (I.O.U) Swing and Split Factors:

1.4.5.1 Index of Opposition Unity:-

IOU has calculated from the percentage share of the largest opposition party divided by the percentage share of votes for all the parties multiplied by hundred.

$$\text{So, IOU} = \frac{\text{Percentage share of votes for the largest opposition party}}{\text{Percentage share of votes for the all opposition parties}} \times 100$$

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4. Mahamood, A., Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi, 1986, p.9

5. Ibid, p.18-19.

If there is only one opposition party (i.e., if the opposition is fully united) the IOU will be 100. Its value varies between 0 to 100. Higher the value of IOU the greater will be the united Opposition.

To measure the dispersion in the distribution of IOU values in relation to its' Central value for expressing the consistency in the data the Coefficient of Variation (C.V.) has calculated for Bihar as a whole for the three time periods. To measure this relative variability the calculation has done according to the following formula.

$$C.V. = \frac{S.D.}{Mean} \times 100$$

Higher the value of C.V. the higher will be the inconsistency in the data, whereas a lower value of C.V. indicates higher consistency in data.[6]

1.4.5.2 Swing Factor:-

The swing factor has calculated with the help of following formula.[7]

$$Swing = (X_t - X_{t-1}) \quad (1 + I_{t-1})$$

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6. Op.Cit., p.21, Mahmood, A., 1986.

7. Op.Cit., p.37, Butler, D. et.al., 1991.

where X = percentage share of votes for the dominant party (here INC);

I - Index of Opposition Unity (expressed here as a proportion and not as a percentage, i.e. $0 < I < 1$);

the subscript t = the year for which the calculation has done;

and the subscript t-1 = the proceeding year.

1.4.5.3 Split Factor:-

The split factors have calculated with the help of following formula.

$$\text{Split Factor}^{8} = (I_{t-1} - I_t)\ (100 - X_t)$$

where I = Index of Opposition Unity (expressed here as a proportion and not as a percentage, i.e. $0 < I < 1$)

X = percentage share of votes for the dominant party (here INC).

the subscript t = the year for which the calculation has done

and the subscript t -1 = the preceeding year.

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8. Op.Cit., p.37, Butler, D. et.al.,1991

In Bihar INC was dominant only in 1971 general election among the three particular general elections taken into consideration. There are no other political party, except INC which contested for 1971,1977 and 1991 general elections from most of the constituencies with a considerable percentage share of votes. To calculate IOU, swing and split one dominant party should be taken into consideration. For the quite simple reason INC is chosen for that. The values for IOU, swing and split cannot be calculated where INC was not in the electoral fray.

The IOU values were not possible to calculate for this reason for Maharajganj, Vaishali, Patna, Jahanabad., Singhbhum and Khunti in 1971 general election. For the same reason swing and split factors also were not possible to calculate for those constituencies.

1.4.6 The Socio-Economic Correlates between Political and Socio-Economic Indicators.

To see the interrelationships between the political and socio-economic indicators the correlation coefficient between those have been computed and the test of significance examined at .01 and .00 level of significance.

1.5 Bihar: A Brief Social, Political and Economic Account:

Bihar is an eastern state of India having an area of 173877 sq.kms. and 86338853 population (according to 1991

Census. Till 1911 Bihar formed a part of the Bengal Presidency, when on 12 December, 1911, a separate province of Bihar and Orissa was created. In 1936 Bihar was made a separate province.[9]

From time to time the number of districts in Bihar are increasing. According to 1971, 1881 and 1991 Censuses the number of districts in Bihar were 17,31 and 42 respectively. The northern Bihar is a plain area with many Hindu castes and muslim population, whereas the south Bihar is a plateau area, which is known as Chotanagpur region with considerable tribal and Christian population.[10]

"Bihar is today in the midst of one of the worst phases that can be found in the life cycle of a caste-ridden and caste tensions in Bihar since long therewas a distinct qualitative increase in their tempo follow independence. And now we are in a phase which can be aptly described as one of 'caste riots'.[11] The present politics of Bihar cannot be analysed without the impact of caste. The creation Bihar

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9. Government of India, India 1991: A Reference Annual, New Delhi, 1992, pp.862-863.

10. Singh, R.L. (ed.), India: A Regional Geography, National Geographical Society of India, Varanasi, 1971.

11. Prasad, H.P., "Caste and Class in Bihar", Economic and Political Weekly, Vol.14, No.7 and 8 (February 1979), Annual Number, pp.481-484.

and Orissa from earlier greater Bengal province as separate province in 1912was a movement which was combined with the caste and politics.[12]

Before the formation of separate Bihar and Orissa province from Bengal, the Government Services as well as the professions of law and teaching were dominated by Bengalees who had received English education earlier and in a large number than the more rural and isolated population of Bihar. Kayasthas and to some extent Muslims got English education later on. But the job opportunities narrowed down by Bengalees, who were often alleged for nepotism in taking on their fellow Bengalees in the services. So, the Kayasthas started the movement, "Bihar for Biharis". The topmost Bihari leader Sachchidananda Sinha provided his intellectual leadership to the educated Biharis through " Kayastha Samachar".[13]

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The creation of separate Bihar province open the avenue to the kayasthas for employment in various fields especially in politics. The kayasthas constitued only less than two

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12. Shukla, Kiran, Caste Politics in India, Mittal Publications, Delhi, 1987, pp.33-47.

13. Roy Ramashray, "Caste and Political Recruitment in Bihar", in Rajni Kothari (ed.), Caste in Indian Politics, Orient Longman, New Delhi, 1986, pp.228-258.

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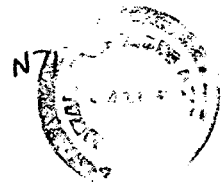

per cent of the total population of the state and yet they hold majority of the employment and in the forefront of the education and political scene.[5] This was not acceptable to the other three high caste groups, i.e., Brahmins in general and Bhumihar's and Rajputs in particular. Soon the two strongest land owning groups of Bihar. The Rajputs and Bhumihars and as well as the Brahmins came into education and politics. They began to pose a serious threat to the Kayasthas who made alliance with some politically dormant caste to make their position safe. In due course from the politically less concious caste group emerged leaders in their own right, brought more and more caste into the vortex of politics.

The three major backward tenant castes in Bihar are Yadavas, Kurmis and Koeries. They are sometimes called as intermediate castesand presently after Mandal Commission Recommendation, they are renamed as other Backward classes, (OBCs). Their projected total percentage (for all OBCs) according to 1961 Census was 52.16 per cent.[14]

After Independence, due to landreform a considerable area of land came into their hand. They emerged as most efficient class in the context of agricultural development. The

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14. Op.Cit., p.244, Roy, R.,1986.

level of adoption of new technology among them is higher than former land-holding high castes. Therefore, the per acre output for the OBCs is on an average about 20 per cent higher than the higher castes. With their newly acquired economic power they made a successful bid for the capture of political power.[15]

During the euphoria of J.P. movement casteism was relegated to some extent in the background. But after the implementation of seat reservation' policy of Karpoori Thakur, a nai by caste, the whole population of Bihar was divided into two main groups - Upper castes and Backward castes. The year 1977 was water divide for the backwards who for the first time came under single leadership of Janata Party leader Karpoor Thakur.[16]

The caste conciousness of the OBCs got many times intensified after the declaration (August 7,1990) of the Mandal Commission Recommendations (MCR).[17] In MCR the

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15. Op.Cit., p.483, Prasad, H.P., 1979.

16. Dhar, H., S.Gupta, N.Roy and N.Sengupta, "Caste and Polity in Bihar", in Gail Omvedt(ed.), "Land Caste and Politics in Indian States, University of Delhi, Delhi,1982, pp.109-110.

17. Bardhan, A.B., Class Caste Reservation and Struggle Against Casteism, All India Youth Federation, New Delhi, p.44.

complete OBc lists for Bihar and other states and Union Territories were published. It recommended 27 per cent jobs in Union Government and Public Sector Undertakings should be reserved for the OBCs.[18] Its' after effect was seen in the 1991 general election when National Front and Left Front alliance who supported the MCR, secured 46 parliamentary seats out of 52 under the leadership of Yadava leader Mr.Lallo Prasad Yadav.

The participation of the scheduled castes was started following the Poona Pact of Congress, 1932. They sponsored a young scheduled caste leader Mr.Jagjvan Ram. After Independence the reservation policy for the scheduled castes in academics as well as in employment open the avenue for their betterment. However, their socio-economic and political development is not so significant. Still they are coming more in number than earlier in politics. Their political support and party affiliation is mainly towards the communists., J.D. and J.P.

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18. Government of India, Backward Classes Commission Report, First Part (Vo.I to II). and Second Part (VolIII. to VII), New Delhi, 1980.

The southern Bihar is dominated by the tribal population. The tribal communities are quite distinct from the rest of their non-tribal neighbours with regard to their ownership rights on land, their culture and language. From time to time with different policies of Government and land holding systems many outsiders came here. Afterwards those outsider exploited the tribals.[19]

Presently the long been exploited tribals are raising demand to the centre for separate Jharkhand state which will include thirteen districts from south Bihar according to 1991 Census. These thirteen districts are - Palamau, Hazaribagh, Giridih, Godda, Sahibganj, Dumka, Deoghar, Dhanbad, Lohardaga, Gumla, Ranchi, Purbi, Singhbhum and Paschimi Singhbhum. This thirteen districts together constitute 2.5 per cent of Indian territory but produce 25 per cent of India's mineral resource. Bihar gets a profit margin of about 80 per cent from this area but never invest more than 15 per cent for the development of this area. India's 30 per cent area is irrigated, and in Bihar 27 per cent area is irrigated whereas in this area only 7.2 per cent area get the facility of irrigation. This tribal area produce 204.4 kilowatts, electricity per head whereas in whole Bihar only 59.5 kilowatt per head is produced and for whole India this figure is 66.3 kilo-watt.

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19. Sen, Jyoti, "The Jharkhand Movement", in K.S.Singh(ed.), Tribal Situation in India, Indian Institute of Advanced Study, Simla, 1972, pp.432-437.

But in this area only 5 per cent area is electrified whereas for Bihar and India this figure is 20.1 per cent and 27.3 per cent respectively.[20]

All the above things created a sense of discontents among the tribals of south Bihar. The other causes of discontent are alienation of land from the tribals for the developmental works, but the proper rehabilitation work from Government never been fulfilled so far. After Independence the tribal youth got education but not job, because the job generated in this area is already captured by the outsiders locally termed as 'Diku'[21]

The present tribal movement of Bihar is more than seven decades old. The already existing Chotanagpur Unnati Samaj which had been renamed into Adibasi Sabha in 1928 for the uplift of the tribals. In the same year a demand of separate Jharkhand state was raised to the Saiman Commission. Jaipal Singh was elected the 'President of the Adibasi Sabha in 1939. Under his leadership the Jharkhand movement gathered momentum. In 1951 the Adibasi Sabha took the name of Jharkhand Party and was organized as a full-fledged political party.

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20. Saraswati, Debashis, "Chotonagpurer Booke 'Chhabbistama Rajya', Habe Jharkhand?". Anandabazar Patrika, 11th Nov., 1987.

21. Op.Cit., pp.432-437, Sen, Jyoti, 1972.

In the year 1963, the Jharkhand Party was merged with INC with a view that the later may help them in forming the Jharkhand State.[22]

However, the demand for separate Jharkhand state created another strong Regional Party, the Jharkhand Mukti Morcha (JMM), in the year 1973 by Mr.Vinod Bihari Mahato. JMM joined hand with the INC in 1980 general election and with the Janta Dal (JD) from 1988. The electoral victories of this area has been also shared by the BJP, whose demand for constitution of a separate Vananchal state., also seems to be favoured by the tribal electorates.[23]

In Bihar the INC has the support base among the higher castes. The intermediate and lower castes support mainly to JD, JP and the communists for their seat reservation policy and to other opposition parties. The Muslims mainly support the J.D. BJP has supported base among the higher castes and the tribals. However, in order to compete successfully in the political game, the contesting groups had to broaden their support base by coopting man from other politically dormant caste groups.

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22. Op.Cit., pp.432-437, Sen Jyoti, 1972.

23. Kant, Abhay, "Bushfires of Belligerence, " The Hindustan Times, 12 April,1992.

1.6 Organisation of the Study

The present study is organised in six chapters, statement of the problem, objectives, hypothesis, methodology employed and the socio-economic and political account of Bihar are briefly indicated in the introductory chapter. Introduction Chapter also includes the choice of indicators, computation of Index of Opposition Unity, swing factor and split factor. The second chapter consists of an overview of literature on the topic. The third chapter describes the spatial and temporal pattern of voting turn-out and invalid votes. It made an attempt to analyse the interrelationship between the two variables. It also attempted to show the impact of voting turn-out on the percentage share of votes for the different parties. In this chapter an attempt has been made to analyse the electoral behaviour and the electoral performance of the parties with the help of share of votes for them, Index of Opposition Unity, swing factor and split factor margin of victory and seat won by different parties in chapter four. Chapter five includes electoral behaviour and party performances in Bihar, with the help of some socio-economic and political correlates. Chapter six includes the broad conclusions.

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CHAPTER-II

2. An Overview of Literature

Election is one of the most commonly used term which has social, economic, political and geographical implications. Election in a democratic polity marks a short period when common voters elect their representatives who on their behalf shall manage the affair of the state. Electoral processes are some kind of manipulation by the Elities "where friends are pampered and foes are forgiven". Problems which require long term solutions are ignored. Values and objectives are thrown wayside for short terms gains. The poor become important their tears evoke sympathy and even promises, their opinion attain significance, their problem become meaningful and in some cases even lead to performance. The slum get visitors and even get beautified. The political parties do promises with new slogans such as "Garibi Hatao," "Secularism Stability and Integrity of the Country".[1]

Psephology or the formal study of elections is only a little older than independent India. Over the last two

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1. Kaushik, S., Elections in India Its' Social Basis, K.P. Bagchi and Co., Calcutta, 1982, p.15

generations there have been studies in America and in Britain, which together with a growing body of work by opinion pollstears, have developed new techniques for looking at voting behaviour. In the last thirty years there has been some valuable research completed on Indian voting, nationally and locally. It ranges from the pioneer work of W.H.Morris-Jones, J.O.Field and Myron Weiner to more specialized studies such as those by A.H.Somjee, V. Siriskar, B.Ahmed and S.Elders-Veld, as well as by EPW, De Costa and others who have ventured into Opinion Polling.[2]

Psephology concentrated on the patterns and trends in the way electorates have noted, hold opinion polls in carefully selected constituencies and then translate the data into seats through some complex calculations.[3]

Election is mainly influenced by ethnic factors and economic factors. So, most of the election studies are concentrated on how the ethnic and economic factors influence politics and in turn how politics influence those. The

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2. Butler, D., Lahiri, A. and Roy, P., India Decides: Elections, 1952-1991, Living Media India Ltd., New Delhi, 1991, pp.1-2.

3. Raghavan, G.N.S. and Balachandran, Forty Years of World's Largest Democracy, Press Trust of India, New Delhi, 1990, p.108.

ethnic factors includes caste, religion, language, tribal groups and other social groups, whereas economic factors creates classes - the poor and rich, regional disparities and inequalities.

Ethnicity is often an important independent variable in voting behaviour. Ethnic voting has two manifestation (1) Members of an ethnic group shown an affinity for one party or the other which cannot be explained solely as a result of other demographic characteristics; (2) Members of an ethnic group will cross party lines to vote for - or against - a candidate belonging to a particular ethnic group.[4]

Parties and political leaders often expoited ethnic groups for selfish purposes which is clear enough.[5]

India is not an exception. Here multiplicity of regional, caste, religious, tribal, and linguistic political parties does foster and represent a wide variety of 'ethnic' and 'nationality' interests in the political context. As for example, the support base of the leading political party

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4. Wolfinger, R., "The Development and Persistence of Ethnic Voting", in Henry J.Pratt (ed.), Ethno-Religious Politics, Sehenkman Publishing Co., Inc.Cambridge, 1974, p.135.

5. Sindler, A.P., "Negroes, Ethnic Groups and American Politics", in Henry J.Pratt (ed.), Ethno-Religious Politics, Sehenkman Publishing Co., Inc., Cambridge, 1974, p.370.

the INC is provided by a wide variety of groups.[6]

In India among the ethnic factors the most dominant role is played by caste factors on politics. There are enormous literature published on this particular issue discussing many angles of it.

It is seen that most of the Political parties appear to be influenced by consideration of caste in the selection of the candidates for election to the parliamentary and assembly elections. Politicians mobilise caste groupings and identities in order to organise their power. But according to some scholars view, political relationships are no more than projections of social relationships, of systems of social and economic dominance and have no independent capacity to influence the latter. So, it is difficult to say whether caste uses politics or polities uses caste. There never was a complete polarisation between the caste system and political system. However, it is not politics that gets caste - ridden, it is caste that gets politicised.[7] A case study of Modasa an Assembly

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6. Oommen, T.K., "Ethnicity, Immigration and Cultural Pluralism: India and the United States of America, an unpublished working Paper", Jawaharlal Nehru University, New Delhi, 1988, pp.39-41.

7. Lal, S., Indian Elections Since Independence, The Election Archives, New Delhi, 1972, p.88.

8. Kothari, R., Introduction: "Caste in Indian Politics", in Rajni Kothari (ed.), Caste in Indian Politics, Orient Longman, New Delhi, 1986, pp.4-20.

constituency of Gujarat State proves the above fact. This case study reveals the politicisation of social cleavages and the creation of new identifications and loyalities, although both were involved in the process of change while caste provided an ongoing structure along which politics got articulated, politics provided events and opportunities by which traditional structures were found to disintegrate or re-shape under the impact of new forces.[9]

The word class is oftenly used with castes, but the basic difference between the two is while the caste is a 'social' phenomenon 'class' is mainly an economic phenomenon. Omvedt (1982) empirically proved land is the most dominant factor in Indian class politics which also follow the caste hierarchy. Political parties use those caste cum class cleavages in politics.[10] At the same time, caste-cum class cleavages also follow some political parties' ideology and behave accordingly at the time of practising their franchise.

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9. Kothari, R. and Shah, G., "Caste Orientation of Political Factions: Modasa Constituency", A Case Study in Party System and Election Studies, Allied Publishers, New Delhi, 1969, pp. 137-158.

10. Omvedt, G., "Class, Caste and Land in India: An Introductory Essay", in Gail Omvedt (ed.), Land, Caste and Politics in Indian States, University of Delhi, Delhi, 1982, pp.9-36.

A recent study by Johnstone, and Pollie (1988) reveals that with spread of education urbanisation and use of mass media, class consideration in voting behaviour erode down. In Britain during 1950s and 1960s the blue Collar or working class supported Labour Party and the White Collar or non-mannual middle class supported Conservative Party. But for the greater mobility in British Society this class selective voting behaviour was not seen in the latest study on 1983 British general election.[11]

Like caste and class religion is also an important factor in present politics and all parties are involved in communal game in present Indian politics. In fact, religion is more pervasive in India than the West. Though, India is a secular country, but secularism in India is a political rhetoric and a compromise with religion for political purposes.[12]

Indian Hindu community's electoral responses are fragmented according to caste line, but the second highest

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11. Johnstone, R.J. and Pollie, C.J., "Attitudes and Votes at the 1983 General Election: Explorations of the Geography of 'Deviations'," Area, Vol.20, No.2 (June 1988), pp.111-119.

12. Shakir, M., "Religion and Politics: Role of Islam in Modern India", Economic and Political Weekly, Vol.14, No.7 and 8, Annual Number, (February 1979), pp.469-474.

religious community of India, the Muslims always behave as a bloc during the time of election. In one case study of Baroda East assembly constituency revealed that during election the traditional divisionsin the Muslim community between the Shiyas and the Sunnis and within each, loyalities to various communities as Voras, Momans, Khojas and Shaikhs found no reflection in voting. During the election even the sharpest divisions were minimized and a sense of solidarity over came the incipent factionalism of Muslim community living.[13] So, politics can be as much a unifying as a divisive force in society.

There is a widely held impression in the country that the pattern of Muslim politics has remained more or less the same since independence. Nevertheless a careful analysis of the Muslim electoral behaviour during the last two decades shows that underneath it's strong communal orientation, the politics of the community has been undergoing some significant changes. Just after independence its' support was extended to INC with a belief that the later can provide the earlier with security. But their INC representatives of which majority were Muslims failed to raise their socio-economic grievances of the community.

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13. Kothari, R. and Sheth, P., "Extent and Limits of Community Voting: The case of Baroda East", in Rajni Kothari, et.al., Party System and Election Studies, Allied Publishers, New Delhi, 1967, p.123.

Some exclusively Muslim Organisations tried to exploit this situation. Those Muslim Organisations were communal both in its strategy and in its composition. It naturally produced a strong Hindu reaction in the same areas. It seems therefore, that in the state as a whole the Muslim will vote according to their political preferences, rather than for any particular party, secular or communal.[14]

Another numerically small but large in some pockets, the Christians also behave according to religious lines. The Churches of tribal Bihar plateau always acted as champion of the rights of the poor and the oppressed. Some of the Church leaders expressed grave concern that communists Muslims and the Jana Sanghis were trying to reap benefits from the prevailing tensions. In this particular area, apart from the Christian Missions, no voluntary organisations takes intelligent and effective interest in the welfare of the tribals.[15] In Kerala, from the Muvahupurgha parliamentary seat, which is numerically dominated by the Christians no non-Christian has been elected.[16]

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14. Op.Cit., pp.104-113, Lal, S.,1972.

15. Sen, J., "The Jharkhand Movement", in K.S.Singh(ed.), Tribal Situation in India, Indian Institute of Advanced Study, Simla, 1972, pp.432-437.

16. Op.Cit., P.15, Raghavan, G.N.S. and G.Balachandran, 1990.

Another parameter of different electoral behaviour is language. The linguistic of states in 1956 plays a major role in shaping the state boundaries in closer alignment in the socio-cultural- coordinates. As a rule, therefore, a linguistic state is not only a major administrative unit but also a form of national statehood.[17] In fact, linguistic identity evokes passions and emphasises the whole gamut of their cultural identity and which can be transformed into a powerful political force and to win over votes loyalities.[18]

In his study Brass depicted that sometimes a numerically small linguistic movement may absorbed into stronger linguistic group and loose its identity and political success. On the other hand, some linguistic movement may achieve communal significance such as Urdu movement, Sikh and Punjabi Suba movement.[19] The Jana Sangh was branded as Hindi linguistic party.[20] However, it had followers of all languages.

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17. Borris, I.K., India: National and Language Problems, New Delhi, 1981, p.124.

18. Kumar, D.S.P., "Electoral Trends in Reserved Parliamentary Constituencies in Andhra Pradesh During 1977, 1980, 1984 Lok Sabha Elections", an unpublished M.Phil.dissertation, Jawaharlal Nehru University, New Delhi, 1990, p.86.

19. Brass, P.R., Language, Religion and Politics in North India, Vikas Publishing House, New Delhi, 1974.

20. Sukhwal, B.L., Modern Political Geography of India, Sterling Publishers Pvt.Ltd., New Delhi, 1985, p.109.

Another social group which is an important factor in politics is the tribals. The tribes are belonged to different ethnic linguistic and religious groups and have some unique social and economic characteristics. They generally live in areas which are by and large unfavourable for settled agriculture and isolated. So, their influence on politics is regional one.

There is little evidence of bloc voting among the tribes of India. Tribal voter turn-out is low. However, this ethnic group is showing increasing turn-out trend with passing of time. They show a distinctive regional pattern in the electoral behaviour.[21]

Factors like regional imbalances fudalism and regional personality leads to regionalism or conciousness to a particular region. Regional parties are those which generally and exclusively operate within a limited geographical area within a state or which represent the interests of particular linguistic, religious, ethnic or cultural groups whose population may be concentrated in an area as small as a single assembly constituency or as large as an entire state

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21. Weiner, M. and Osgood Field, J., "How Tribal constituencies in India Vote", in Myron Weiner and John Osgood Field(eds.), Studies in Electoral Politics in the Indian States: Three Disadvantaged Sectors, Vol.II, Manohar Book Service, New Delhi, 1975, pp.117-118.

or region. In respect of their narrowly defined interests regional parties in shape contrast to the broad ranging diverse concerns of national parties.[22] Regional Parties generally avoid to field candidates in those constituencies or areas where they do not have at least a meaningful support base.[23] Some example of regional parties are JMM of the tribal area of Bihar, Orissa, West Bengal and Madhya Pradesh, All Party Hill Leaders' Conference in Assam, Mizo National Front of Mizoram, Maharashtrawadi Gomantak Party, Akali Dal of Punjab, Gorkha National Liberation Front of Darjiling district of West Bengal, etc.

A latest study by Bhambhri (1991) reveals that regionalism is growing as a new phenomenon in many states of India having new dimensions. Present regional parties have two dimensions. First their political contest is targeted against the INC, the only all India Party in true sense of term. Second all regional movements, parties and leaders old or new are against the present system of the Centre-state relations in India. All regional parties are committed to the varying concept of autonomy for the state government.[24]

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22. Park, R.L. and Mesquita, B.De, Indias Political System, Prentice Hall, 1979, p.110.

23. Banerjee, K., Regional Political Parties in India, B.R. Publishing Corp., Delhi, 1984, pp.4-13.

24. Bhambhri, C.P., Elections 1991: An Analysis, B.R.Publishing Corp., New Delhi, 1991, pp.59-60.

Some authors tried to link electoral behaviour with the various sides of modernization. Among them Osgood Field and Weiner (1977) showed the educated unemployed urban youth out of frustration practise their franchise against the ruling parties.[25]

Migration is an important factor which brings changes in society, economic conditions. The migrants bring new view, ideologies from their place of origin. So, they can influence the electorates of their place of destinations and at the same time they also got changed. Katzenstein (1977), tried to correlate the migration related factors, with turn-out.[26]

Electoral behaviour pattern of party dominance to a greater extent influence by the existing socio-economic conditions in turns dependent on the available technology. If the other conditions are favourable modern technology is able to bring the upward mobility of a particular social group.

Frankels (1977) analysis correlated the changing technology, economic conditions and the changing socio-

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25. Weiner, M. and Osgood Field, J. "Indias Urban Constituencies", in Myron Weiner and John Osgood Field, (eds.), Electoral Politics in the Indian States: The Impact of Modernization, Vol.III, Manohar Book Service, New Delhi, 1977.

26. Katzenstein, M.F., "Migration and Electoral Participation in India", in Myron Weiner and John Osgood Field (eds.), Electoral Politics in the Indian States: The Impact of Modernization, Vol.III, Manohar Book Service, New Delhi, 1977.

economic conditions of the ethnic groups of Uttar Pradesh and their impact on the voting behaviour.[27]

The correlations calculated at one level of aggregation do not necessarily apply to observations at another level of aggregation. If any study does this mistake then that will be suffered by 'ecological fallacy'. Because the magnitudes of correlation might be different at different levels, their signs also might be different. Dasgupta and Morris-Jones (1975) Ecological Analysis gives the guide line to the researchers of electoral study, how to conduct the ecological analyses of the electoral behaviour.[28]

Bihar is today in the midst of one of the worst phases that can be found in the life cycle of a caste ridden society, which is still maintaining its fudal character. This stage of society dates back to 1973 when the Parmanent settlement brought in a new phase of land lordism.[29]

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27. Frankels, F., "Problems of Correlating Electoral and Economic Variables: An Analysis of Voting Behaviour and Agrarian Modernization in Uttar Pradesh", in Myron Weiner and John Osgood Field (eds.), Electoral Politics in the Indian States: The impact of Modernization, Vol.III, Manohar Book Service, New Delhi, 1977.

28. Dasgupta, B. and Morris-Jones, Patterns and Trends in Indian Politics: An Ecological Analysis of Aggregate Data on Society and Elections, Allied Publishers. Pvt.Ltd., New Delhi, 1975.

29. Pradhan, H.P., "Caste and Class in Bihar", Economic and Political Weekly, Vol.14, No.7 and 8 (February 1979), p.481.

Like all other areas class of Bihar by that time was matched with the caste hierarchy. The landlords were belonged to four upper castes, i.e., Brahmins, Bhumihars, Rajputs and Kaysthas.[30] The intermediate castes were mainly constituted by Yadavas, Kurmis and Koeris and other backward castes were mainly tenants or poor middle peasantry or share croppers. The Scheduled Castes constituted the land less agricultural labourers. The condition of muslims were better than the intermediate and Scheduled Castes.

This was a existing caste situation of Bihar till 1911. On 12th December, 1911 Bihar was separated from the existing Greater Bengal Province. For this the Kayasthas were most benefitted. They got the Western education earlier than any other castes of Bihar and struggled mainly for the separation of Bihar from Bengal. Soon they occupy most of the jobs and also became politically dominant. Soon other castes also achieved western education and demanded share in employment and politics which invited the caste conflict in politics. This caste-conflict by these days became deep rooted in Bihar.

After independence for the zamindari abolition and land-ceiling on land holdings the intermediate castes got

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30. Shukla, K., Caste Politics in India: A Case Study, Mittal Publications, New Delhi, 1987, p.27.

considerable area of land. The level of adoption of new technology by them is higher than the upper castes. So, they are in a position to produce surplus which in turn established their position socially and politically stable. The intermediate caste now became the competitors of higher castes in politics.[31] However, the Reservation policy of independent India brought little change among the Scheduled Castes of Bihar in terms of socio-economic and political conditions.

During the euphoria of J.P.Movement casteism was relegated to some extent in the background, but when the Karpoori Thakur's reservation policy of 1977 implemented, the people of Bihar were disintegrated into Forward and Backward Castes. The latest Mandal Commission Recommendation deeper the trench between the two social groups.

The above situation of caste and politics is dealt with by Shukla (1987) as a case study of Khagaria and Begusarai assembly constituency.[32] The study of Dhar, et.al. (1982),[33] bridge the caste-politics with class politics.

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31. Op.Cit., p..483, Pradhan, H.P., 1979.

32. Op.Cit., Shukla, K., 1987.

33. Dhar, H., Gupta, S., Roy, N. and Sengupta, N., "Caste and Polity in Bihar", in Gail Omvedt(ed.), Land, Caste and Politics in Indian States, University of Delhi, Delhi, 1982.

To Pradhan's (1979) View the adoption of new technology and development of agriculture may sharpen the contradictions and cause the disintegration of semi-feudal production relation in Bihar.[34] To Roy (1986) the trend in dispersal of inequalities started and in long run the numerically stronger underprevileged caste groups will come to dominate the political scene in Bihar.[35]

The tribal communities of Chotanagpur of Bihar are quite distinct from the rest of their non-tribal neighbours. Their society is not based on caste hierarchy and it is classless society. Their culture and language were also different. Later on due to permanent land holding system many outsiders came into that area. A class of exploiters emerged from among the non-tribals who gave them loans against high interest which the tribals were unable to pay. After independence the land of the tribals were acquired for the development purposes but proper rehabilitation was not taking place for them. Rapid spread of education among the tribals produced a large number of educated unemployed youth among the tribals. They were not provided with job, because the job generated here was already captured by the non-tribals.

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34. Op.Cit., pp.481-484, Pradhan, H.P., 1979.

35. Roy, R., "Caste and Political Recruitment in Bihar", in Rajni Kothari (ed.), Caste in Indian Politics, Orient Longman, New Delhi, 1986, pp.228-258.

All the above phenomenon created a sense of discontent among the tribals. How this sense of discontent among the tribals created the atmosphere of Jharkhand movement this political development has been nicely discussed by Sen (1972).[36]

Tribal dominated Chotanagpur is store house of mineral resources. It provides Bihar state with a huge margin of benefit, but a very small fraction of this benefit is invested in this area. Which keep this region permanently backward. Saraswati(1987) related this spatial discrimination with the ongoing Jharkhand Movement.[37]

This study the "Parliamentary Elections in Bihar A Spatio Temporal Study of its' Socio-Economic Correlations" is a work which is related to Electoral Geography.

Electoral Geography is essentially concerned with the study of process of political decision-making as the study of the spatial and environmental perceptions of such decision-makers. Its' main aim is to identify the geography of voting itself, to analyse the geographical influences on

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36. Op.Cit., pp.432-437, Sen, J.,1972.

37. Saraswati, D., "ChotoNagpurer Booke 'Chhabbistama Rajya' Nabe Jharkhand?, Anandabazar Patrika, 11th November,1987.

voting and to find out the geographical influences on the representation.[38]

The justification lying behind the existence of Electoral geography is that many geographical elements are involved in the electoral process. Such as voters are registered according to their home addresses. The socio-economic and political conditions within which a person lives influence his or her voting behaviour. Different areas get different attention from the political parties which causes to different representation pattern. Location of constituency boundary may affect the electoral result.[39]

The history of electoral Geography dates back to the beginning of this century. The pioneer study in this field was done by Siegford (1913) and Krebheil(1916). Those were followed by some other sporadic contributions such as Wright (1932), Paulin (1932). However, substantial geographical researches on elections were made only in France under the intellectual guidance of Andre Siegfried. Siegfrieds' study (1949) on the geography of elections of the Andeche region of France is a unique work. His students

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38. Dikshit, S.K. and Giri, H.H., "Concept and Purpose of Electoral Geography", Transactions Institute of Indian Geographers, Vol.6, No.1 (January,1984), p.85.

39. Taylor, P.J. and Johnstone, R.J., Geography of Elections, Penguin Books, 1979, pp.22-24.

and associates like Francois Goguel (1951) and Lancelot (1968) also did not able work on old man land relationship tradition. Another notable work in west on the field of electoral geography are done by Busteed(1975), Taylor and Johnstone (1979) the theoretical work on Geography of Elections and conceptual and methodological work of Soja (1974).[40]

In India a series of work had done by Dikshit and Sharma. Dikshit in his book political Geography gave a brief Introduction on Election Studies.[41] Dikshit and Sharma (1981) in their article gave solution to overcome the problem of unit of analysis problem. Under Indian administrative and electoral system.[42] Both of them (1983) in their another article showed the reverse trend of voters turn-out with development variables in Punjab.

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40. Dikshit, R.D., Political Geography: A contemporary Perspective Tata Mcgraw-Hill Publishing Company Ltd., New Delhi, 1982, pp.237-238.

41. Dikshit, R.D. and Sharma, J.C., "A Solution to the Unit -Of - Analysis Problem in the Electoral Geography of India", The National Geographical Journal of India, Vol.27, Parts 1 and 2 (March- June,1981), pp.14-20.

42. R.D. and Sharma, J.C., "Trends and Patterns in Voter Turn-out in Punjab(1967-1980): An Ecological Analysis", National The Geographical Journal of India, Vol.29, Parts 1 and 2 (March - June, 1983), pp.18-29.

An ecological study by Mir and Hussain (1983) depicted the spatial electoral pattern, of votes, Party performance and some specific findings in that area.[43] Sukhwal (1985) done work on the distributional pattern of political parties both for parliamentary and assembly elections.[44] Nuna (1983) showed one of the fundamental work on spatial fragmented pattern of Indian political representation.[45]

Parliamentary Elections in Bihar: A Spatio Temporal Study of its Socio-Economic Correlates will be different from the above works. This study shall attempt to understand the electoral behaviour and party situations with reference to the parliamentary general elections and shall also attempt an explanation for the same.

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43. Mir, A.M. and Husain, M., "The Assembly Elections in Jammu and Kashmir: A study in Spatial Structure of Voting Behaviour in 1983, The National Geographical Journal of India, Vol.30, Pt 1 (March 1984), pp.53-62.

44. Op.cit., Sukhwal, 1985.

45. Nuna, S.C., "Spatial Fragmentation of Political Behaviour in India: An Analysis of Electoral Trends, 1971-1980," An Unpublished Ph.D.Thesis, C.S.R.D., Jawaharlal Nehru University, New Delhi, 1983.

CHAPTER-III

VOTER TURN-OUT: SPATIAL AND TEMPORAL PATTERNS

3. Introduction:

In electoral studies, majority of the calculations are carried out with the help of turn-out. Turn-out is normally defined as the percentage of registered voters in each constituency who had actually exercised their voter right.[1] It is well known that the proportion of the Indian electorate turning out to cast their vote has been increasing steadily over the years. It can be argued as what significance one may attach to this rising level of participation and as to how far this indicates genuine incorporation of larger number of people in an effective citizen body. Whatever the results may be it cannot be denied that the growing turn-out implies the increasing political conciousness of the people of their democratic right and their involvement in making the decision makers. These days casting of votes has become a 'matter of habit', a 'part of mass culture', in many places.[2]

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1. Dikshit, R.D. and Sharma, J.C., "Trends and Patterns in Voter Turn-out in Panjab (1967-1980): An Ecological Analysis", The National Geographical Journal of India, Vol.29, Parts 1&2, March-June, 1983, p.21.

2. Das Gupta, B. and Morris- Jones, W.H., Pattern and Trends in Indian Politics: An Ecological Analysis of Aggregate Data on Society and Elections, Allied Publishers, New Delhi, 1975, p.73 and 299.

The rate of turn-out varies over space and time depending on the existing socio-economic and political conditions. From the earlier studies it may be seen that areas with a high turn-out rate in one election would also normally show a high turn-out in the next. There is a close correspondance between the level of development of an area and its turn-out record.[3] However, Dikshit and Sharma (1983) showed in their study that though Punjab is the most prosperous state in India, still it shows a steadily decreasing turn-out over the years.[4] So, a researcher has to be careful about the 'ecological' conditions of the particular area on which electoral study will be carrying out. A particular area may not match with the normal situation and it may give quite different result from others.

Turn-out may change the electoral performance of different parties. It is seen for different turn-out rate, percentage shares of vote for a party are different.[5]

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3. Op.Cit., Dasgupta, B. and Morris-Jones, W.H., 1975, p.301.

4. Op.Cit., Dikshit, R.D. and Sharma, J.C., 1983, pp.18-29.

5. Ibid.

So, a party which is dominant in an area may loose the seat if voting turn-out goes down or another party may gain from this situation.

In electoral analysis the turn-out data is widely used, but it has a certain percentage of error. The register can never be up-to-date. On the other hand, there are often duplication and omission of names. However, the accuracy of Indian electoral register is reasonably high., but it varies considerably between different regions and localities.[6]

A small proportion of electorates who exercised their right to vote fail to record a valid vote, usually by inadvertence but occasionally deliberately.[7] Their votes are considered as invalid votes. Though the percentage of invalid vote is very small, still it attract the interests of electoral geographers, political,sociologists, psephologists and other social scientists. Invalid votes depict the lack of political conciousness or apathy of the electorates. The percentage of invalid votes goes down when level of development is high. One might think

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6. Butler, D., Lahiri, A. and Roy, P., India Decides: Elections 1952-1991, Living Media India Ltd., New Delhi, 1991, p.8

7. Ibid.

that higher the turn-out, higher will be the less informed, less competent or less motivated people who will added the number of invalid votes. But turn-out will increase in those areas where level of development is increasing. So, in a developed area the political concious would be high which will reduce the percentage of invalid votes. For this the relationship between turn-out and invalid votes ought to be negative. Again the relationship between turn-out and invalid vote may be positive as the increment of turn-out takes place in the less developed areas where initially that rate was low. So, the electorates of less developed areas may increase the percentage of invalid votes.[8]

3.1 Comparative Trends of Voter Turn-out in Parliamentary Elections, Between India and Bihar (1952-91).

Table III.1 shows that with passing of time the rate of turn-out is increasing both for India and Bihar. However, the trend is highly fluctuating for the two cases. In the trend line Bihar is always below all India average turn-out, except 1977, when the earlier crossed the later. It was so because of the anti-pathy of the common people of Bihar

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8. Op.Cit., Dasgupta, B. and Morris Jones, W.H., 1975, p.301.

against INC region during the emergency period. For this the electorates of Bihar turned up in large scale to defeat INC Government in Centre. It may be remembered that Bihar was affected severely during emergency period and they reacted accordingly in practicing their franchise to bring a debacle for INC.

The average voter turn-out for Indian elections is 56.6 per cent, which varies from the lowest 45.7 per cent in 1952 to the highest turn-out of 64.1 per cent in 1984.[9] In case of Bihar it varies from the lowest 40.5 per cent in 1952 to the highest 67.63 per cent in 1991. The average voter turn-out for Bihar is 53.02 per cent. Till 1967 all India turn-out figure showed a steady increase. After 1967, the all India trend became highly fluctuating. Bihar follows exactly the all Indian trend till 1971, after which Bihar is behaving in a somewhat different way. During 1984-89 period, while India was showing downward trend. Bihar showed an upward trend. Comparative study between the two is not possible for 1989-91, because of unavailability of data. From 1984, general election of Bihar is maintaining a steady increasing trend which

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9. Turn-out figure for India is not available for the year 1991.

touched its highest peak (67.63) in the year 1991. This increasing trend in turn-out for Bihar may be interpreted as the impact of development but simultaneously there is high cases of booth capturing and fake voting. So, the last two factors hinder us to make a clear comment on the relationship between turn-out and level of development in Bihar.

Table III.1

India & Bihar: Voter Turn-out in Parliamentary Elections, 1952-91.(in percentage to total Electorates).

Election Year	1952	1957	1962	1967	1971	1977
All India	45.7	47.7	55.4	61.3	55.3	60.5
Bihar	40.5	42.9	47.0	51.5	48.96	61.59

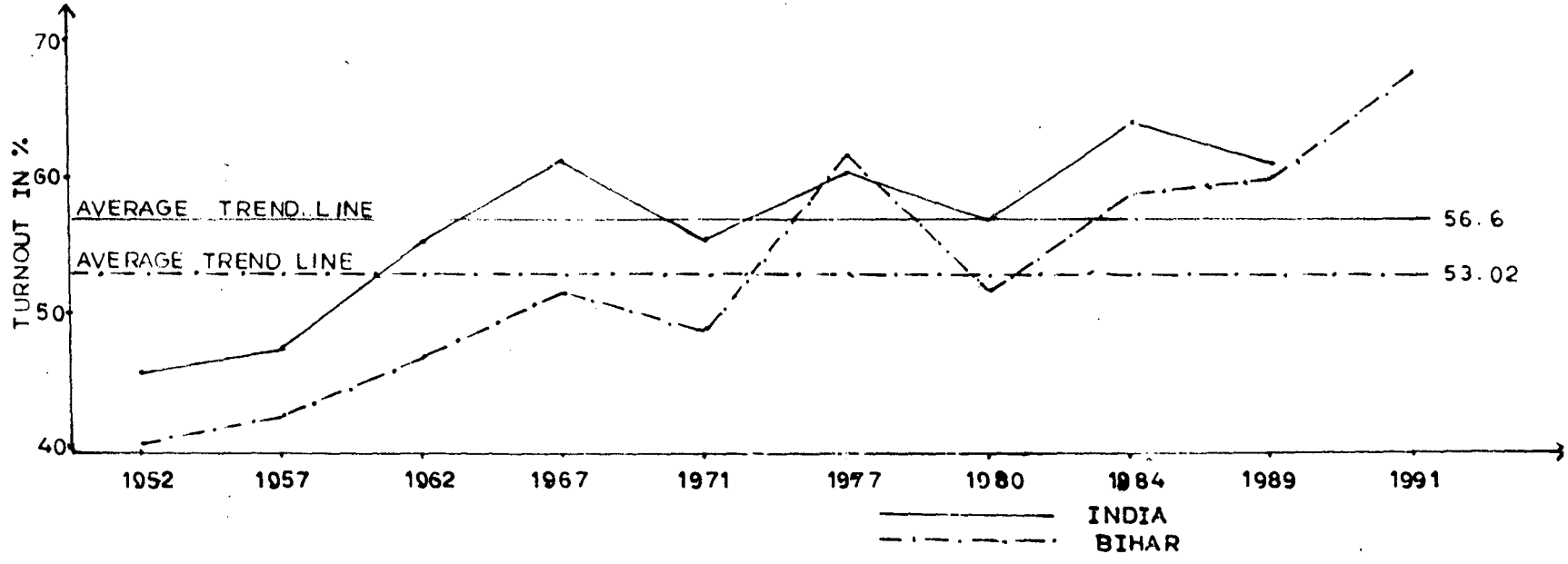
Election Year	1980	1984	1989	1991	average overtime
All India	57.0	64.1	62.0	NA.	56.6
Bihar	51.9	58.8	60.2	67.63	53.02

N.B. 1. N.A. stands for data not available

Source: 1) Op.Cit., Butler, D., et.al., 1991, Table 2.1
and 2) Information and Public Relation Department, Bihar, Press Release, dated 17 June, 1991.

Fig. III.1

COMPARATIVE TREND OF TURNOUT IN PARLIAMENTARY ELECTIONS FOR INDIA AND BIHAR (1952-91)



3.2 Spatial Pattern of Voter Turn-out

3.2.1 Spatial Pattern of Voter Turn-Out, 1971:

Table III.2 shows for this time 9 constituencies were showing very high rate of turn-out. Among those the highest value (67.32 per cent) and lowest value (61.17 per cent) were shown by Sitamarhi and Barh respectively. The other constituencies falling into this category were Muzaffarpur, Monghyr, Sheohar, Jahanabad, Hajipur, Nawada and Nalanda according to the descending order of percentage turn-out figure. All those constituencies are situated in Bihar plain and constitute a L shape in a contiguous form.

High percentage of turn-out was shown by 22 constituencies. Among the highest figure (60.49 per cent) and the lowest figure (48.67 per cent) were shown by Arrah and Buner respectively. Except Khunti (in Bihar plateau of south) all of those are situated in Bihar plain and separated in two blocs by the constituencies with very high percentage turn-out. Among the western bloc. the constituencies are Gopalganj, Patna, Sasaram, Arrah, etc. Among the eastern bloc the constituencies are Madhubani, Samastipur, Banka, Katihar etc.

The low percentage of turn-out was shown by 12 constituencies. Among those the highest figure (47.04 per cent)

and the lowest figure (36.80 per cent) were shown by Gaya and Bagaha constituencies respectively. The other constituencies of this category were Motihari, Rosera, Vaishali, Dhanbad, Kishanganj, Lohardaga, Araria, Purnea, Jamui and Bettiah according to the descending order of percentage turn-out. Those constituencies are showing highly fragmented pattern and distributed dispersely on whole Bihar.

The very low turn-out rate was shown by 10 constituencies among those the highest (35.93 per cent) and lowest (16.57 per cent) turn-out were shown by Godda and Singhbhum constituencies respectively. All the constituencies are contiguous and situated in Tribal Bihar plateau. The other constituencies falling into this category were Ranchi, Giridih, Dumka, Hazaribagh, Palamau, Jamshedpur, Chatra and Rajmahal are according to the descending order of percentage turn-out. (See appendix I)

Table III.2

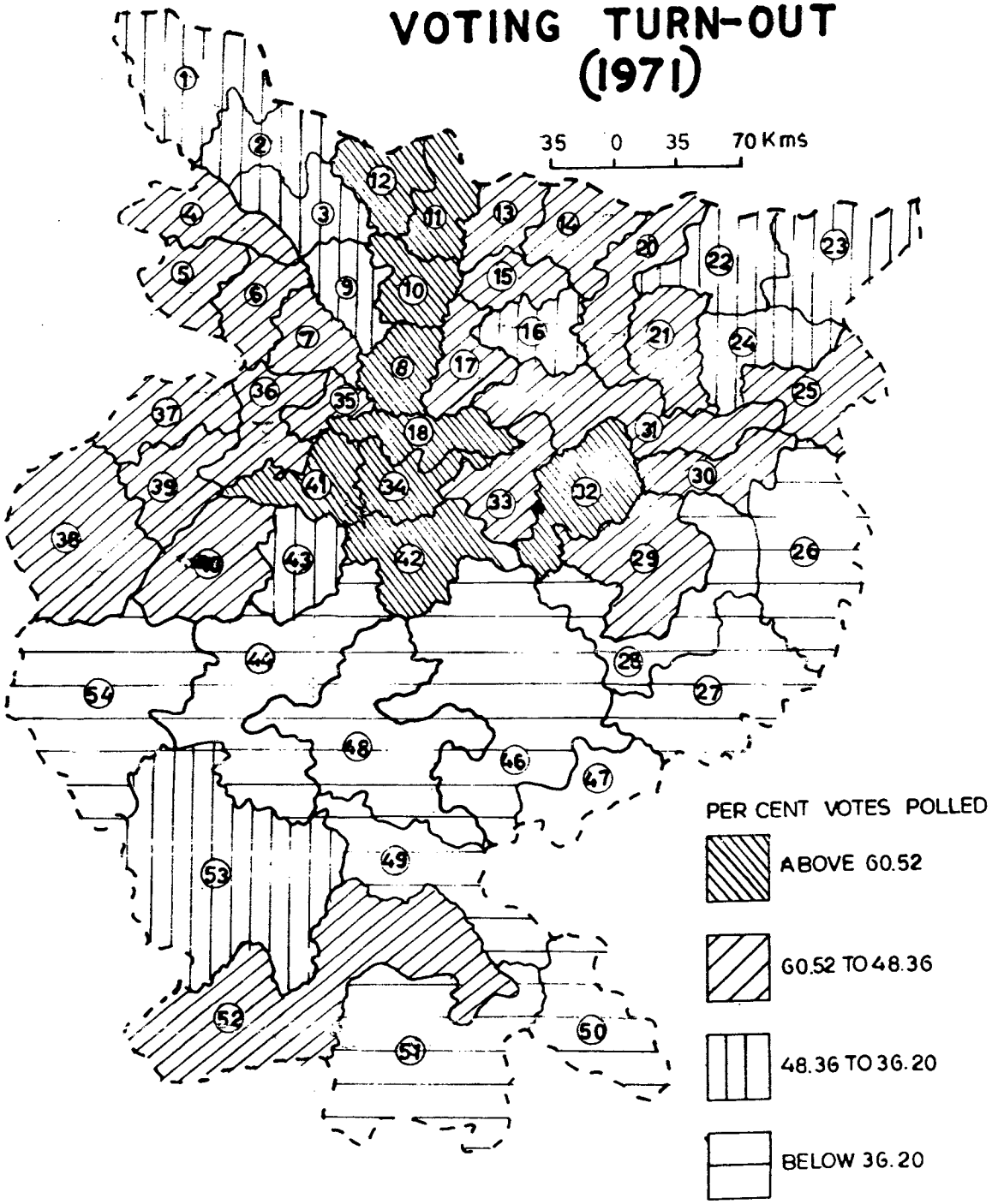
Bihar: Distribution of the Constituencies by Per cent votes Polled, 1971.

Percent votes polled	Number of constituencies
above 60.52	9
60.52 to 48.36	22
48.36 to 36.20	12
below 36.20	10

Fig. III. 2

BIHAR

VOTING TURN-OUT (1971)



3.2.2 Spatial Pattern of Voter Turn-Out, 1977:

The table III.3 shows this time out of 54 constituencies, where election was held 9 constituencies were of high percentage turn-out. Among those, Hajipur showed the highest turn-out (77.07 per cent) and Madhepura showed the lowest turn-out (71.58 per cent). Other constituencies falling into this category were Jahanabad, Gopalganj, Saharsa, Madhepura, Nawada, Nalanda and Barh. They were seen in a fragmented circular form in Bihar plain.

High turn-out was shown by 23 constituencies. Among those the highest (70.69 per cent) and the lowest (60.17 per cent) were shown by Samastipur and Katihar constituencies respectively. Other constituencies falling into this category were Nawada, Sitamarhi, Jahanabad, Khagaria., Bikramganj. etc. All of those are situated in the northern half of Bihar in the plain region around the constituencies of very high percentage of turn-out.

Low turn-out was shown by 9 constituencies. Among those the highest (59.92 per cent) and the lowest (48.91 per cent) were shown by Balia and Kishanganj constituencies respectively. Another constituencies falling into this category were Purnea, Araria, Godda, Motihari, Banka,

Bettiah and Giridih. All of those were seen dispersely in a highly fragmented form.

This time 13 constituencies showed very low turn-out. Among those the highest (47.97 per cent) and the lowest (33.93 per cent) were shown by Chatra and Khunti constituencies respectively. Another constituencies falling into this category were Ranchi, Hazaribagh, Jamshedpur, Bagaha, Palamau, Lohardaga, Dhanbad, Rajmahal, Koderma, Dumka and Singhbhum according to the descending order of percentage turn-out. All of the constituencies are situated in tribal dominated Bihar plateau. They are contiguous and formed a cluster there. (see appendix I).

Table III.3

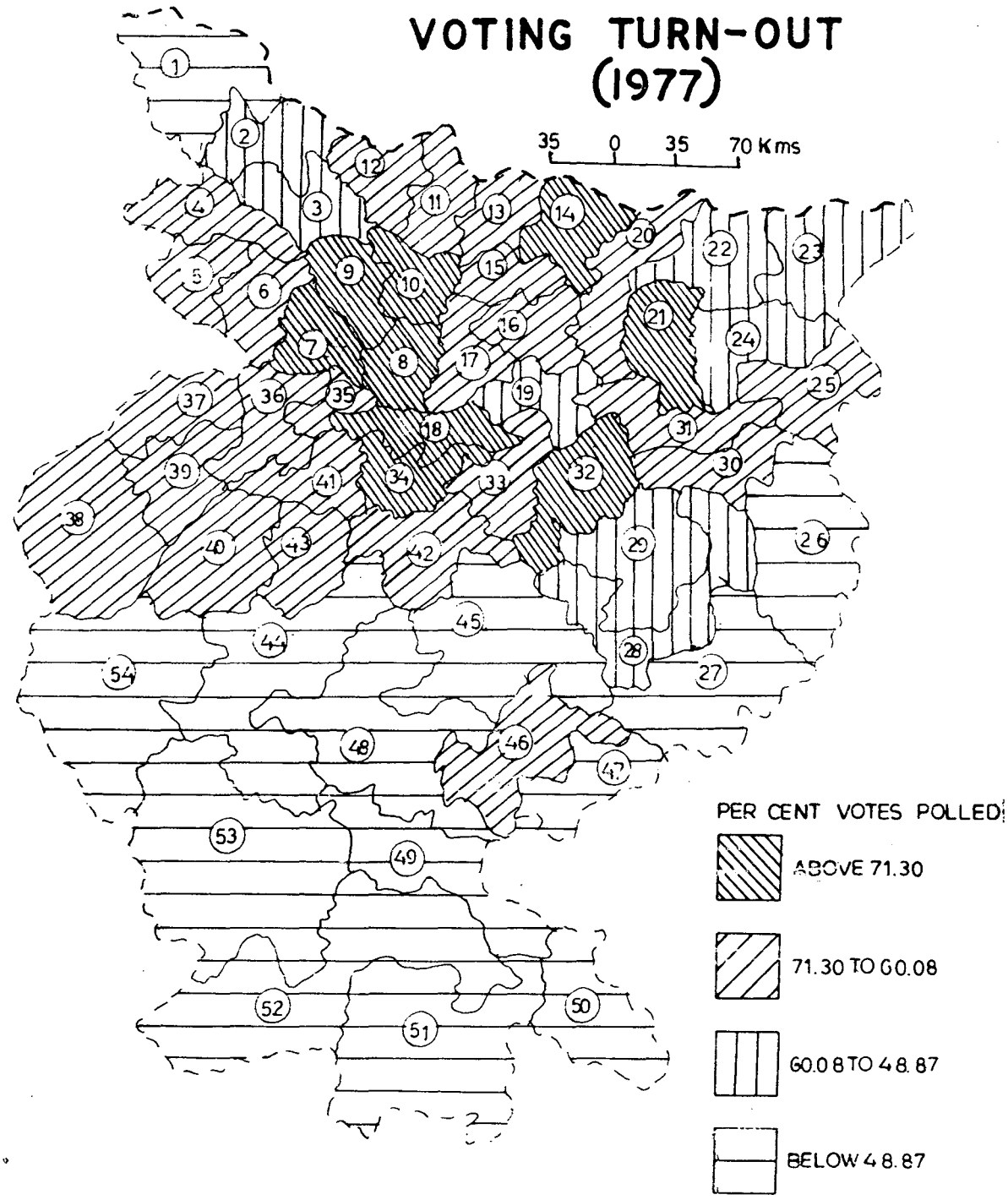
Bihar: Distribution of the Constituencies by Per Cent Votes Polled, 1977.

Per cent Votes Polled	Number of Constituencies
above 71.30	9
71.30 to 60.08	23
60.08 to 48.87	9
below 48.87	13

Fig. III. 3

BIHAR

VOTING TURN-OUT (1977)



3.2.3 Spatial Pattern of Voter Turn-out, 1991:

Table III.4 shows that this time there were 9 constituencies in very high percentage turn-out category. Among those the highest (76.44 per cent) and the lowest (68.58 per cent) percentage of turn-out were shown by Hajipur and Jhanjharpur respectively. Another constituencies falling into this category were Jahanabad, Gopalganj, Saharsa, Madhepura, Nawada, Nalanda and Barh according to the descending order of percentage turn-out. Among those, 9 constituencies 5 were clustered in central Bihar and 3 were in north Bihar and rest one was situated on north-west Boundary of Bihar.

The number of constituencies falling into high percentage turn-out category were 17. Among those the highest (67.06 per cent) and the lowest (60.02 per cent) were shown by Begusarai and Sheohar respectively. The other constituencies falling into this category were Darbhanga, Monghyr, Chapra, Samastipur, Vaishali, Madhubani, Gaya, Sitamarhi, Muzaffarpur, Siwan, Rosera, Arrah, Maharajganj, Motihari and Araria, according to the descending order of percentage turn-out. The constituencies formed a fragmented crescentic shape around the constituencies of high percentage turn-out.

This time 18 constituencies were in low percentage turn-out category. Among those the highest (49.86 per cent) and the lowest (38.28 per cent) were shown respectively by Hazaribagh and Palamau constituencies. Other constituencies falling into this category were Sasaram, Chatra, Khunti, Lohardaga, Bagaha, and Singhbhum according to the descending order of percentage turn-out. All those constituencies were situated on the south-western plateau part of tribal dominated Bihar (see Appendix I)

Table III.4

Bihar: Distribution of the Constituencies by Per Cent Votes Polled, 1991

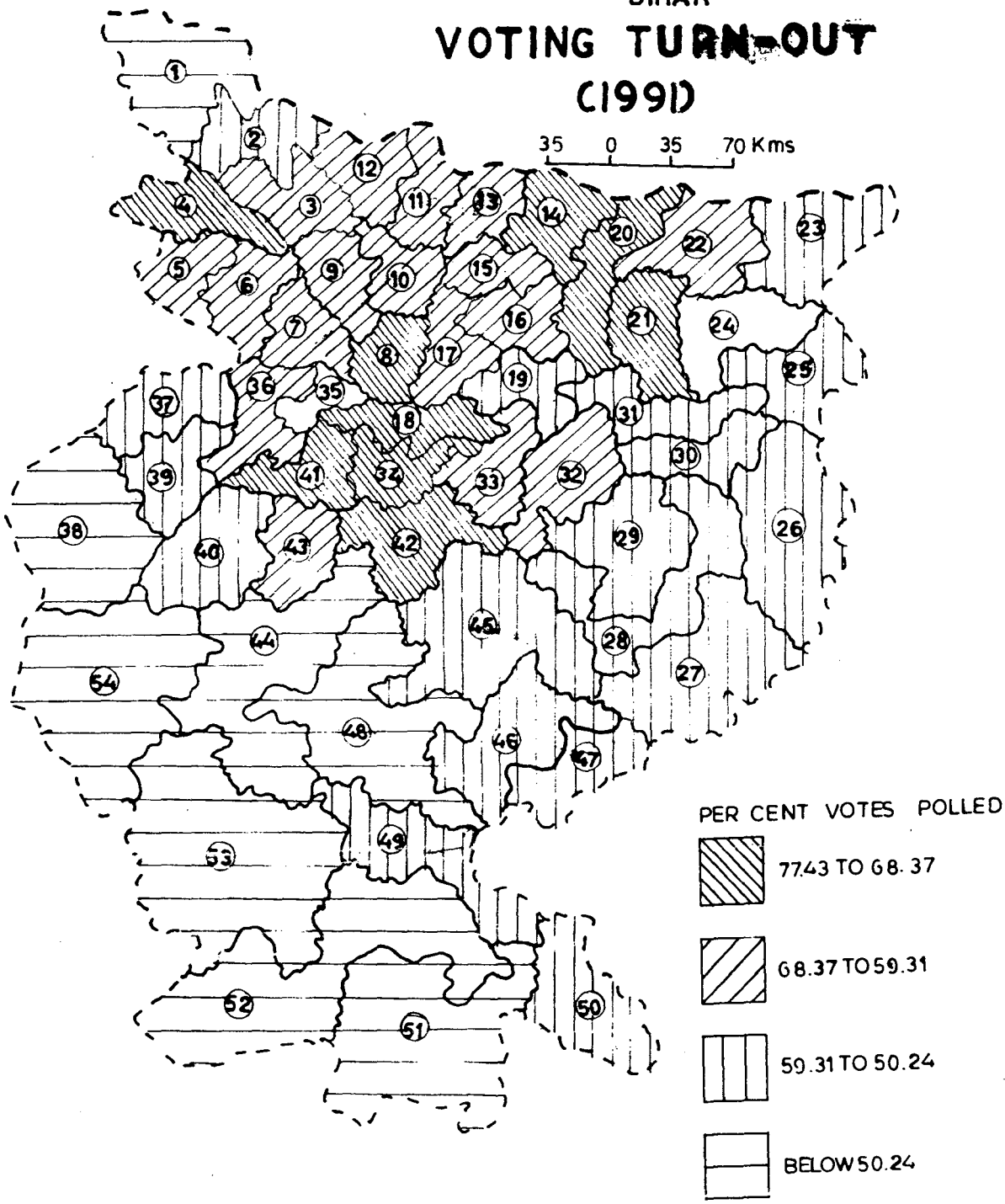
Per cent Votes Polled	Number of Constituencies
77.43 to 68.37	9
68.37 to 59.31	17
59.31 to 50.24	18
below 50.24	8

So, it is seen from the above interpretation, that constituencies of traditionally high turn-out showed the high turn-out in all the three elections, such as Hajipur, Nalanda and Barh were in very high percentage turn-out category for thrice. Out of these three constituencies Hajipur

Fig.III.4.

BIHAR

VOTING TURN-OUT (1991)



showed twice the highest percentage of turn-out in Bihar. On the other hand, there are some constituencies in Bihar which showed always the lower percentage of turn-out. These constituencies are mainly situated in the tribal dominated plateau of south Bihar where education level is low and exposure to the mass-media is very poor. Some of the constituencies of this area, such as Palamau, Singhbhum etc. showed very low turn-out rate for thrice.

3.3 Voter Turn-Out, Spatio-Temporal Trends:

Change in turn-out shows the awareness or apathy of the voters to practise their franchise. If the change is positive it implies an improvement in turn-out while negative change implies a drop in turn-out, or the voter's apathy which refrain from them to cast their votes. Greater positive change in percentage turn-out takes place both in developed areas, where level of socio-economic development is high and also in less developed areas where the turn-out figures were previously low.[10] The reasons behind the negative change in turn-out figures may be the harsh climatic condition or the political anarchy, for which the electorates could not come out to cast their vote easily.

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10. Op.Cit., Dasgupta, B. and Morris-Jones, W.H., 1975, p.301.

The table III.5 shows the percentage points change in voting turn-out for the period of 1971-77. For this period 8 constituencies were showing very high percentage points change in voting turn-out. Among those the highest (33.6 per-centage points) and the lowest (19.73 percentage points) change were shown by Vaishali and Jhanjharpur respectively. Other Constituencies falling into this category were Rosera Gaya, Chapra, Godda, Purnea and Giridih according to the descending order of percentage points change.

For this time 17 constituencies showed high percentage points change in voting turn-out. Among those the highest (18.52 percentage points) and the lowest (12.36 percentage points) change were shown by Chatra and Sasaram respectively. Another constituencies falling into this category were, Singhbhum, Madhepura, Rajmahal, Palamau., Buxar, Saharsa, etc. Those constituencies were seen in a fragmented form in all over Bihar.

Low percentage points change for this period were shown by 18 constituencies. Among those the highest (10.85 percentage points) and the lowest (5.95 percentage points) were shown by Barh and Banka constituencies respectively. Other constituencies falling into this category were Patna,

Bhagalpur, Dumka, Bagaha, Nalanda, Katihar, Muzaffarpur, Monghyr, Madhubani, Khagaria, Gopalganj, Kishanganj, Nawada, Bikramganj, Begusarai and Lohardaga according to the descending order of percentage points change. These constituencies are dispersely distributed except in the central Bihar where few of those constituencies clustered in a contiguous line.

Very low percentage points of change were shown by 9 constituencies among those, the highest (4.62 percentage points) and the lowest (-2.69 percentage points) change were shown by Darbhanga and Sheohar respectively. Other constituencies falling into this category were Araria, Arrah, Dhanbad, Sitamarhi, Aurangabad, Jahanabad and Khunti according to the descending order of percentage points change (see Appendix II).

Table III.5

Bihar: Percentage Points change in Turn-out, 1971-77.

Percentage points change in Voter Turn-out	Number of constituencies
above 19.12	8
19.12 to 11.93	17
11.93 to 4.73	18
below 4.73	9

The table III.6 shows the percentage points change in voting turn-out for the period of 1977-91. For this period 10 constituencies were showing very high percentage points change in voting turn-out. Among those, the highest (12.76 percentage points) and the lowest (6.11 percentage points) change were shown by Rajmahal and Bettiah Constituencies respectively. The other constituencies falling into this category were Khunti, Gopalganj, Singhbhum, Dumka, Jahanabad, Koderma, Jamshedpur and Kishanganj according to the descending order of percentage points change in voting turn-out. Most of those constituencies are peripheral constituencies in a fragmented pattern.

For this time 13 constituencies showed high percentage points change in voting turn-out. Among those the highest (5.15 percentage points) and the lowest (-0.3 percentage points) were shown by Dhanbad and Madhepura constituencies respectively. Another constituencies falling into this category were Motihari, Saharsa, Begusarai, Ranchi, Hazaribagh, Darbhanga, Araria, Nawada, Giridih, Lohardaga and Nalanda according to the descending order of percentage points change in turn-out. They were arranged in a fragmented pattern, except some constituencies of this category which were contiguous from central Bihar and extended to the South Bihar.

In low percentage point change category there were 22 constituencies. Among those the highest (-0.63 percentage points change) and the lowest (-7.00 percentage points change) were shown by Hajipur and Monghyr constituencies respectively. Another constituencies falling into this category were Bagaha, Chatra, Arrah, Siwan, Samastipur, Bunar, Balia etc.

This time in low category there were 7 constituencies. Among those, the highest (-7.21 percentage points change) and the lowest (-15.77 percentage points change) were shown by Chapra and Sasaram respectively. Another constituencies falling into this category were Palamau, Bikramganj, Vaishali, Aurangabad and Muzaffarpur according to the descending order of percentage points change. (see appendix II)

Table III.6

Bihar: Percentage Points Change in Turn-out, 1977-91.

Percentage points change in Voter Turn-out	Number of constituencies
above 5.92	10
5.92 to -0.61	13
-0.61 to -7.14	22
below -7.14	7

So, it is seen that spatial pattern of percentage points change in turn-out is highly fragmented. The change in turn-out is higher in those constituencies where the turn-out of previous election was lower. In the case of Bihar, the constituencies where voter turn-out went higher are mainly backward areas in terms of level of socio-economic development and tribal dominated. Such as Khunti, Singhbhum etc.

3.4 The Impact of Voting Turn-Out On the Percentage Share of Votes for the Different Parties.

It is mentioned at the beginning of this chapter that for a particular rate of voting turn-out the electoral performance of different parties are different.

The table III.7 shows the correlation of coefficient for voting turn-out with percentage share of votes for different parties. However, the correlation coefficients, showed high variation over time. For INC among the three general elections voting turn-out showed significant correlation in 1991 general election only. This time the correlation showed positive significant value at .001 level which indicates with increase of turn-out the percentage share of INC votes also will be increased. However, in earlier two

elections INC's correlations with turn-out were insignificant and positive it implies in those two periods turn-out had no impact on INC's popularity. B.L.D.showed positive significant correlation (at .001 level) in 1977. That time common electorates were in search of an alternative for INC in the centre. In 1977, general election turn-out was also high which tells not only the committed party members but also the common voters also voted for BLD. Another party showed significant (at .001 level) and positive correlation was JD in 1991 election. Just before 1991 election JD's supports for Mandal Commission Recommendations for the upliftment of the other backward classes; JD's commitment to protect the minorities evoked sympathy for a large number of electorates in Bihar which is seen through this positive significant correlation.

The parties which showed insignificant-positive correlations were CPI for 1971, 1977 and 1991, CPM, BJS, INCO, PSP and SSP for 1971 general elections. This phenomenon indicates that for those particular years those parties popularity among non-member voters were less.

The JKD in 1971 and BJP in 1991 showed insignificant-negative correlations or which means to an insignificant

extent the attitude of the common voters for this two particular years were against the two parties.

So, from the above analysis we see with particular reference of time INC, B.L.D. and JD pulled significant support from the higher turn-out. Whereas including INC and other parties for different election could not benefitted much from the turn-out rate. So, for those years from the insignificant correlations it can be inferred for those years for those parties the electoral atmosphere was not favourable.

Table III.7

Bihar:
Correlation Coefficients for Voting Turn-out with Percentage Share of Votes for Different Parties

	Political Parties							
	INC			CPI			CPM	BJS
	YEAR OF THE ELECTIONS							
Voting Turn-out	1971	1977	1991	1971	1977	1991	1971	1971
	02548	.1331	.5212**	.0574	.0829	.1676	.0515	.0983

Voting Turn-out	JKD 1971	INCO 1971	PSP 1971	SSP 1971	BLD 1977	BJP 1991	JD 1991
	-.2958	.2044	.0973	.3343	.6600**	-.1339	.4141**

N.B. ** indicates significant at .001 level.

3.5 Spatial Pattern of Invalid Votes

3.5.1 Spatial Pattern of Invalid Votes, 1971:

It is seen from the table III.8 that out of 53, 8 constituencies showed very high percentage of invalid votes. Among those constituencies Singhbhum showed the highest (4.46 per cent) and Rajmahal showed the lowest (3.15 per cent) invalid votes. Another constituencies falling into this category were Banka, Gaya, Saharsa, Kishanganj, Palamau, Araria, Chatra, Bhagalpur, Hazaribagh, Bunar, Godda and Dhanbad according to the ascending order of invalid votes in percentage figures. All those constituencies are situated either on extreme east or south and mainly either Muslim a tribal dominated area.

This time high percentage of invalid votes were shown by 14 constituencies. Among those the highest (3.07 per cent) and the lowest (2.24 per cent) were shown by Giridih and Arrah constituencies respectively. Another constituencies falling in this category were Dhanbad, Godda, Bunar, Hazaribagh, Bhagalpur, Chatra, Araria, Palamau, Kishanganj Saharsa, Gaya and Banka according to the descending order of invalid votes.

Contd..

This time 21 constituencies showed low percentage of invalid votes. Among those, the highest (2.08 per cent) and the lowest (1.19 per cent) were shown by Bikramganj and Jhanjharpur constituencies respectively. Another constituencies falling in this category were Balia, Vaishali Aurangabad, Chapra, Gopalganj etc.

The very low percentage of invalid votes were shown by 10 constituencies. Among those, the highest (1.10 per cent) and the lowest (0.38 per cent) were shown by Madhubani and Nawada constituencies respectively. Another constituencies falling in this category were Darbhanga, Sitamarhi Maharajganj, Muzaffarpur, Sheohar, Hajipur, Samastipur and Nawada according to descending order of invalid votes See Appendix III).

Table III.8

Bihar: Invalid Votes, 1971 (Percentage to the total vote polled).

Invalid Votes	Number of constituencies
above 4.99	1
4.99 to 3.58	2
3.58 to 2.17	18
below 2.17	33

3.5.2 Spatial Pattern of Invalid Votes, 1977:

Table III.9 shows for 1977 election only one constituency, i.e. Rajmahal was showing the very high invalid votes (10.70 per cent). This figure is even highest among the three general elections.

High percentage of invalid votes were shown by Singhbhum (4.50 per cent) and Kodenma (3.81 per cent) constituencies.

This time low percentage of invalid votes were shown by 18 constituencies. Among those the highest (3.49 per cent) and the lowest (2.24 per cent) invalid votes were shown by Lohardaga and Banka constituencies respectively. Other constituencies falling into this category were Khunti, Ranchi, Giridih, Jamshedpur, Dumka, Hazaribagh, Bagaha etc.

The maximum number of constituencies (33) showed very low percentage of invalid votes. Among those the highest (2.12 per cent) and the lowest (0.70 per cent) were shown by Jhanjharpur and Vaishali constituencies respectively. The another constituencies falling into this category were Aurangabad, Kishanganj, Motihari, Sasaram, Gaya, Rosera etc. (see Appendix II.).

Table III.9

Bihar: Invalid Votes, 1977

(Percentage to the total vote Polled)

Invalid votes	Number of constituencies
above 4.99	1
4.99 to 3.58	2
3.58 to 2.17	18
below 2.17	33

3.5.3 Spatial Pattern of Invalid Votes, 1991:

In this general election out of 52 constituencies only two constituencies i.e. Madhepura (6.98 per cent) and Jahanabad (4.42 per cent) showed very high percentage of invalid votes. In high percentage of invalid votes category there were also two constituencies, Gaya (2.90 per cent) and Lohardaga (2.64 per cent).

This time there were 19 constituencies which showed low percentage of invalid votes. Among those the highest (2.57 per cent) and thelowest (1.63 per cent) were shown

by Singhbhum and Kishanganj respectively. The other constituencies falling into this category were, Khunti, Hazaribagh, Giridih, Motihar, Bettiah, Ranchi, Dumka, Dhanbad, Rajmahal, Chatra, Jamshedpur, Banka etc.

The very low percentage of invalid votes were shown by 29 constituencies. Among those the highest (1.60 per cent) and the lowest (0.62 per cent) were shown by Aurangabad and Siwan respectively. Other constituencies falling into this category were Madhubani, Maharajganj, Bhagalpur, Samastipur, Nalanda, Begusarai, Bikramganj, Barh, Hajipur, Sitamarhi etc. (see Appendix II).

Table III.10

Bihar: Invalid votes, 1991 (Percentage to the total vote polled)

Invalid Votes	Number of constituencies
above 3.59	2
35.9 to 2.61	2
26.1 to 1.63	19
below 1.63	29

From the above discussion it is clear like other factors of electoral analysis invalid vote also showed a fragmented pattern with few exceptions. In 1971 and 1977 general elections the constituencies showing very low percentage of invalid votes formed contiguous clusters. In both the cases the constituencies formed regions in the Bihar plain. It is seen that percentage of invalid votes are higher in the tribal dominated south-Bihar plateau area. With passing of time mean percentage of invalid vote for Bihar was showing a fluctuating trend (see table 11).

Table III.11

Bihar: Mean Percentage of Invalid vote, 1971,1977 and 1991.

(As shown percentages to the total vote polled)

Year	Mean Percentage of invalid vote
1971	2.11
1977	2.17
1991	1.63

3.6 Relationship between Turn-out and Invalid Votes

From the table III.12, it is seen that the correlation coefficients for voting turn-out with invalid votes were

negative for 1971 and 1977 and positive for 1991 general election. So, for the first two cases it may be stated that with increase in turn-out percentages of invalid votes will be decline. For 1971 the relation between the two were negative but not significant at .01 level. But in 1977 the correlation between the two were significant at .01 level. From the appendix II it is seen that during the first period percentage points change in turn-out were mainly taken place in north Bihar Plain which is from the socio-economic point of view is developed than the tribal south Bihar. So, higher informed, higher competent or higher motivated electorates of this period reduce down the invalid vote. However, during second period the percentage points turn-out were mainly increased in South Bihar where electorates are less informed, less competent and less clearly motivated which ultimately raise the invalid votes.

Table III.12

Bihar:
Correlation Coefficients for Voting Turn-out with Invalid Votes, 1971,1977,1991.

Year	1971	1977	1991
	-.2695	-.3676*	.2977

* significant at 0.01 level

3.7 Summary of the Findings

From all the analyses of this chapter, it is clear that electoral participations among the electorates of Bihar is increasing with passing of time. However, the tribal dominated areas of South Bihar always showed a lack of interest in electoral participation for their particular socio-economic conditions. For 1971-77 period the electorates of plain area of Bihar showed an increment in voting turn-out but for the 1977-91 period the electorates of the tribal areas of south Bihar showed the increment in voting turn-out. Electorates of earlier area were always in higher level than the later in education and political conciousness. So, the correlations between voting turn-out and invalid votes were negative in the 1971 and 1977 general elections but the politically less unaware, less informed, less competent voters of south Bihar increased the turn-out for 1991 which simultaneously increased the invalid votes as well. Though electorates of south Bihar always showed high percentage of invalid votes but it is declining with passing of time for their growing education and more political conciousness. The percentage shares of votes for BLD in 1977 and INC and JD in 1991 showed positive significant correlations, with voting turn-out which indicates their popularity among the common electorates for those particular periods.

CHAPTER IV

ELECTORAL BEHAVIOUR AND PARTIES

4.0 Introduction

In layman's concept party dominance means how many seats a party won. But an Electoral Geographer won't stop there. He will search out how a party won the seats what other factors bring a party to that situation of gain. In other words, it may be stated that in order to win the seats is the ultimate stage. Before coming to this point a party has to minimize the number of dominant parties in the electoral fray for the seats. This phenomenon will make a considerable number of parties united in favour of that party by forming a front against a dominant party. In order to register a win a party has to solicit support from people in their favour. This may play a positive role by causing of votes in favour of that party and against its opponent party or parties.

A party can win a seat easily with very low percentage of votes when the split in opposition votes takes place. In other words in a multi-party or multi-candidate contests, the winning candidate may not obtain high share of total valid votes polled. However, all those factors are inter-related to each other and sometimes one factor can dominate

over the other. In 1977 election swing of votes away from INC for the unfavourable attitude of the electorates towards it was more responsible for its debacle than the ever highest United Opposition or the negative splitting of opposition votes. This chapter will deal with all those factors and attempt to obtain as to how they influence the electoral behaviour of Bihar for 1971,1977 and 1991. parliamentary elections.

4.1 Share of Votes Polled by the Winner and Runners-UP Parties

Share of votes polled by different parties are mainly dependent on the number of parties in the contest. When this number is small the share of votes to each contesting party is theoretically expected to be high. But the share of votes for the parties or independent will be small if the number of strong parties goes high. How the share of votes goes up and down can be understand by examining the overall polling results of Bihar for the three different election years.

4.1.1 Share of votes for Different Parties,1971:

The national parties, viz, BJS, CPI, INC, INCO and SSP and the strong regional party JKP was in the electoral fray of Bihar. This type of electoral situation obviously

indicates that each strong party will attract a considerable percentage of vote which will ultimately reduce down the total share of each party's vote. This time out of total 14759802 valid votes polled INC secured the highest percentage share (40.42 per cent). INC followed by BJS with 12.12 per cent valid votes, INCO with 11.60 per cent valid votes, SSP with 9.36 per cent valid votes, CPI with 8.48 per cent valid votes and JKD with 0.92 per cent valid votes. (See Table IV.1).

Table IV.1

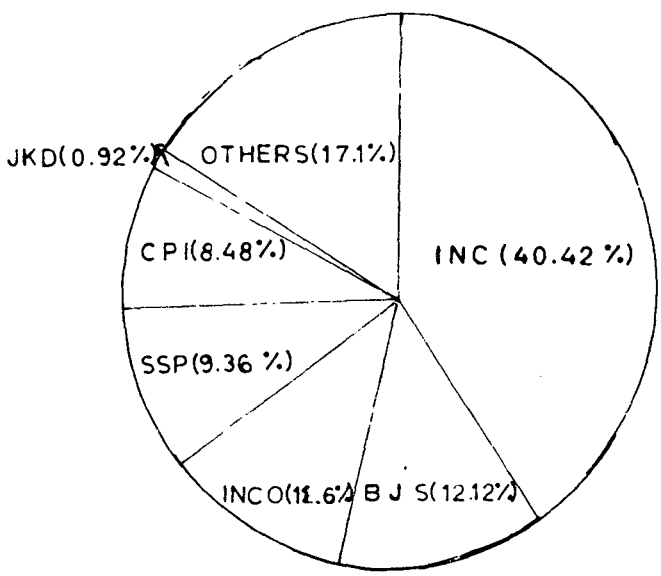
Bihar: Percentage Share of Votes for the parties, 1971

Parties	Percentage Share of Votes
INC	40.42
BJS	12.12
INCO	11.60
SSP	9.36
CPI	8.48
JKD	0.92
Others	17.10

Fig.IV.1

BIHAR

SHARE OF VOTES FOR DIFFERENT PARTIES (1971)



4.1.2 Share of votes for Different Parties, 1977:

In sixth general election the most dominant national party was BLD or what later came to be known as the Janata Party. The two other strong national parties contested the election were INC and CPI. Besides there was one strong regional party J.K.P. However, in most of the constituencies the fight was in between BLD and INC. Out of total 21050770 valid votes polled, BLD secured 64.43 per cent followed by INC with 22.71 per cent valid votes, CPI with 5.58 per cent valid votes and JKP with 0.41 per cent valid votes (See Table IV.2)

Table IV.2

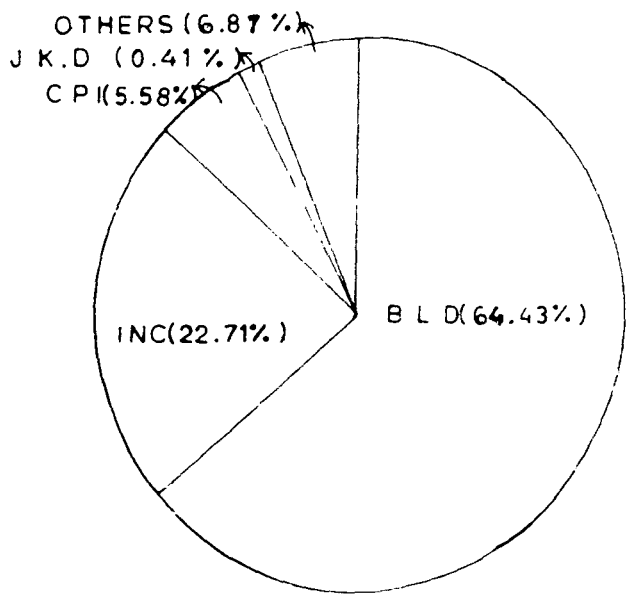
Bihar: Percentage share of votes for parties, 1977

Parties	Percentage share of votes
BLD	64.43
INC	22.71
CPI	5.58
JKP	0.41
Others	6.87

Fig.IV.2

BIHAR

SHARE OF VOTES FOR DIFFERENT PARTIES (1977)



4.1.3 Share of Votes for Different Parties, 1991:

This time Bihar showed a triangular contest between INC, BJP, and Left Front and National Front allies. Besides there was JP (this JP is not the JP of 1977). Out of total 29606300 votes polled the National Front and Left Front allies secured the highest percentage (28.5 per cent). Its party wise break-up is as following, J.D. secured 20.06 per cent vote or the highest, followed by CPI with 4.43 per cent vote, CPM with 1.41 per cent and JMM 2.60 per cent. This timeOINC was the single party which polled the highest valid vote (24.16 per cent). Another important parties B.J.P. secured 9.36 per cent valid votes and JP secured 3.48 per cent valid votes (See table IV.3)

Table IV.3

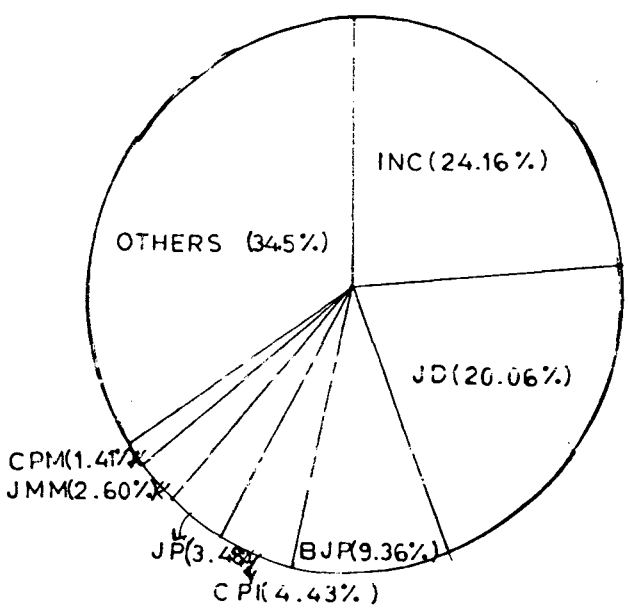
Bihar: Percentage share of votes for Parties, 1991

Parties	Percentage Share of Votes
INC	24.16
JD	20.06
BJP	9.36
CPI	4.43
JP	3.48
JMM	2.60
CPM	1.41
Others	34.5

Fig. IV. 3

BIHAR

SHARE OF VOTES FOR DIFFERENT PARTIES (1991)



So, among the three general elections it is seen that the lowest number of contesting parties were in 1977 general election. So, the ever highest percentage share of votes (64.43 per cent) was polled by a single political party (B.L.D.) in this year. The next highest percentage share of vote (40.42 per cent) was secured by a single party INC in 1971. In 1991 election the oppositions were united but not as much as 1977. This time election was triangular in most of the constituencies. So, the oppositions' performance was not as good as achieved by them during the 1977 general elections.

4.2 Index of Opposition Unity (IOU)

Under the Indian multi party system the swing does not make much influence in the winning of seats. Swing is backed by splitting of non winning party's vote. There is a simple statistical method to calculate the splitting of votes among the opposition parties. This method is known as Index of Opposition Unity (IOU).

This statistical method isolates the split factor and shows the ratio of vote polled by the largest opposition party and the sum total of all opposition vote in percentage figure.[2]

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2. Butter, D., Ashok Lahiri and Prannoy Roy, India Decides: Elections, 1952-1991, Living Media India Ltd., New Delhi, 1991, pp. 33-34.

The IOU will be higher when there is the practises of the following - inter party understanding, agreements, seat adjustments or alliances. Bihar during 1977 election showed the electoral contests of the main four opposition parties under a common symbol and in 1991 election showed seat adjustment between the Nation Front and Left Front parties. The National Front is a alliance of Janata Dal; Telugu Desam Party of Andhra Pradesh (not contested in Bihar election), Jharkhand Mukti Morcha, Cong.(S) (not contested in Bihar election) and HVP (not contested in Bihar election). The Left Front is the alliance of CPI, CPM, RSP and FBL. In India IOU varies from one constituency to the another and from one election year to the another.

The Opposition Unity has a psychological effect on voter's perception. If the opposition seemed to the voter to be disunited, a certain proportion of the electorate may either not vote at all, or vote instead for a more cohesive party.[3] This phenomenon will increase the percentage share of votes for the dominant party and makes a swing in favour of it. It is often said that when a party comes into power it is compelled to implement unpopular

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3. Op.Cit., Butler, D., et.al., 1991, p.37

measures and the accumulated grievances of the electorates erodes the popularity of the party in power.[4]

However, IOU should not be interpreted without taking into consideration other related issues. Suppose in an area three parties X, Y and Z are in the election fray, where X is the ruling party and Y and Z are two strong opposition parties. So, here IOU will be low. A community a makes the non-Y votes. So, in this situation the non-Y votes would be divided among X and Z which ultimately may help Y to win the seat.

4.2.1 Spatial Pattern of Index of Opposition Unity in 1971 General Election:

This time 7 constituencies showed very high IOU. Among those the highest (98) and the lowest (85) were shown by Muzaffarpur and Sasaram constituency respectively. The other constituencies falling in this category were Aurangabad, Gopalganj, Sitamarhi, Siwan and Bagaha according to descending order of IOU values. All those constituencies showed a fragmented pattern.

The high IOU values were shown by 12 constituencies. Among those the highest (77) and the lowest (61) were shown

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4. Op. Cit., Butler, D., et.al., 1991, p.40

by Barh and Ranchi respectively. The other constituencies falling in this category were Gaya, Araria, Arrah, Sheohar, Madhepura, Madhubani, Chatra, Bettiah, Palamau and Bikramganj. Constituencies in this category were spreaded everywhere in a fragmented form.

The low IOU values were shown by 20 constituencies. Among those the highest (58) and the lowest (39) were shown by Nalanda, Giridih (for highest) and Hazaribagh respectively. The other constituencies falling in this category were Hajipur, Rajmahal, Nawada and Lohardaga. These constituencies showed a fragmented line shape on eastern Bihar.

Very low IOU were shown by 8 constituencies. Among those the highest (39) and the lowest (25) IOU were shown by Hazaribagh and Purnea constituencies respectively. The other constituencies falling into this category were, Jamshedpur, Banka, Motihari, Darbhanga and Khagaria (See table IV.4 and appendix IV.

Table IV.4

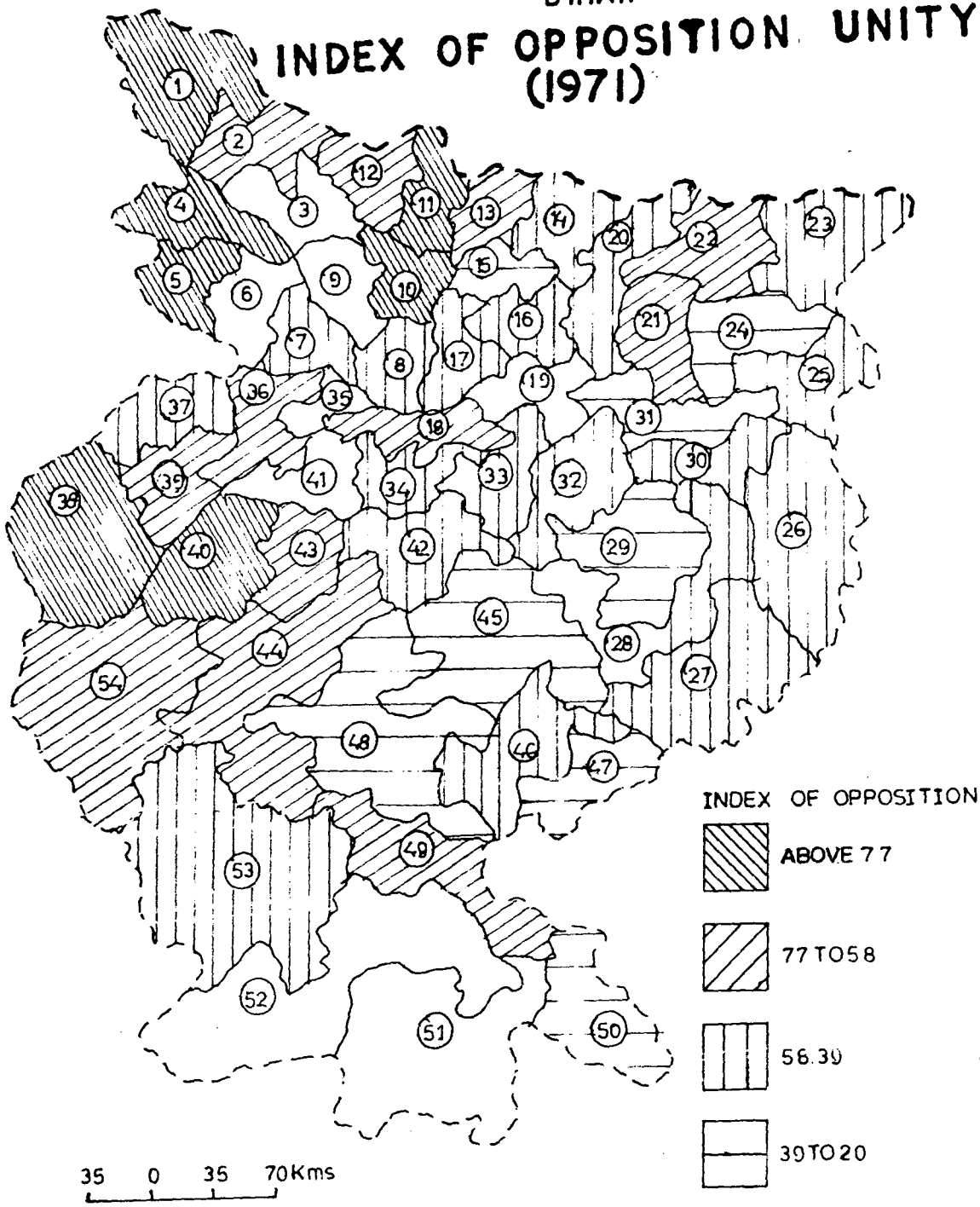
Bihar: Index of Opposition Unity, 1971

Index of Opposition Unity	Number of Constituencies
above 77	7
77 to 58	12
58 to 39	20
39 to 20	8

Fig. IV. 4

BIHAR

INDEX OF OPPOSITION UNITY (1971)



4.2.2. Spatial Pattern of Index of Opposition Unity in 1977 General Election:

The very high IOU was shown by 4 constituencies. Among those the highest (100) IOU was shown by Bhagalpur and 99 IOU was shown by Gopalganj, Maharajganj and Vaishali.

This time maximum number (24) constituencies showed high IOU. Among those constituencies, Hajipur, Araria, Sasaram and Gaya showed the highest (98) IOU and Jahanabad showed the lowest (75) IOU. In this category the constituencies were seen every where in a fragmented form except in the extreme south Bihar.

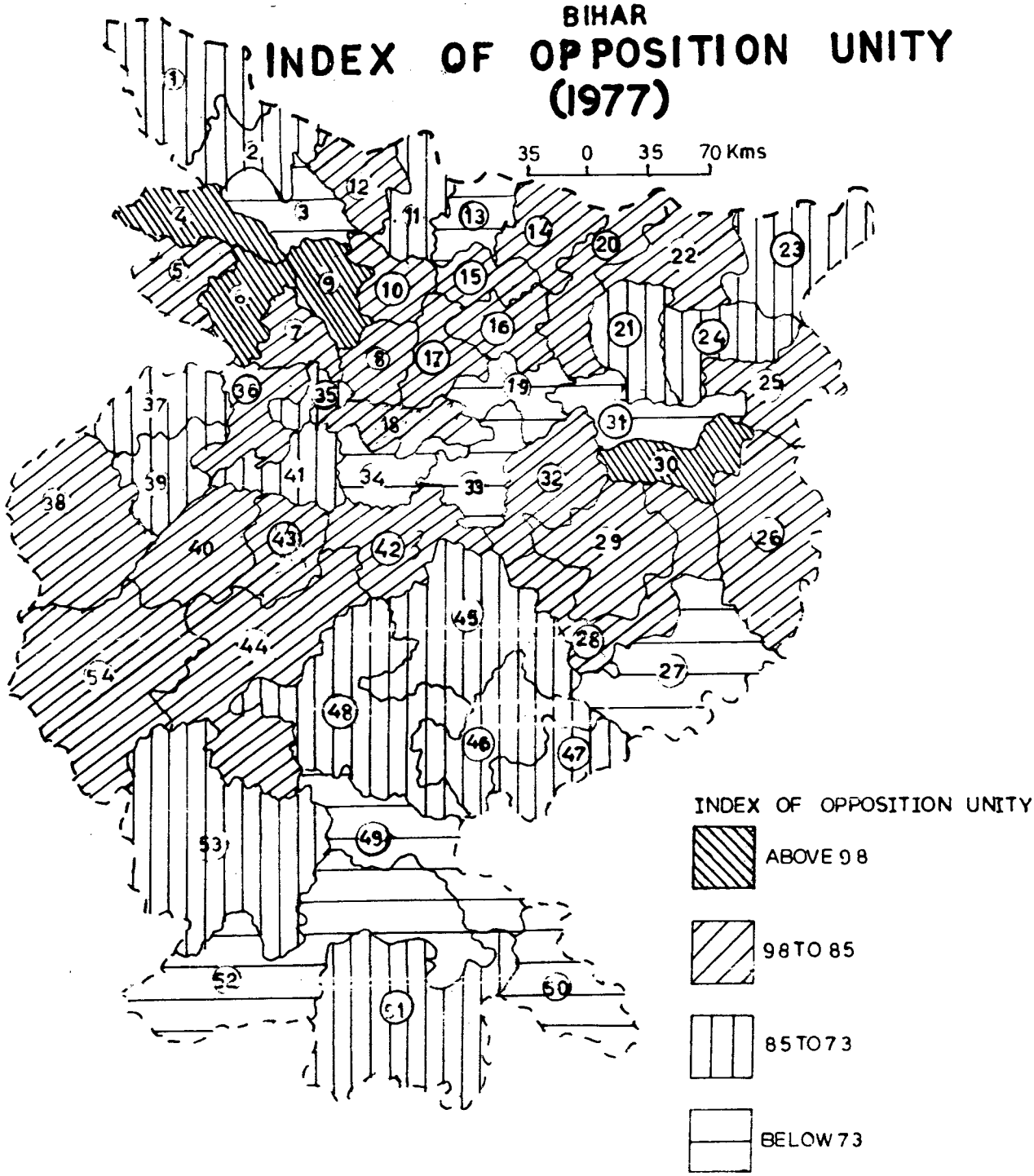
Low IOU were shown by 16 constituencies for this time. Among those the highest (85) and the lowest (75) were shown by Singhbhum and Jahanabad respectively. Other constituencies falling into this category were Madhepura, Kishanganj, Giridih, Patna, Bettiah, Lohardaga, Sitamarhi, Purnea, Buxar, Begahr, Bikramganj, Dhanbad and Hazaribagh.

Very low IOU were shown by 10 constituencies. Among those the highest (72) and the lowest (51) were shown by Khagaria and Balia respectively. Other constituencies falling into this category were Begusarai, Jamshedpur,

Fig.IV.5

BIHAR

INDEX OF OPPOSITION UNITY (1977)



Dumka, Ranchi, Nalanda, Motihari, Khunti and Madhubani constituencies according to the descending order of IOU values.

This year all the constituencies of Bihar showed a highly fragmented pattern (See table IV.5 and appendix IV).

Table IV.5

Bihar: Index of Opposition Unity, 1977

Index of Opposition Unity	Number of Constituencies
above 98	4
98 to 85	24
85 to 73	16
below 73	10

4.2.3 Spatial Pattern of Index of Opposition Unity in 1991 General Election:

For this election very high IOU values were shown by 12 constituencies. Among those the highest (93) IOU were shown by Sitamarhi and the lowest IOU (81) were shown by Balia and Jhanjharpur. Another constituencies of this category were Muzaffarpur, Barh, Vaishali, Madhubani, Gaya,

Saharsha, Nawada, Samastipur, Begusarai and Jhanjharpur. All the constituencies are situated in central north Bihar in a contiguous shape but to some extent in a fragmented form.

High IOU values were shown by 12 constituencies. Among those the highest IOU (77) and the lowest IOU (65) were shown by Rosera and Khagaria respectively. The other constituencies falling into this category were Gopalganj, Hajipur, Sasaram, Darbhanga, Madhepura, Nalanda, Jahanbad., Banka, Bhagalpur and Araria respectively. A fragmented pattern were shown by the constituencies in north Bihar.

This time low IOU values were shown by 17 constituencies. Among those the highest IOU (64) and the lowest IOU (50) were shown by Dumka and Katihar respectively. The other constituencies falling into this category were Aurangabad, Sheohar, Bettiah, Giridih, Rajmahal, Monghyr etc. Those constituencies showed a fragmented pattern in whole Bihar.

The very low IOU values were shown by 11 constituencies among those the highest IOU (49) was shown by both Dhanbad and Jamshedpur and the lowest IOU (36) was shown by Lohardaga. Other constituencies falling into this

category were Jamshedpur, Chatra, Singhbhum, Khunti, Koderma, Palamau, Arrah and Hazaribagh. All of these constituencies were seen in south Bihar (see Table IV.6 and appendix IV)

Table IV.6

Bihar: Index of Opposition Unity, 1991

Index of Opposition Unity	Number of constituencies
95-80	12
80-64	12
64-49	17
49-34	11

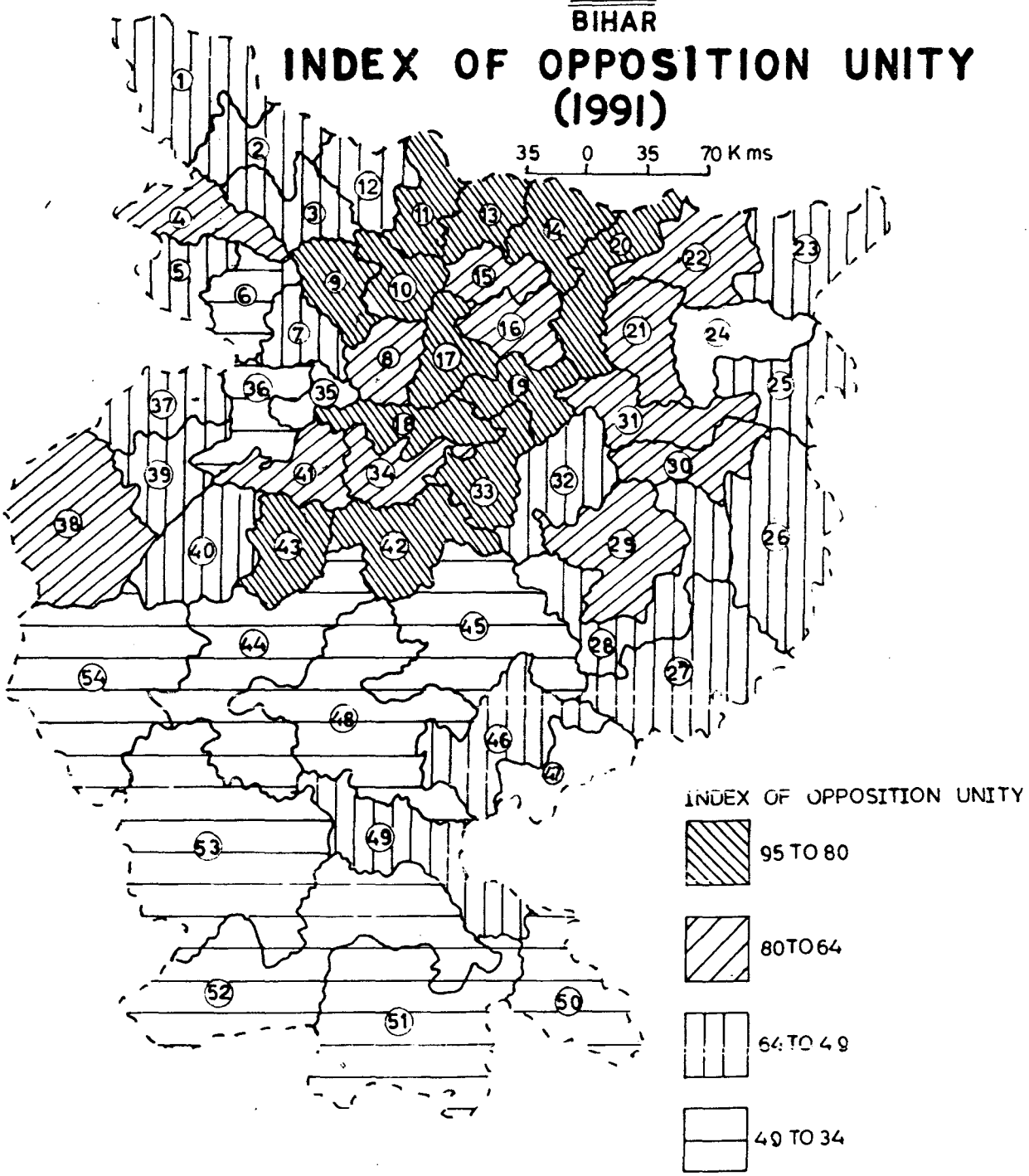
In table IV.7 it is seen that the mean IOU values for whole Bihar was lowest (58) in 1971, it ascended a peak in 1977 with the ever highest IOU value, i.e.,85 again it went down to 64 in 1991 election. At the outset, it is stated that IOU values are mainly dependent on the number of contesting candidates. Generally, higher the number of candidates the lower will be the IOU value.

In 1971 general election besides INC the other four strong opposition, national parties were BJS, CPI, INCO and SSP in the electoral fray. In some constituencies

Fig. IV.

BIHAR

INDEX OF OPPOSITION UNITY (1991)



independent candidates were also very strong. For this in this particular general election IOU was low.

The 1977 election was very close to two party system of west. Opposition parties were almost completely united against INC in everywhere Bihar. So, this time IOU of Bihar touched its highest ever mean (85). This time Bhagalpur constituency with two candidates showed the ever highest (100) IOU value of Bihar.

The latest general election of 1991 was three cornered fight between INC, BJP and National Front and Left Front alliance. So, there was a 21 point slump in IOU value of Bihar.

Table IV.7

Bihar: Mean Index of Opposition Unity for 1971, 1977 and 1991 General Elections.

Year	Index of Opposition Unity
1971	58
1977	85
1991	64

The coefficient of variation of IOU values for whole Bihar are given in Table IV.8. From the table it is seen

that IOU value in 1977 was more consistent than the other two years. Another interesting thing is with higher mean IOU the consistency is also higher. For 1977 the mean IOU was the highest and coefficient of variation was the lowest or the 1977 showed the most consistency. For the opposite reason 1971 was showing the most inconsistant IOU value.

Table IV.8

Bihar: Coefficient of Variation of Index of Opposition Unity for 1971,1977 and1991

Year	C.V.of Index of Opposition Unity
1971	32.76
1977	15.29
1991	23.44

4.3 Swing Factor

Swing is a statistical method to measure a party's popularity between one election and the next in terms of average of change in percentage margin. It shows the

Contd...

relationship between votes and seats.[5] This measurement holds good in two party system and not give correct results in the country's where multi-party system is existing. However, it may be used in India but there will be some percentage of error.[6] In Indian situation the problem is solved to some extent, taking INC as a dominant party. Swing shows the net impact of political issues, social and caste trends and underlying economic realities. The swing factor is to a greater extent influenced by attitude of the electorates to the parties. Till now there is not much study in India on the attitude of the electorates but many study on electorate's attitude have done in Britain during 1983 election.[7] In India another problem arises due to the localised dominance of the regional parties which makes the swing less uniform over the space.

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5. Suppose a party X won a seat by a margin of 40 per cent vote and next time by 30 per cent vote then in this case swing will be (40-30)/2 = 5 per cent. This 5 per cent swing will be exactly equal to the decline in percentage votes for X and this vote will be gained by the other contesting party or parties.

6. Dasgupta, B. and W.H.Morris-Jones, Patterns and Trends in Indian Politics: An Ecological Analysis of Aggregate Data on Society and Elections, Allied Publishers, Pvt.Ltd., New Delhi, 1975, pp.115-116.

7. Quoted in Johnstone, et.al., 1988 pp..

When swing is positive it will favour the party whose percentage share of votes have considered in the analysis but when it is negative it won't be favourable to that party. However, positive swing does not imply the dominant party will be winner. Sometimes when the percentage share of vote for the base year is very low in comparison to the year for which calculation is done, the swing will be positive. Another confusion arises in the multi-party system positive swing comes for a party at the cost of many other parties' vote. In this situation another party may be favoured by higher positive swing. So, it is very difficult to say who will be the winner.

4.3.1 Spatial Pattern of Swing during 1971-77:

Table IV.9 is showing the distribution of swing factor. For this period only one constituency showed very high swing. That constituency is Begusarai with 33.94 swing factor. Five constituencies were showing high swing factor. Among those Jhanjharpur showed 7.63 or the highest swing factor, followed by Purnea, Khagaria, Jamshedpur and the lowest -4.28 shown by Katihar. Among the five constituencies four are situated in north-eastern Bihar and Jamshedpur is in the south-eastern Bihar. The pattern is fragmented. Low swing was shown by 18 constituencies. Among those highest was shown by Aurangabad with -6.51 and

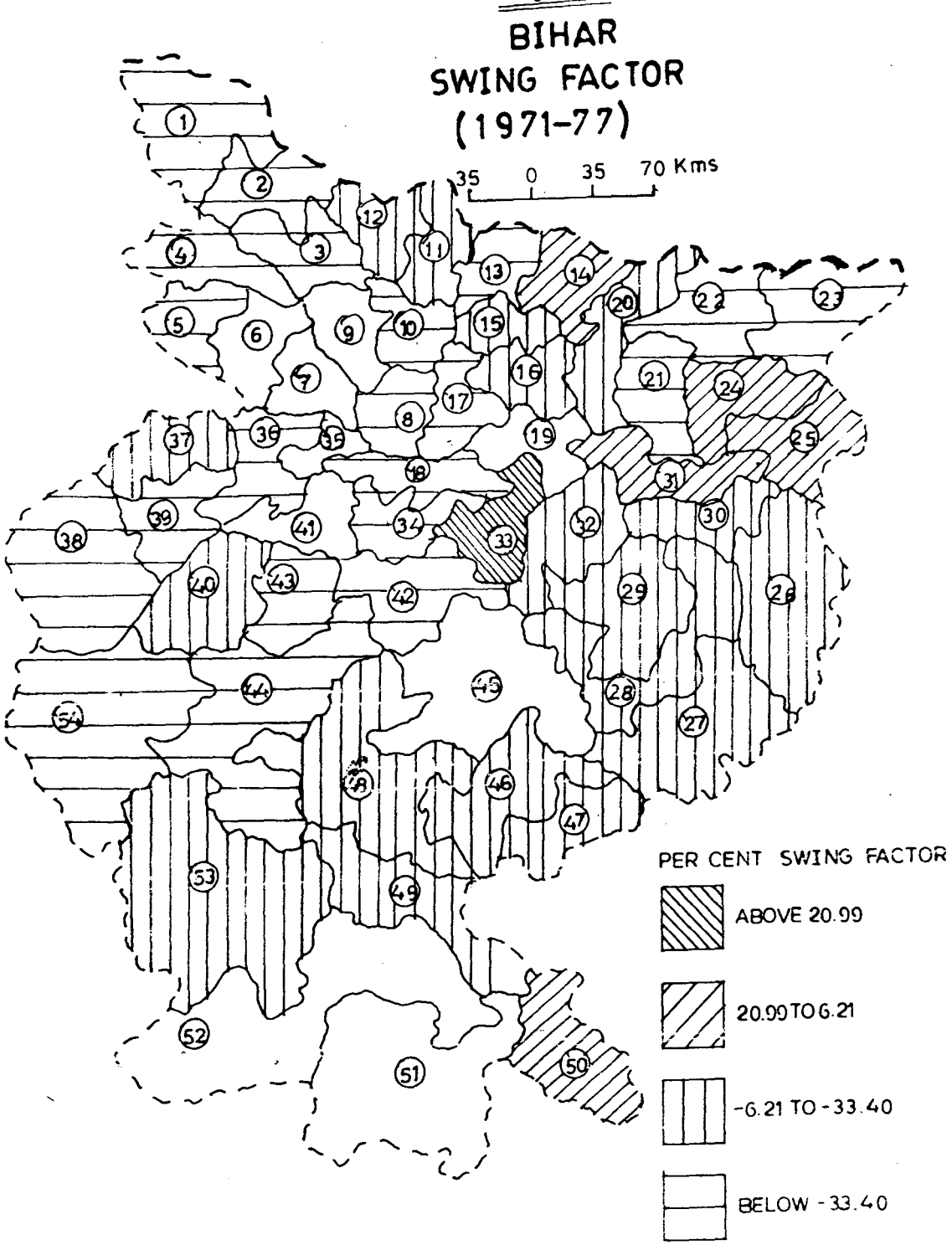
lowest by Hajipur -33.91. Among those the northern fragmented constituencies are Sitamarhi, Sheohar, Darbhanga and Saharsha in north Bihar and Bunar and Aurangabad in West. Rest of the constituencies starting from Bhagalpur to Lohardaga a continuous crescentic pattern was shown. This 22 constituencies showed very low split factor among those Chatra showed the highest value (-34.73) and Muzaffarpur showed the lowest value (-95.38). These very low values were seen from Bagahar in extreme north-west to Kishanganj in extreme north-east to chatra and Palamau in extreme south. All these constituencies though showed a fragmented pattern but they are all most in a continuous line shape along central Bihar from north to south (see appendix VI).

Table IV.9

Bihar: Swing Factor, 1971-77

Swing	Number of constituencies
above 20.99	1
20.99 to -6.21	5
-6.21 to -33.40	18
below -34.40	22

Fig.IV.6.


BIHAR
SWING FACTOR
(1971-77)
35 0 35 70 Kms
PER CENT SWING FACTOR
ABOVE 20.99
20.99 TO 6.21
-6.21 TO -33.40
BELOW -33.40

4.3.2 Spatial Pattern of Swing during 1977-91:

Table IV.10 shows the distribution of swing for 1977-91. According to this table two constituencies were showing very high swing. Those are Muzaffarpur with highest swing factor (57.38) and Nawada with 51.34 swing factor. One of them is in central Bihar while the other in north Bihar. High swing factor was shown by 7 constituencies. Among those Vaishali showed the highest (47.06) and Begusarai showed the lowest (25.96) swing factor. Other constituencies falling in this category are Jahanabad, Gaya, Sasaram, Nalanda and Barh. Among those 7,5 constituencies are clustered in central Bihar, while other two are in western and northern Bihar. Low swing factor was shown by 14 constituencies. Among those Samastipur showed the highest (24.77) and Bunar showed the lowest (3.40) swing factor. Another constituencies falling in this category are Balia, Madhubani, Saharsha etc. in north, Singhbhum and Khunti in South. These category is showing highly fragmented pattern. This time 29 constituencies were showing very low swing factor. Among those the highest value (-0.65) was shown by Aurangabad and the lowest value (-51.78) by Sheohar. Another constituencies falling in this category are, Bagha, Bettiah, Kishanganj, Palamau, Lohardaga and Jamshedpur (see appendix VI.).

Table IV.10

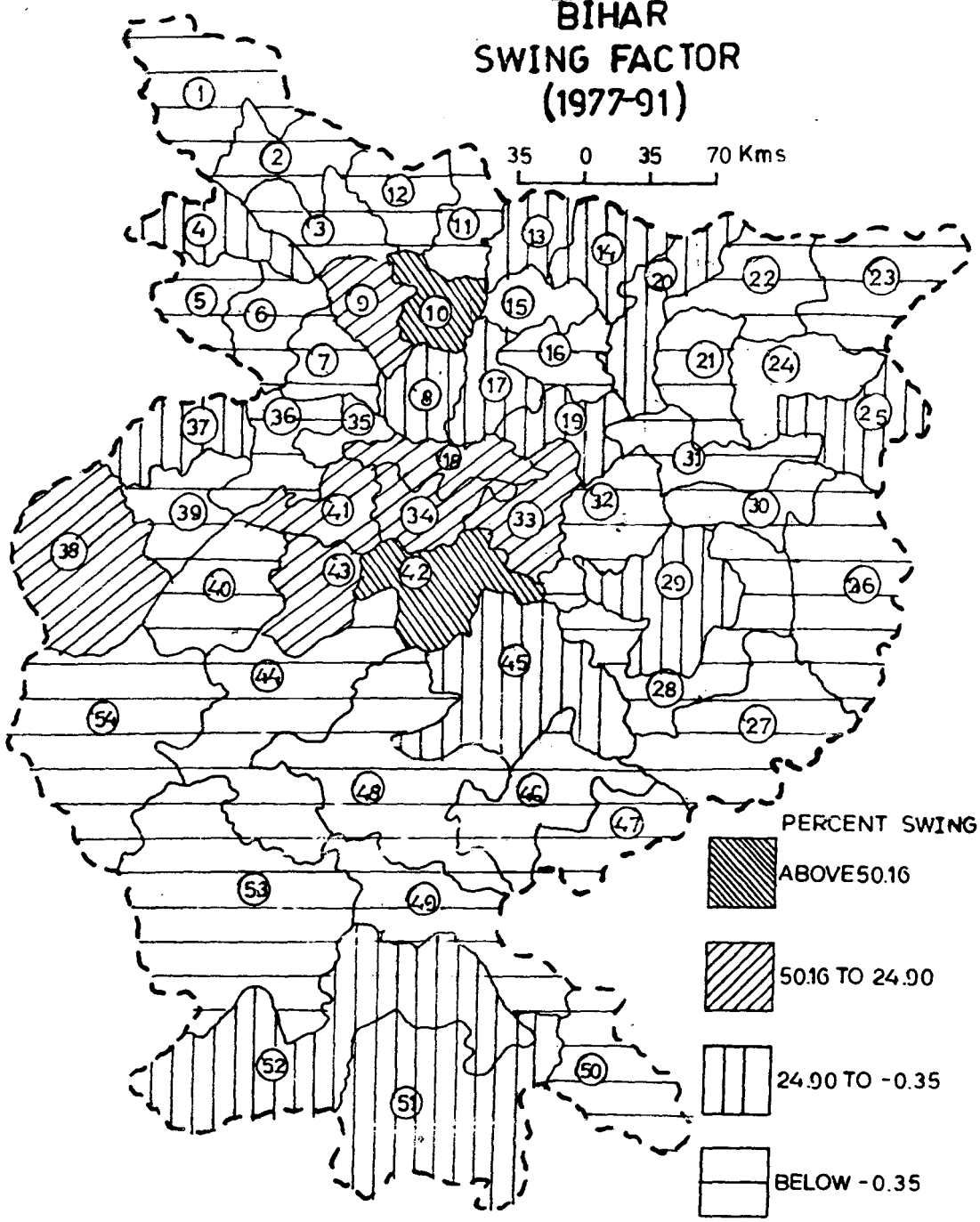
Bihar: Swing Factor, 1977-91

Swing	Number of Constituencies
above 50.16	2
50.16 to 24.90	7
24.96 to -0.35	14
below- 0.35	29

From the table IV.9 and IV.10 it is seen there is a great temporal variation between 1971-77 and 1977-91. The mean swing value during the first period was -33.40 but during second period it was only -0.35. This great variations are arising but of high and low percentage of votes for INC (See appendix VIII) for the preceeding year and the year for which swing value has calculated. For 1971, 1977 and 1991 INC's total share of vote in the state were 40.42 per cent, 22.71 per cent and 24.16 per cent respectively. For this reason during the first period 43 observations showed negative swing and during second phase 29 observations showed negative swing against INC. This predominantly negative swing values helped the opposition to capture majority of the parliamentary seats. During the

Fig. IV. 7

BIHAR
SWING FACTOR
(1977-91)



first period the impact of swing (mean value for state was -33.40) was much more than split factor (mean value was -21.46) in determining the winner candidates. (see appendix V & VI).

4.4 Split Factor

Split is a statistical method to measure the fragmentation of the opposition parties' or independent candidates share of votes in the electoral result. In the multi-party system of India with swing the split factor or splitting of the opposition share of votes plays an important role in deciding the winner. It is possible for a party with a very small margin of vote to win a seat if the split factor in the opposition votes becomes dominant thing.[8]

4.4.1 Spatial Pattern of Split during 1971-77:

Table IV.11 shows that this time 9 constituencies showed very high splits. Among those the highest value (9.07) and lowest value (-5.07) were shown by Madhubani and Nalanda respectively. Another constituencies falling into the very high split category are Sitamarhi, Muzaffarpur, Bagaha, Aurangabad, Ranchi, Siwan and Gopalganj. The above mentioned constituencies showed a fragmented

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8. Op.Cit., Butler, D., et.al.,1991, p.32 & 37.

form in all over Bihar. High split factors were shown by 13 constituencies. Among those the highest and lowest values (-10.38 and -20.69) were shown by Sasaram and Motihari respectively. The constituencies of high split factors are distributed in all over Bihar in a dispersed form. In north-western part the constituencies are Bettiah, Motihari and Sheohar; in north eastern part the constituencies are Madhepura and Araria; in central and western part the constituencies are Begusarai, Balia, Arrah, Bikramganj Sasaram and Gaya and in eastern part the two constituencies are Dumka and Giridih. The low split factors are shown by 16 constituencies which are distributed mainly in north-eastern and south western Bihar. Among those the highest and lowest values (-22.25 and -35.91 respectively) were shown by Jamshedpur and Bhagalpur respectively. The constituencies in north-east Bihar are Kishanganj, Saharsha, Jhanjharpur, Rosera, Samastipur, Khagaria, Bhagalpur and Rajmahal. In south-western Bihar Chatra, Palamau, Lohardaga, Khunti Jamshedpur and Hazaribagh. Outside these two clusters the low constituency is Bunar which also showed low split. Very low splits were shown by 8 constituencies. Among those the highest (-37.78) and lowest splits were shown by Dhanbad and Darbhanga constituencies respectively. These constituencies are seen in a fragmented pattern in whole Bihar except in extreme south. The other constituen-

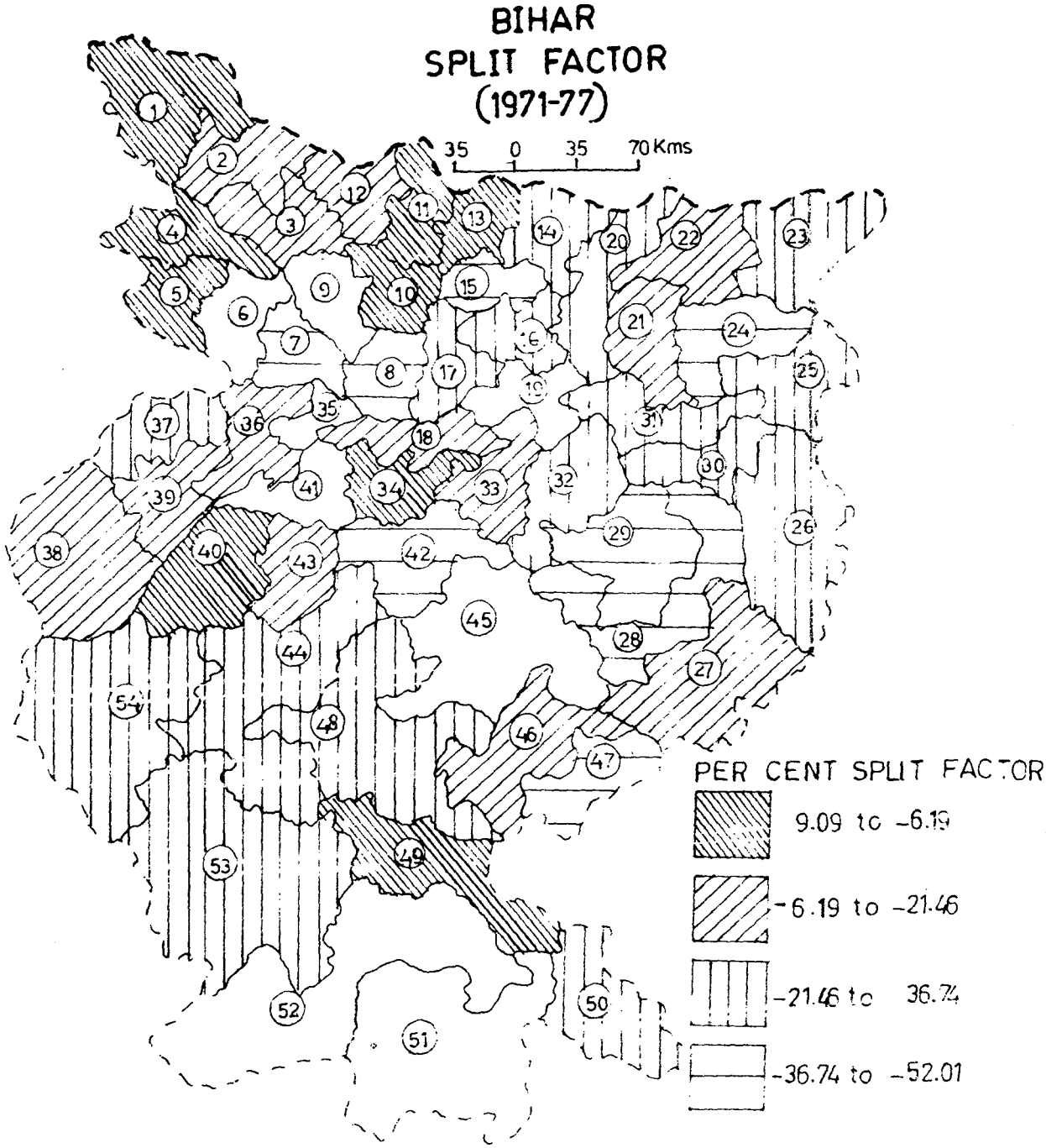

BIHAR
SPLIT FACTOR
(1971-77)
35 0 35 70 Kms
PER CENT SPLIT FACTOR
9.09 to -6.19
-6.19 to -21.46
-21.46 to 36.74
-36.74 to -52.01

Fig. IV. 8

cies falling in this category are Godda, Purnea, Chapra, Hajipur Banka and Nawada (see appendix V).

Table IV.11

Bihar: Split Factor, 1971-77

Split	Number of constituencies
0.09 to -6.19	9
-6.19 to -21.46	13
-21.46 to -36.74	16
-36.74 to -52.01	8

4.4.2 Spatial Pattern of Split during 1977-91:

The table IV.12 shows in this period 8 constituencies showed very high splits. Among those the highest value (50.35) and the lowest value (33.30) were shown by Arrah and Hazaribagh respectively. These constituencies are seen in two clusters ane in north-western Bihar with Siwan, Maharajganj, Chapra and Arrah and another in south Bihar with Hazaribagh, Chatra, Palamau and Lohardaga. High splits were shown by 17 constituencies which showed a dispersed pattern in all over Bihar. Among those the highest (32.01) and lowest (18.96) splits were shown by natihar and

Hajipur respectively. The other constituencies falling in this category are Monghyr, Singhbhum Sheohar, Koderma, Godda, Kishanganj, Rajmahal, Dhanbad, Araria, Bhagalpur, Giridih, Bunar, Bettiah, Bagaha and Aurangabad. Low swings were shown by 21 constituencies. Among those the highest (17.39) and lowest (2.45) values were shown by Banka and Jahanabad respectively. These constituencies are distributed in all over Bihar in a dispersed pattern, such as Motihari, Gopalganj etc. were in north-western Bihar; Saharsa, Madepura etc. in north-east; Nawada Gaya in central Bihar; Sasaram etc. in west; Ranchi, Jamshedpur, Khunti etc. in south Bihar. Very low splits were shown by 6 constituencies. Among those the highest (0) and lowest (-19.86) were shown by Muzaffarpur and Balia respectively. All they were seen in north Bihar in two clusters. Among those in one cluster were Muzaffarpur, Sitamarhi and Madhubani. In another cluster the constituencies are Balia, Begusarai and Nalanda. (See appendix V.)

Table VI.12

Bihar: Split Factor, 1977-91

Split Index	Number of constituencies
above 32.71	8
32.71 to 17.26	17
17.26 to 1.80	21
below 1.80	6

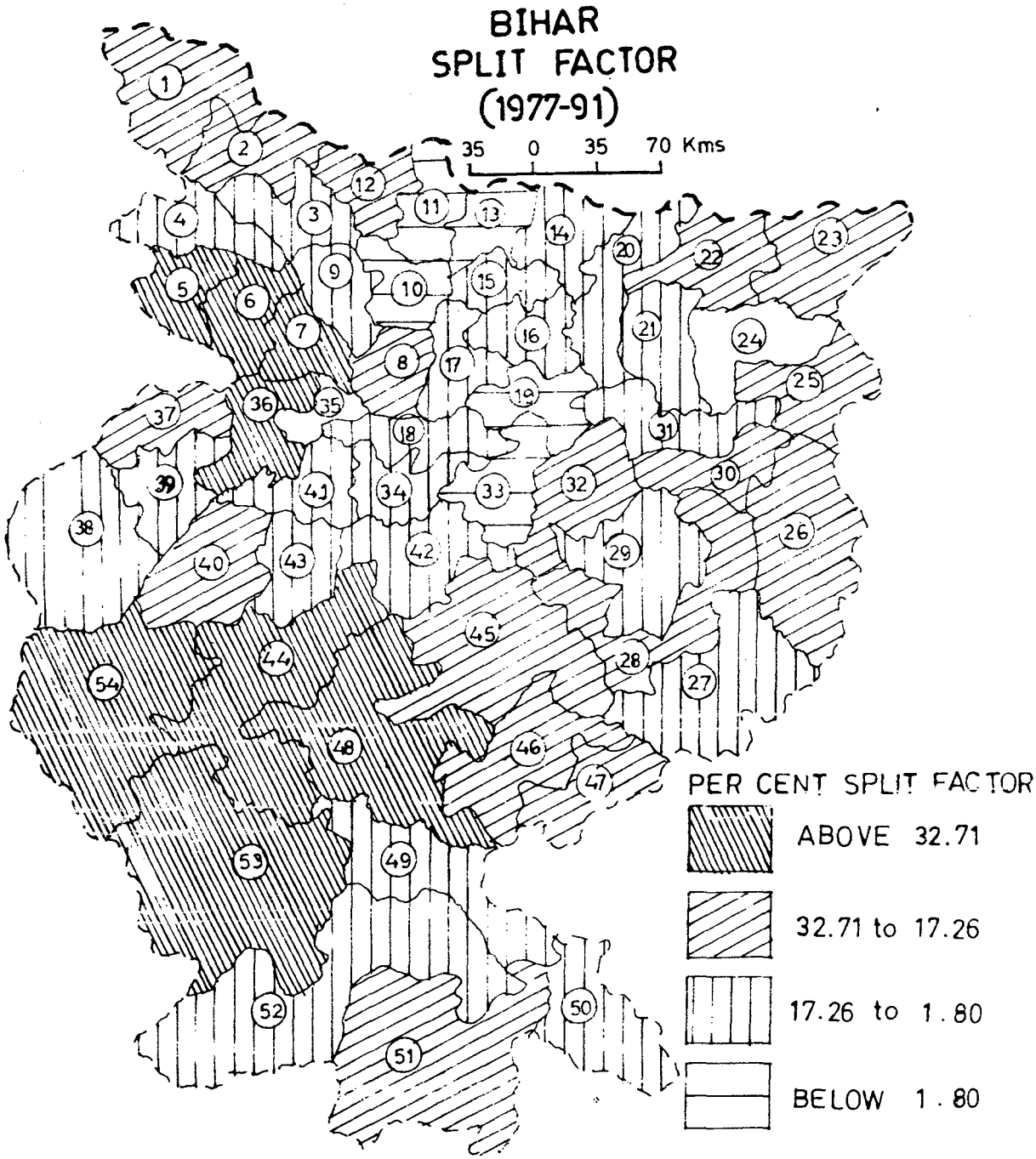

BIHAR
SPLIT FACTOR
(1977-91)
35 0 35 70 Kms
PER CENT SPLIT FACTOR
ABOVE 32.71
32.71 to 17.26
17.26 to 1.80
BELOW 1.80

Fig. IV. 9

The mean split value for 1971-77 and 1977-91 for Bihar were -21.46 and 17.26 respectively. In the first period 41 constituencies showed negative split. This implies that the opposition was united. In the second period 46 constituencies showed positive split which means the situation was more favourable for INC. From the formula of split, i.e. $(I_{t-1} - I_t)$ (100-Xt) it is seen it's value is dependent on the IOU of the previous year and INC's vote. IOU of 1977 was more than the IOU of 1971 and during 1971-77 INC's vote declined so most of the splits during first period was negative. During second period there was a decline in IOU and increment in INC's vote, so most of the splits during this period were positive which indicates the splitting of opposition vote. (See appendix V.).

4.5 Margin of Victory

The main attention of election studies is on the margion of victory. In electoral analysis much emphasis is not given on who won or lost but it finds the difference between winner and runners up parties in share of votes and the causes lying behind it. This margin of victory is dependent on many factors - such as number of candidates in the electoral fray, seat adjustment or understanding , party alliance etc.

4.5.1 Pattern of Margin of Victory in 1971:

From Table IV.13,8 constituencies showed high margin of victory. Among those the highest (56.8 per cent) and the lowest (33.6 per cent) values were shown by Motihari and Nalanda respectively. Another constituencies falling in this category are Bettia and Motihari in the north-west corner; Araria and Kishanganj in the north-eastern Bihar; Sasaram in West and Lohardaga in south. These constituencies are showing highly fregmented spatial pattern. High margin of victory was shown by 15 constituencies. Among those Dhanbad showed the highest (30.7 per cent) and Bhagalpur showed the lowest(19.5 per cent). Another constituencies falling in this catefory are Biharamganj, Gopalganj, Palamau, Sheohar Madhubani, etc. Those constituencies showed a dispersed pattern in all over Bihar. Low margin of victory was shown by 22 constituencies among those constituencies Singhbhum (15.2 per cent) showed the highest and Banka(4.1 per cent) showed the lowest margin of victory. There constituencies, such as Buxar, Barh, Rajmahal, Singhbhum, Sitamarhi etc, were seen all over Bihar with no particular spatial concentration. For this 8 constituencies showed very low margin of victory. Among those highest (2.9 per cent) and lowest (0.1 per cent showed by Gaya and Jamshedpur respectively. Another constituencies falling in this category are Giridih, Najipur, Khunti, Begusarai, Maharaj ganj and Khagaria. Those are distributed in a dispressed pattern (See appendix VII).

Fig. IV.10

BIHAR
MARGIN OF VICTORY
(1971)

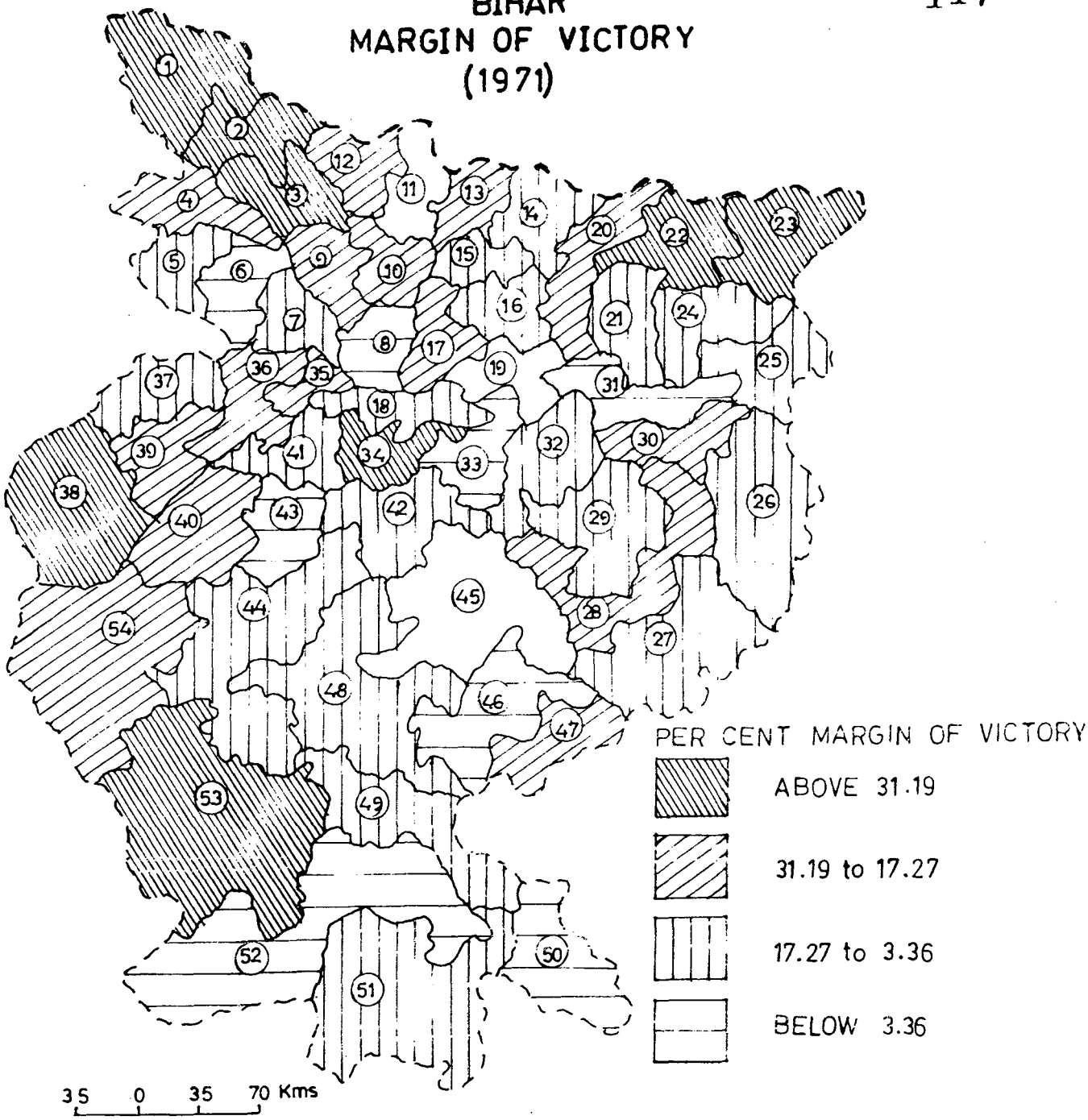


Table IV.13

Bihar: Margin of Victory, 1971

Margin of Victory	Number of constituencies
above 31.19	8
31.19 to 17.27	15
17.27 to 3.36	22
below 3.36	8

4.5.2 Pattern of Margin of Victory, 1977:

Table IV.14 shows for 1977 election 9 constituencies showed very high margin of victory. Among those the highest (80.8 per cent) and lowest (59.1 per cent) were shown by Hajipur and Singhbhum constituencies respectively. Among the other constituencies of this category the 6 constituencies, Chapra, Hajipur, Vaishali, Muzaffarpur, Samastipur and Patna clustered in round shaped in northern Bihar. Rest three Nawada, Palamau and Singhbhum showed a dispersed pattern.

The high margin of victory was shown by 21 constituencies. Among those the highest (58.3 per cent) and the lowest (41.4 per cent) were shown by Sasaram and Saharsa respectively. Another constituencies like Siwan, Darbhanga,

Katihar, Hazaribagh, Sasaram etc. form a crescentic shape. The low margin of victory was shown by 14 constituencies. Among those the highest (41.2 per cent) and lowest (24.4 per cent) were shown by Gopalganj and Jamshedpur respectively. The other constituencies, like Bettiah, Jhanjhanpur, Kishanganj, Giridih, Jamshedpur, Aurangabad etc. are not showing any contiguous pattern. The very low margin of victory were shown by 10 constituencies. Among those Ranchi showed the highest margin of victory (23.5 per cent) whereas Begusarai showed the lowest margin of victory (8.5 per cent). The other constituencies of very low margin of victory, Dumka, Motihari, Khunti, Sitamarhi Sheohar, Bagaha, Bettiah and Madhubani are randomly situated over space. (See appendix VII).

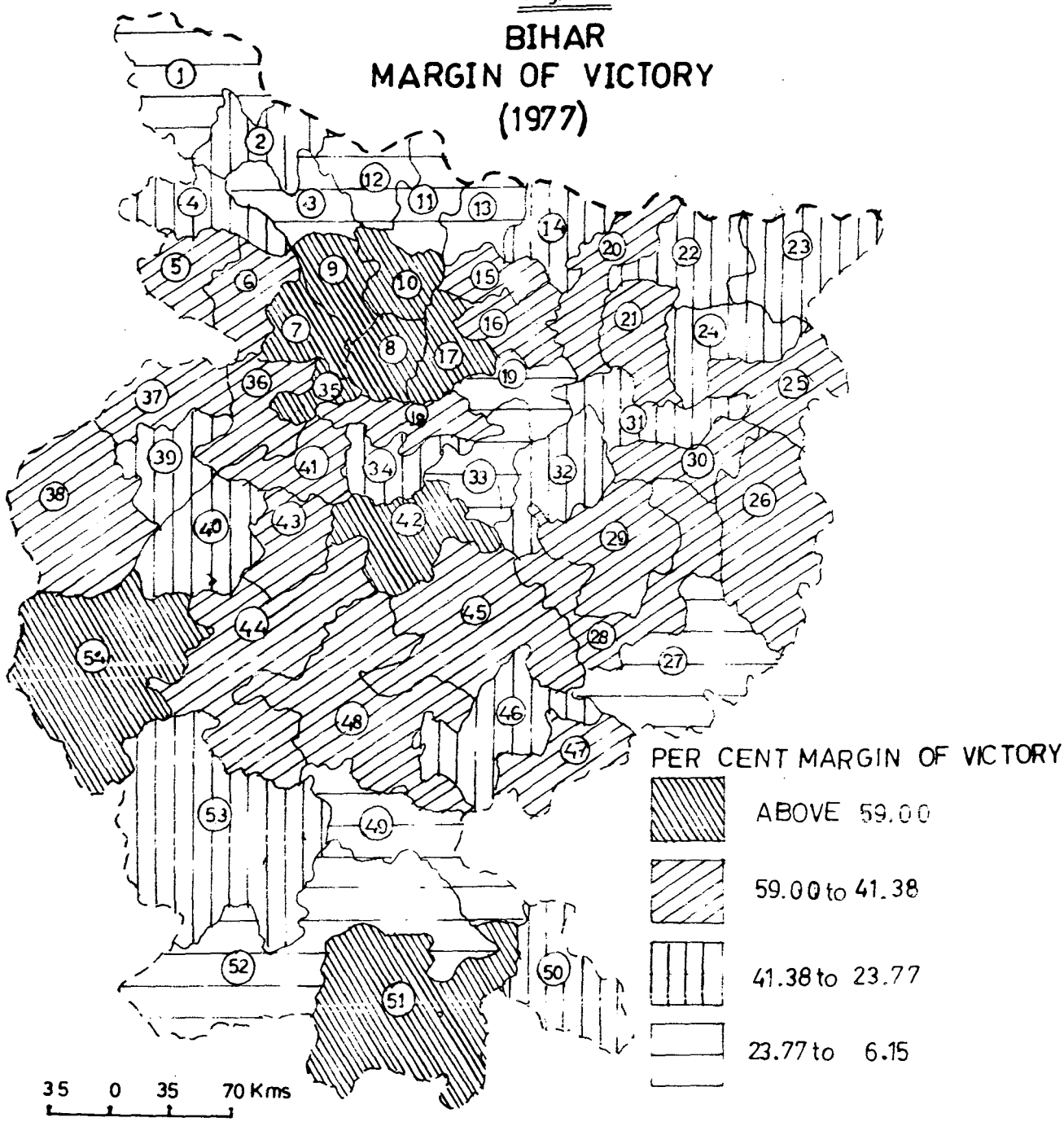
Table IV.14

Bihar: Margin of Victory, 1977

Margin of Victory	Constituencies
above 59.00	9
59.00 to 41.38	21
41.38 to 23.77	14
23.77 to 6.15	10

Fig. IV.11

BIHAR
MARGIN OF VICTORY
(1977)



4.5.3 Spatial Pattern of Margin of Victory, 1991:

Table IV.15 shows, 8 constituencies with very high margin of victory. Among those Hajipur showed the highest margin of victory (49.42 per cent) and Dumka showed the lowest margin of victory (29.94 per cent). Except Dumka all other constituencies are situated in north Bihar. Those are Bikramganj, Hajipur, Samastipur, Rosera, Sitamarhi, Madhepura and Araria. However, those were not making any contiguous pattern. High margin of victory was shown by 13 constituencies. Among those the highest (28.01 per cent) and lowest (19.15 per cent) were shown by Bhagalpur and Chapra constituencies respectively. Another constituencies of this category are Sheohar, Khagaria, Saharsa, Ranchi, Barh, Siwan, Banka, Bettiah, Darbhanga, Godda and Balia. They are not contiguous on space and not forming any clear pattern. Low margin of victory was shown by 23 constituencies. Among those the highest (17.63 per cent) and lowest (7.08 per cent) were shown by Motihari and Rajmahal constituencies respectively. The other constituencies of this category are Maharajganj, Katihar, Palamau, Hazaribagh, Dhanbad etc. The very low margin of victory was shown by 8 constituencies. Among those the highest (5.87 per cent) and lowest (2.89 per cent) was shown by Palamau and Koderma respectively. The other constituencies

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are situated dispersely in all over Bihar. Those constituencies are Hazaribagh, Sasaram, Katihar, Jahanabad, Maharajganj and Dhanbad (See Appendix VII).

Table IV.15

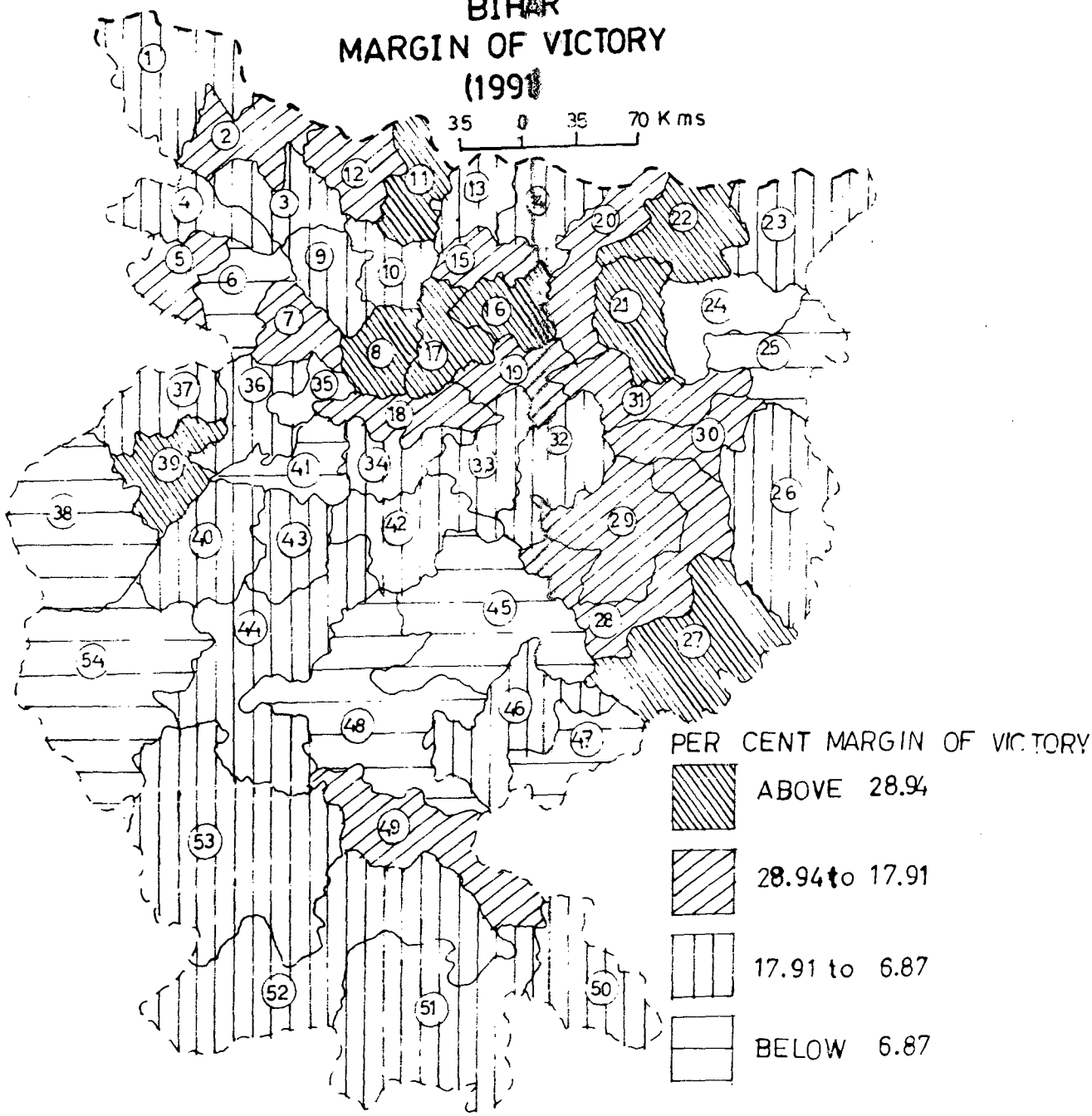
Bihar: Margin of Victory, 1991

Margin of Victory	Number of Constituencies
above 28.94	8
28.94 to 17.91	13
17.91 to 6.87	23
below 6.87	8

The trend of the mean margin of victory for Bihar showed a sudden upward jump from 17.27 in 1971 to a peak of 41.38 in 1977 and then again a downward fall at 17.91 in 1991 general election. At the outset it is already been mentioned that margin of victory is dependent on some electoral understandings. This situation of understanding was most favourable in 1977, when the contest was direct in between INC and BLD. The electoral understanding was backed by anti-INC swing. So, these factors raised the

Fig.IV.12

BIHAR
MARGIN OF VICTORY
(1991)



margin of victory. Whereas in 1971 general election the contest was in between INC and a couple of strong opposition parties. This situation splitted the opposition vote and ultimately brought down the margin of victory. In 1991 election, the contest was in between INC, BJP and National Front and Left Front allies. Besides, some regional parties, also attraced certain fraction of vote. This time the average number of candidates per constituency (24) was the highest among the three general elections. So, all those factors lead to lower margin of victory.

Table IV.16

Bihar: Mean Margin of Victory., 1971,1977 and 1991

Year	Margin of victory
1971	17.27
1977	41.38
1991	17.91

4.6 Seats won by Different Parties:

The winning of a seat is not a result of one factor, like swing, or IOU or Split. In fact, it is a result of all the three factors besides others. But in Indian multi-party situation another thing should be taken into consideration, i.e., percentage share of votes of the

different parties. Sometimes swing may favour a party, but at the sametime another party may be favoured by much more positive swing.

4.6.1 Spatial Pattern of Winners in 1971 General Election:

From table IV.17 it is seen, out of total 53 seats, 39 seats were won by INC, INC followed by, CPI with 5 seats, INCO with 3 seats, BJS and SSP 2 seats each., and JKD with 1 seat. This time one independent candidate Mr.Niral Enam Horo won reserved (ST) parliamentary constituency with 30.53 per cent vote. He is politically renowned in his constituency for his contribution to Jharkhand Movement for a long period. Afterwards he contested from the same seat as a JKD candidate. The reason behind INC's winning 39 seats was very low IOU in all of the constituencies of Bihar. This time the mean IOU for Bihar was only 58 (Table IV17).

Table IV.17

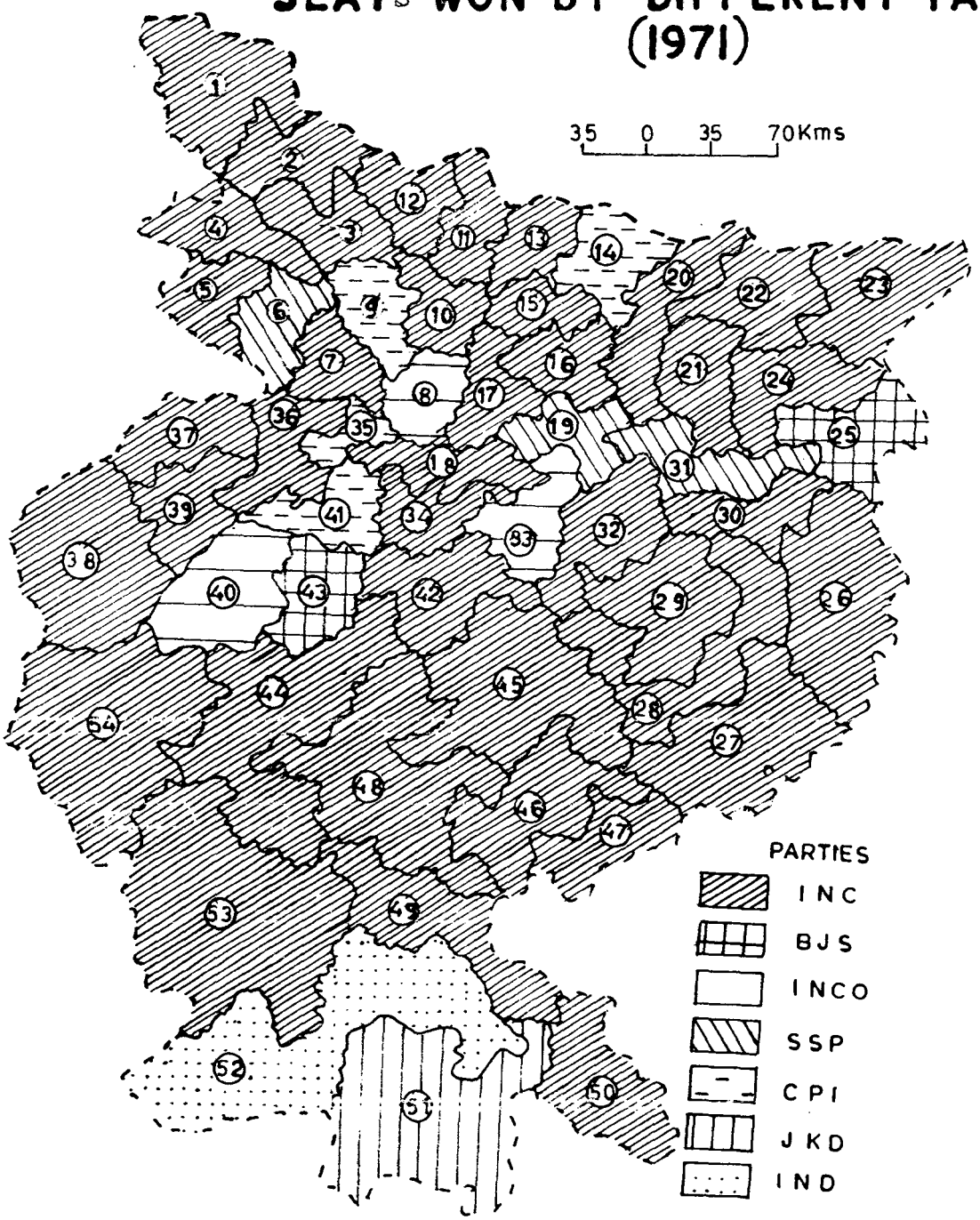
Bihar: Parliamentary Seats won by Different Parties, 1971.

Parties/Independent	Number of seats
INC	39
CPI	5
INCO	3
BJS	2
SSP	2
JKD	1
IND	1

Fig. IV. 13

BIHAR

SEATS WON BY DIFFERENT PARTIES (1971)



In 1971 election the almost whole Bihar was won by INC, but there are few pockets which were won by opposition. CPI won Jhanjharpur, Vaishali, Patna, Jahanabad and Jamui constituency (this constituency cannot be fit in the map shown, which is existing after 1976). INCO won Hajipur, Begusarai and Aurangabad constituencies. BJS won Katihar and Gaya constituencies. SSP won the Khagaria and Maharajganj constituencies. JKD won Singhbhum and one independent won Khunti constituency. Rest of the constituencies were won by INC. So, a dominance of the opposition parties were shown in central Bihar. These constituencies are close to Patna. It may be the people of those constituencies were adversely affected by the Government's policy. The two other opposition constituencies are Khunti and Singhbhum. In these two constituencies the demand for separate Jharkhand state is long been existing which created an anti-INC feeling in the minds of electorates here. (See Appendix IX)

4.6.2 Pattern of Winner in 1977 General Election:

From table IV18 it is seen that BLD out of 54, won 52 seats. Rest out of two one was won by JKP with which BLD had a seat adjustment and another one won by an independent candidate.

Contd..

Fig.IV. 14

BIHAR

SEATS WON BY DIFFERENT PARTIES (1977)

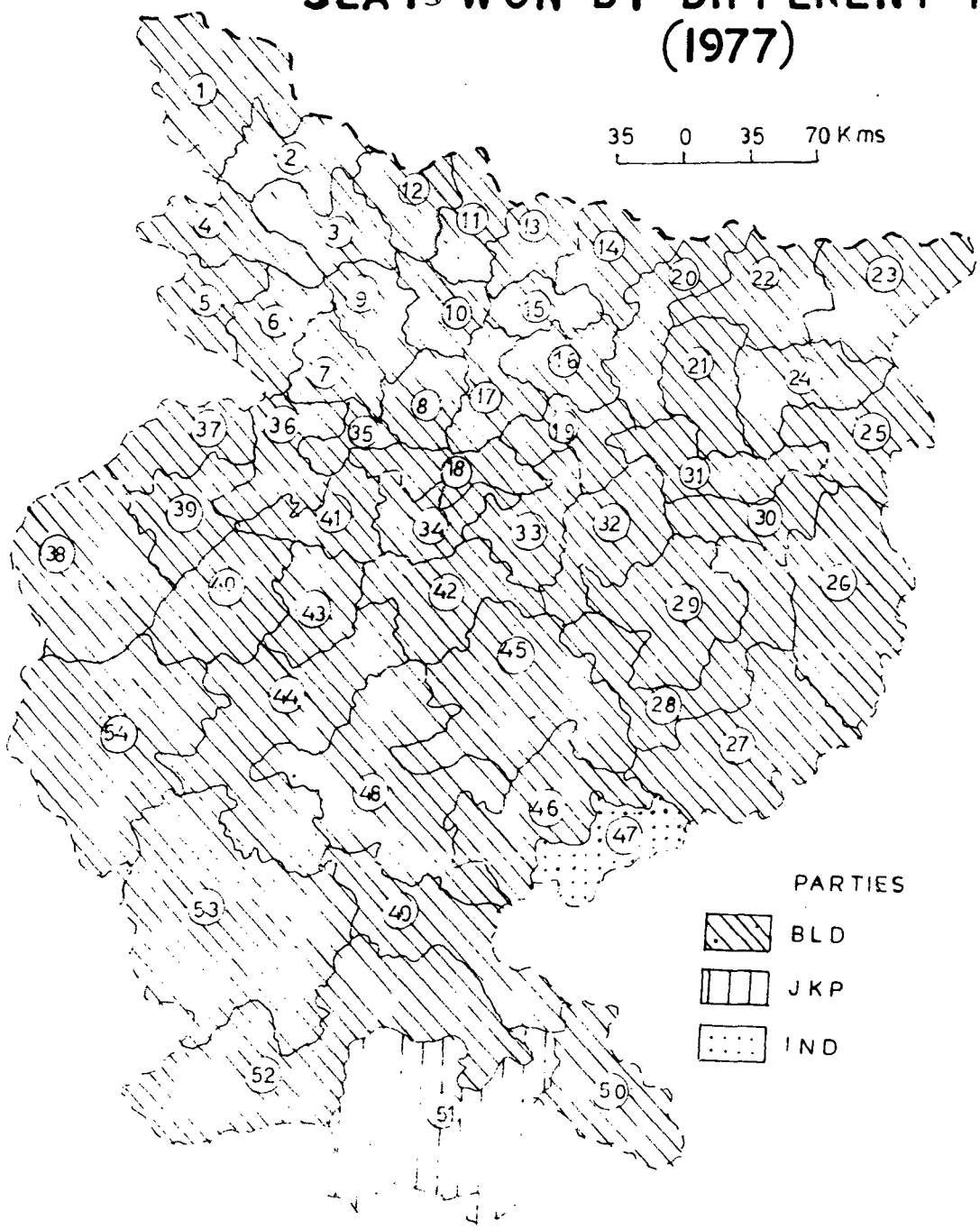


Table IV.18

Bihar: Parliamentary Seats won by Different Parties, 1977

Parties/Independent	Number of seats
BLD	52
JKP	1
IND	1

This time only the Singhbhum and Dhanbad constituencies were won by non-BLD party or independent.

This time high IOU (Mean 85) highly negative swing and split (mean--33.40 and -21.46 respectively) helped BLD to be winner in most of the constituencies. This time the effect of negative swing was more effective than negative split. (See Appendix IX)

4.6.3 Pattern of Winner in 1991 General Election:

Table IV.19 shows this time out of 52 parliamentary constituencies, 43 were won by National Front and Left Front allies. The maximum number of seats were won by JP (31) which was followed by CPI with 8 seats, JMM, 6 seats, BJP 5 seats and CPI (M) and INC one seat each.

Contd..

Table V.19

Bihar: Parliamentary seats won by different Parties, 1991

Parties	Number of Seats
JD	31
CPI	8
JMM	6
BJP	5
CPI (M)	1
INC	1

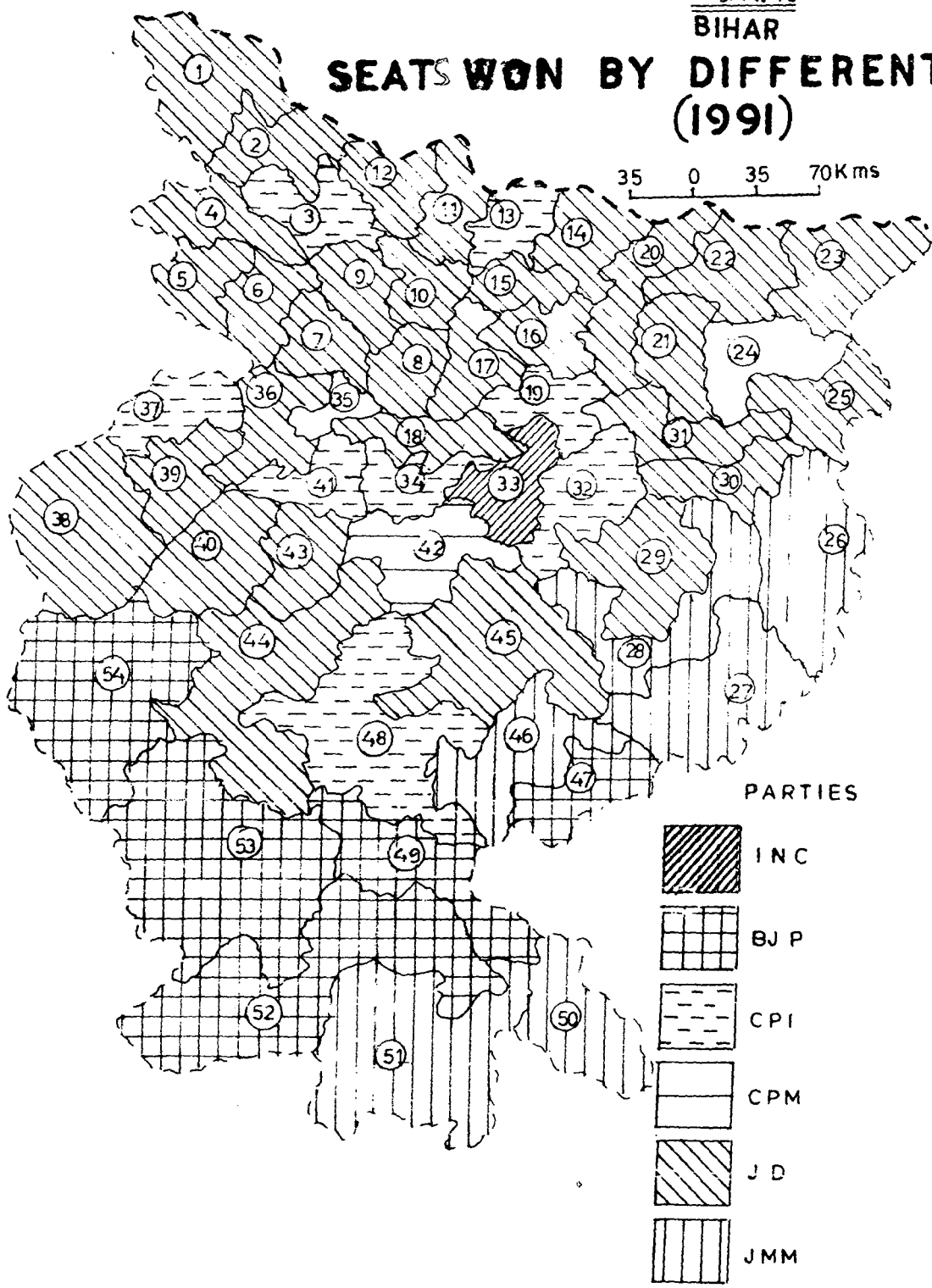
This time the mean values of IOU, swing and split for Bihar were 64, -0.35 and 17.26 respectively. Still INC was winner in one seat because in 1977 election their percentage of vote was lower and positive split factor could not helped them much (See appendix V & IX)

JD won Bagaha, Sasaram, Chatra, Banka, Kishanganj, Hajipur etc. Those constituencies are situated in a ring shape around the areas of other party dominance. CPI won Motihari, Madhubani, Bunar, Jahanabad, Nalanda, Balia, Monghyr and Hazaribagh. CPM won Nawada constituency and INC won Begusarai. The south eastern and southern constituencies were won by BJP and JMM. JMM won Rajmahal, Dumka Godda, Giridih, Jamshedpur and Singhbhum constituencies

Fig. IV. 15

BIHAR

SEATS WON BY DIFFERENT PARTIES (1991)



while BJP won Dhanbad, Ranchi, Khunti, Lohardaga and Palamau. The constituencies won by JMM and BJP are situated in a line. (See appendix IX).

4.7 Summary of the Findings:-

From the three general elections it is seen that 1977 general election was an extreme case when IOU and negative swing against INC were highest and splitting of the Opposition votes was the lowest. INC for this great debacle was ceased to exist for the next five years in Bihar. Whereas Opposition got the 100 per cent seats for this time. Another two elections can be stated as normal. But over time and space constituencies of Bihar showed high variation for the electoral phenomena. Still Chotanagpur Plateau area of Bihar always maintained its personality. It showed always the dominance of regional parties which are involved in Jharkhand Movement. But in 1991 election BJP showed a considerable dominance in that particular area. The south Bihar for most of the electoral matter showed opposite result to its' northern counterpart, such as in case of IOU, percentage share of votes for the parties etc.

Over the three periods three different parties showed their dominance in Bihar, such as in 1971 was INC, 1977

was BLD and in 1991 was JD and alliance. So, the electorates of this state showed a highly responsive nature in practising their franchise. The overall electoral behaviour showed a highly inconsistent and fragmented pattern of spatio-temporal distribution.

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CHAPTER-V

ELECTORAL BEHAVIOUR IN BIHAR: SOME CORRELATES

5. Introduction

Electoral responses are nothing but the reactions of the socio-economic factors in voters' mind. So to know the electoral behaviour of an particular area one should know also how the socio-economic factors influence the electoral behaviour. This chapter is an attempt to discuss all those factors through correlation coefficients.

Through correlation coefficient values one can judge the interrelationship between the socio-economic indicators with the performances of the parties. However, correlation coefficient does not give the total picture. The ecological correlations significant at one level may not be significant for another level. In the ecological study of electoral behaviour aggregate data is taken into consideration, but it is the individual voter who slip his ballot paper into the ballot box. So, in a sample of 100 population 55 may behave in a particular manner and another 45 may behave in another manner. It is not possible for the correlation coefficient to judge this particular situation.

Correlation coefficient for the electoral studies are very inconsistant in nature. Such as the percentage share of votes for a particular party in a developed unit area may give positive significant correlation for one period but for another period it will show negative significant correlation.

To carry out an ecological study of electoral behaviour one should first choose some variables. But there are so many factor's which is redated to election but not taken into consideration.

Election is the mental understanding between politicians and common voters. But nothing can track the psychology of the voters. So, the correlations of electoral variables with developmental, agricultural and social pluralism variables give quite different results over space and time which is not always possible to interpret.

5.1 Relationship of Voter turn-out with the Indicators

Table V.1 shows the impact of the indicators[1] on voter turn-out (G1). Among the developmental indicators

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1. All indicators are given in detail in the Chapter I, in methodology part.

turn-out showed high and all positive correlations. Only with percentage of literate population (G9) to the total population. The correlation was statistically significant at .001 level in the year 1971 but over time the correlation showed a declining trend. In 1977 it was significant at .01 level and positive. In 1991 the correlation became insignificant and positive. So, the literate voters of Bihar was enthusiastic in the 1971 general election to cast their votes but gradually they became apathic in practising their franchise. It may be inferred that overtime the literate electorates became fade up with the performance of their representatives in the centre.

With percentage of urban population (G8) to the total population the correlation coefficient was positive and very low which was insignificant but over time it showed an downward negative insignificant trend. It is so because the government is not so careful about the states' urbanisation for which Bihar is predominantly a rural state.

Overtime the unemployment problem among the urban educated youth made them apathetic. So, accordingly the urban population showed their apathy in giving votes.

With non-primary main male workforce(G_{10}) the correlation coefficient showed a fluctuating trend. In 1971, it was insignificant and positive. For other two years it was insignificant and negative. The value was higher in 1977 than 1991 general election. It showed the fact that with passing of time and change of State Government in Bihar the policy of Government towards this particular workforce also changed. So, accordingly, they showed their interest in practising their franchise.

With all the agricultural indicators (G_{11} and G_{12}) the correlation was significant at .001 level and positive for all the periods. Those variables showed an increasing trend. However, for 1991 the indicators were not possible to calculate because of the unavailability of data. These correlations are quite natural for Bihar which is a predominantly rural state. For a rural state voter turn-out will be higher with the higher facilities in the agricultural sector.

From the available Social pluralism indicators for 1971 and 1977 it was seen that depending on the indicator the correlation coefficient was of different values and with different trend. With percentage of scheduled caste

population to the total population (G_{13}) the relation was positive and significant for 1971 and 1977. The value was higher in the later case. It showed that with increasing scheduled caste population the percentage voter turn-out also increased. It was higher for the second case for another reason, because for 1977 general election the strongest party BLD's policy was favourable towards the scheduled castes.

For scheduled Tribes (G_{14}) the correlation was always negative with a steady downward trend. For 1971 the correlation with percentage scheduled tribe population was significant at .01 and for 1977 the correlation was significant at .001 level. So, over time the scheduled tribe component of Bihar loosing their interest in the existing democratic pattern. In the earlier chapter it has already been discussed that they felt a sense of discontent for the Government's policy in discriminating them.

Bihar is numerically a Hindu dominant state. In all the Government and all decision making sectors they are also numerically stronger. Any decision makes by Government will affect them more. So, they are always enthusiastic in terms of voter turn-out. The correlation coefficient with

percentage of Hindu population to the total population(G_{15}) was higher in 1977 than 1971. It was positive and both the cases significant at .001 level. So, higher the Hindu population, higher will be voter turn-out.

The percentage of Muslim population to the total population (G_{16}) for 1971 and 1977 showed insignificant and positive correlation which is declining in trend. It means with the existing political system the interest of the Muslim community is also reducing. In turn they are showing their indifference in taken part into the election.

Table V.1

Bihar: Correlation coefficient with Voter turn-out and the Indicators, 1971, 1977 and 1991.

Year	Indicators	G_8	G_9	G_{10}	G_{11}	G_{12}
1971	G_1	.0068	.4878**	.2328	.4203**	.5961**
1977	G_1	-.1433	.3389*	-.1591	.4725**	.6983**
1991	G_1	-.1849	.1452	-.1165	N.A.	N.A.

Year	Indicators	G_{13}	G_{14}	G_{15}	G_{16}
1971	GI	.4158**	-.4031**	.6963**	.1807
1977	G_1	-5031**	-.5317**	.7407**	.0664
1991	G_1	N.A.	N.A.	N.A.	N.A.

N.B. * Indicates significant at .01 level
** Indicates significant at .001 level
N.A. Stands for data not available.

5.2 Relationship of Invalid Votes with the Indicators

From table V.2 it is seen that for all developmental indicators the correlation coefficient with invalid votes (G_2) always was significant and positive in 1971 general election. Whereas for the other cases the relationship was insignificant. With percentage of urban population to the total population (G_8). The correlation was significant at .001 level and it was positive in 1971, insignificant and positive in 1977 election and negative insignificant in 1991 general election. So, over the time the percentage of urban population is showing declining trend in invalid votes. It may be inferred that earlier the invalid votes were for protest vote but over time the electorates which are included in this particular section of population are not turning up for practising their franchise. So, this type of protest invalid votes are reducing in number.

With percentage of literate population to the total population(G_9) the correlation coefficient was significant (at .01 level) and positive. Afterwards it became insignificant but was positive. This indicator was showing declining relationship with invalid votes. It is also as the earlier case for the protest vote it was high earlier but the literate voter is not turning up now to cast their vote.

So, it is reducing.

For the percentage of non-primary main male workforce to the total workforce (G_{10}) the percentage invalid vote showed positive significant correlation at .001 level. However, for the later two periods, it became insignificant and with of declining trend. However, for the later two cases the relation was positive. It may be inferred that in 1971 this particular economic group was not favoured by the Government, however, afterwards it may be favoured.. So, for the first case the high positive correlation was because a protest vote but later on it was declined. Another case may be their particular economic group is not turning up at all to cast their votes. Because for the last two cases the correlations were negative for this particular economic group with turn-out.

All the agricultural indicators showed negative correlation with invalid votes. The percentage of net irrigated area to the total geographical area (G_{11}) showed insignificant but negative correlation. The percentage of gross cropped area to the total geographical area (G_{12}) showed significant (at .01 level) and negative correlation. However, for the later case the correlation though was negative but insignificant. So, it was seen that the agri-

cultural indicators also influence the voters' to reduce the invalid vote, but it is now showing lesser relation because there may be some protest vote which is increasing.

Among the social pluralism indicators the percentage of scheduled caste population to the total population(G_{13}) the correlation was significant (at .01 level) and negative for 1971 election for 1977, the correlation was negative but insignificant. So, it may be concluded, that the declining negative relation may be for the protest vote.

With percentage of scheduled tribe population to the total population(G_{14}) the invalid votes showed positive and significant correlation (at .001 level). But the relationship is declining. It indicates the fact the with with increasing education level and more political awareness of the tribal they help to reduce the invalid votes.

With percentage of Hindu population to the total population (G_{15}) the percentage of invalid vote showed insignificant correlationship for 1971 and 1977. But for the earlier case the correlation coefficient was positive while for the second case it was negative. The declining trend was for the growing education level and much political awareness.

For 1971 and 1977 election the percentage of Muslim population to the total population(G_{16}) showed all insignificant but positive relation. However, the trend is declining. So, it may be also the growing education and much political awareness.

Table V.2

Bihar: Correlation Coefficient with invalid vote and the Indicators, 1971,1977 and 1991.

Year	Invalid Votes	G_8	G_9	G_{10}	G_{11}	G_{12}
1971	G_2	.4232**	.3603*	.4525**	-.1654	-.3425*
1977	G_2	.1607	.0937	.2708	-.3028	-.2572
1991	G2	-.0136	.0315	.0079	N.A.	N.A.

Contd..

Year	Invalid Votes	G_{13}	G_{14}	G_{15}	G_{16}
1971	G_2	-.3581**	.6691**	.1637	.1377
1977	G_2	-.2349	.5693**	.0694	-1008
1991	G_2	N.A.	N.A.	N.A.	N.A.

N.B. * indicates significant at .01 level.
** indicates significant at .001 level.
N.A.stands for data not available.

5.3 Percentage Share of Votes for the Different Parties and Socio-Economic Correlates.

For this discussion, the table V.3 is followed.

Percentage Share of INC's vote and the Socio-Economic Correlates:-

With all the developmental indicators the percentage share of votes for INC showed insignificant correlation for percentage of urban population to the total population(G_8) and percentage of non-primary main male workforce to the total workforce the correlation for the three general elections were negative and insignificant. So, higher the values of those two indicators lower would be the INC's share of vote. But that relation affect INC's share of vote insignificantly. With percentage of literate population to the total population (G_9) the correlations were insignificant for the three general elections but it was only negative for 1977 election. This matter indicates the fact for that particular election higher the percentage of literate population lower was the INC's share of vote. For that time the literate electorates of Bihar voted against INC whose performance was very bad during the earlier tenure.

With all the agricultural indicators INC's share of vote showed insignificant correlation for all times. With

percentage of net irrigated area (G_{11}) it showed negative correlation. Rest of the correlations with this indicator was positive for all times. It indicates that these two indicators influence indirectly the percentage share of INC's vote.may it be INC's policy with net irrigated area and gross cropped area which does not favour the electorates of Bihar.

Among social pluralism indicators INC's percentage share of vote showed significant correlation only with Muslim and Hindu population. Rest of the indicators showed insignificant correlations. With percentage of scheduled caste population (G_{13}) it showed positive correlation for 1971 and negative correlation for 1977. Which indicates declining popularity of INC among the scheduled castes. With percentage of scheduled tribe population (G_{14}) it showed negative correlation for 1971 and positive correlation for 1977 election. With percentage of Hindu population the correlation was significant (at .01 level) and positive for 1971 election, but it showed insignificant positive correlation for 1977. So, it may be inferred that for the first period INC was popular among Hindu voter, but its policy during emergency period affected the Hindu most adversely which in turn reduce the Hindu vote for INC.

For both the period Muslim population showed positive correlation with INC's share of vote, but it was significant (at .01 level) in 1977 general election. It may be so because for this time the reduction of Hindu vote affected INC which among INC's total vote the share of Muslim vote became higher.

5.3.1 Percentage Share of CPI'S vote and the Socio-Economic Correlates:-

Like INC, CPI also contested in the election for 1971, 1977 and 1991. Its all correlations with the socio-economic indicators showed insignificant correlations. Among the developmental indicators it showed all positive correlations with literate population (G_9)in all the years which indicates to an insignificant extent literate population increase the percentage share of vote for CPI. With percentage of urban population (G_8) and percentage of non-primary main male workforce (G_{10}) it showed negative correlations only in 1991 general election. So, for this particular election those two indicators were insignificant but negatively affected the percentage share of vote for CPI. For other elections it affected the same in a insignificant and positive manner.

With agricultural indicators it showed all positive correlations. It indicates those two indicators (G_{11} and

G_{12}) to an insignificant positive extent affect the percentage share of vote for CPI.

Among the social pluralism indicators it showed positive correlation with scheduled caste population (G_{13}) for all the periods and with the percentage of scheduled tribe population (G_{14}) negative correlations for all the periods. So, scheduled caste population affect the CPI's share of vote in an insignificant positive manner while scheduled tribe population for the same behave in an opposite manner.

The correlation coefficient of percentage share of voters with Hindu population (G_7) showed positive correlation in 1971 and negative correlation in 1977. It means for the first time this indicator to an insignificant extent influence CPI's share of vote while for the next time the behaviour was opposite. For Muslim population (G_{16}) the correlation was negative for 1971 and positive for 1977. So, for the first time Muslim population was insignificantly unfavourable for CPM. For the next time, the Muslim population was insignificantly favourable for CPM.

5.3.2 Percentage share of CPM's vote and the Socio-Economic Correlates:-

For this analysis percentage share of vote for CPM in the year 1971 has considered. Because after 1971 CPM'S

existence in Bihar is not so important. It only showed significant correlation at (.001 level) with percentage of urban population (G_8). This correlation was positive or the percentage share of CPM's vote will be increase with urban population. It may be with particular urban criteria, such as literates and non-primary workforce its correlation may be not significant but with the overall urban population its correlation is positively significant. It is so because the CPM support base is lying on factory workers, school, colleges and other urban areas.

With all other indicators CPM showed insignificant correlations. Its correlations with percentage of literate population (G_9), percentage of non-primary workers (G_{10}), percentage of scheduled caste population (G_{13}), percentage of Hindu Population (G_{15}) and percentage of Muslim population (G_{16}) were insignificant and positive. This shows that all the above socio-economic correlates insignificant but positively influence the percentage share of votes for CPM.

On the other hand percentage share of vote for CPM showed insignificant and negative correlation with net irrigated area, (G_{11}) Gross cropped area (G_{12}) and percentage of scheduled tribe population. This indicates that these

three socio-economic indicators influenced insignificantly and to a negative direction with CPM'S popularity. It may be stated as CPM is mainly confined in the urban areas and their attention in the rural areas are not sufficient.

5.3.3 Percentage Share of votes for BJS and the Socio-Economic Correlates:

For this study only the electoral performance for BJS in the year 1971 election has taken into consideration, because after that BJS was ceased to exist. Among the all insignificant correlations with the indicators BJS showed negative correlation only with percentage of urban population (G_8) and non-primary main male workforce (G_{10}). So, these two indicators reduced the percentage share of BJS vote. It may be stated as BJS is not so attentive in the urban areas. For all other socio-economic correlates BJS showed positive correlation or those have an insignificant positive impact on BJS percentage vote share.

5.3.4 Percentage share of votes for JKD and the Socio-Economic Correlates:

For this study only the electoral performance of JKD for the election of 1971 has taken into consideration because after 1971 its' electoral performance is not so notable.

It showed significant (at .001 level) correlation with percentage of urban population (G_8), percentage of scheduled tribe population (G_{14}) and percentage of scheduled caste population (G_{13}). For the first two socio-economic factors the relation is positive and for the last social factor the relation is negative. It is so because JKD is a tribal organisation which is confined only in the tribal area of South Bihar. This party's movement is on the demand for separate Jharkhand state which will be numerically tribal dominated. So, the tribal population showed positive correlation with JKD or their proportion also increase the proportion of JKD's vote. On the other hand, urban centres of South Bihar also show numerically strong tribal population So, it is also positively correlated with JKD's vote. On the other hand, percentage of scheduled caste population is less in the tribal areas of Chotanagpur, which reduced down the percentage share of votes for JKD.

With rest of the indicators the percentage share of JKD's vote showed insignificant correlations. With the literates population it showed positive correlations whereas with percentage of net irrigated area (G_{11}), percentage of Gross Cropped Area (G_{12}), percentage of Muslim Population (G_{16}) and percentage of Hindu population (G_{15}) the correlations were negative. This means all those indicators have

less significant in JKD's percentage share of votes.

5.3.5 Percentage Share of Votes for INCO and the Socio-Economic Correlates:

For this study INCO's electoral performance in 1971 general election has been considered because after that INCO was ceased to exist. Its' correlations with percentage of urban population (G8), percentage of literate population (G_9), percentage of non-primary-male main workforce(G_{10}) percentage of net irrigated area (G_{11}), Percentage of scheduled tribe population (G_{14}) were negative. So, those indicators influenced the percentage share of INCO's vote in a negative but insignificant manner. Whereas INCO'S percentage share of votes with percentage of gross cropped area (G12), percentage of scheduled caste population(G13), percentage of Hindu population (G_{15}) and percentage of Muslim Population (G_{16}) it showed positive correlations. This indicates all those socio-economic correlates have positive impact but in an insignificant manner on INCO'S share of votes. However, the overall situation makes it clear that INCO failed to attract common electorates support.

5.3.6 Percentage Share of votes for PSP and the Socio-Economic Correlates:-

Only the Political performance of P.S.P. for the year

1971 was considered for this analysis, because after 1971 parliamentary elections P.S.P. was ceased to exist. It showed only one significant (at .01 level)positive correlation with percentage of Muslim population (G16). It was so because the Muslims with INC's policies were fade up with them and as an alternative to INC the Muslims voted for P.S.P.

With all the rest, but one P.S.P. showed negative insignificant correlations. With Hindu population (G15) it showed positive insignificant correlations. So, P.S.P.'s support base is lying among the Muslims who positively influence the percentage share of votes for P.S.P.

5.3.7 Percentage Share of Votes for SSP and the Socio-Economic Correlates:-

For this analysis only SSP's electoral performance in 1971 general election has considered. P.S.P.'s percentage share of votes does not influenced significantly by the taken socio-economic indicators. It showed all insignificant correlations with all the socio-economic indicators. It showed all negative correlations with all the developmental indicators, (G8, G9 and G10), negative correlations with percentage net irrigated area (G11) and positive correlations with percentage gross cropped area (G12). Among the socio-

economic correlates it showed negative correlations only with percentage of scheduled tribe population (G14), but for rest of the socio-economic indicators (G13, G15 and G16) it showed the positive correlations. So, it may be concluded, perhaps SSP's support base is influenced by another socio-economic factors or their support among the common electorates is very less.

5.3.8 Percentage Share of Votes for BLD and the Socio-Economic Correlates:

For this analysis the electoral performance of BLD for 1977 general election is consider. Because BLD (which afterwards coming to power was recognised as Janata Party by the Election Commission) was a merger of four national parties which afterwards splitted and lost its' importance in the political scene of Bihar and as well as in India.

Its' percentage share of votes showed significant correlations with percentage of gross cropped area (G12), percentage of Hindu population (G15) and percentage of scheduled caste population (G13) at .001 level. The same is significant at .01 level with percentage of net irrigated area (G11). In a predominantly rural state like Bihar the significant positive correlation with all agricultural

indicators means B.L.D. was successful to achieve the popularity among the masses the scheduled castes and Hindu population showed the positive correlation because they constitute the major portion of the population of Bihar. These two social groups were adversely affected by the emergency period of INC Government in the Centre. So, their anti INC attitude gave a massive mandate to BLD.

All the developmental indicators showed insignificant correlation with BLD's vote which indicates that those became less important for this time. The scheduled tribe population showed insignificant negative and Muslim population showed positive insignificant correlations. This is so because these two social groups not so conscious about election.

5.3.9 Percentage Share of Votes for BJP and the Socio-Economic Correlates:

Among these three particular elections BJP was contested only in 1991 general election. So, the electoral performance for BJP in 1991 election has only considered. For this particular general election only developmental indicators were available.

Among the developmental indicators BJP showed significant (at .01 level) positive correlation with percentage of non primary main male workforce. Or with the increase of

this class BJP's percentage share of votes also be increased. It is so because BJP's stronghold is in south Bihar where most of the industrial urban centres of the State is situated. The tribals are engaged in those urban centers in the non-primary sectors with the other developmental indicators its' correlations were positive but insignificant.

5.3.10 Percentage Share of Votes for JD and the Socio-Economic Correlates:

Among the three elections JD was in the electoral fray only in 1991 election. Its' percentage share of votes with the available developmental indicators showed all negative correlations. Among those it's correlations with percentage of urban population (G8) and percentage of non-primary main male workforce (G10) were significant at .01 level, i.e. with their increase percentage share of votes for JD will be decreased . It is exactly true because after their support to Mandal Commission Recommendations JD lost their popularity among the high caste urban educated people of the urban areas who were engaged in the non-primary workforce. For this its correlation, though insignificant in negative, with the literate population. However, for 1991 election JD was the single strongest party in terms of number of seats. The another socio-economic correlates are not available for 1991. So, it is difficult to make on JD's overall electoral performance.

TABLE V.3

Bihars Corelation Coefficients for Percentage Share of Votes for Different Parties and Socio-Economic Indicators, 1971, 1977 and 1991

	INC			CPI			CPM	BJS	JKD	INCO	PSP	SSP	BLD	BJP	JD
	YEAR OF THE ELECTIONS														
INDICATORS	1971	1977	1991	1971	1977	1991	1971	1971	1971	1971	1971	1971	1977	1991	1991
G8	-.1296	-.1061	-.1153	.1773	.0249	-.0770	-.4420**	-.0553	.4166**	-.1644	-.1123	-.2363	-.2157	.3099	-.3186*
G9	.1026	-.1298	.0440	.1337	.0173	.0217	-.1817	.0575	.2477	-.0895	-.1395	-.0280	.1664	.1815	-.1447
G10	-0091	-.1251	-.1100	.1753	.0601	-.0617	.2620	-.0395	.4070*	-.1935	-.1455	-.1787	-.2585	.3735*	-.3426*
G11	.1410	-.0886	N.A.	.0834	.0679	N.A.	-.0908	.0676	-.2545	-.2013	-.1332	-.0318	.3666*	N.A.	N.A.
G12	.2989	.1195	N.A.	.0520	.1585	N.A.	-.1023	.0975	-.2922	.0476	.1233	.2439	.5053**	N.A.	N.A.
G13	.1703	-.0891	N.A.	.0054	.0200	N.A.	.0179	.0548	-.4450**	.0817	-.0051	.1680	.4678**	N.A.	N.A.
G14	-.1562	.0409	N.A.	-.0653	-.1313	N.A.	-.0396	.1954	.6251**	-.1524	-.1352	-.2883	-.2995	N.A.	N.A.
G15	.3642*	.1354	N.A.	.1525	-.1421	N.A.	.0969	.0646	-.2085	.0638	.0676	.1929	.5504**	N.A.	N.A.
G16	.2477	.4037*	N.A.	-.0949	.0008	N.A.	.0967	.1647	-.3001	.0695	.3585*	.0924	.0928	N.A.	N.A.

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N.B. * Indicates significant at .01 level
** Indicates significant at .001 level
N.A. Stands for data not available.

5.4 Summary of the Findings

It is seen among the socio-economic indicators percentage of literate population, percentage of gross cropped area, percentage of net irrigated area, percentage of scheduled caste population and percentage of Hindu population have positive significant influence on turn-out while the percentage of scheduled tribe population has significant negative influence on turn-out.

Except percentage of scheduled tribe population, which showed positive significant correlation with invalid votes for 1971 and 1977, there are no other, socio-economic indicators which showed consistent relationship with invalid votes overtime. However, for 1971, percentage of urban population, percentage literates, percentage of non-primary main male workforce showed positive significant correlations while percentage of net irrigated area and percentage of gross cropped area showed negative significant correlations.

So, from the above discussion, it is seen among the developmental indicators percentage of literate population (G12) had no influence on any party's share of votes. Percentage of urban population (G11) influence showed significant (at .001 level) and positive correlation with percentage share of votes for CPM and JKD in 1971 election.

Percentage of non-primary main male workforce to the total workforce (G13) influence in a significant (at .01 level) and a positive way to the percentage share of votes for JKD in 1971 election and BJP in 1991 election. Both of them had considerable influence in the industrial urban centres of South Bihar.

Among the agricultural indicators the percentage of net irrigated area (G13) showed significant (at .01 level) and positive influence on the percentage share of votes for BLD in 1977 election. The percentage of gross cropped area (G15) showed its influence in a significant (at .001 level) and positive way to the percentage share of votes for BLD in 1977 election.

Among the social pluralism indicators, the percentage of scheduled caste population (G16) showed significant (at .001 level) both negative and positive correlations with JKD in 1971 election and with BLD in 1977 election respectively. The percentage of scheduled tribe population (G17) showed a significant (at .001 level) and positive correlation with predominantly a tribal party, JKD.

The percentage of Hindu population (G18) showed a significant and positive correlation with INC in 1971

election at .01 level and with BLD in 1977 election at .001 level. The percentage of Muslim population (G19) in 1971 election showed a significant (at .01 level) and positive correlation with INC and PSP.

So, the socio-economic indicators with time influence the political parties' share of votes in a different ways. From the socio-economic correlates it is seen some particular party's support base is provided by some particular socio-economic groups in some particular time. The support base changes with time depending on the political performance of the party. The discussed socio-economic correlates gave us a hint that some parties were failed to get the support of the masses because their socio-economic correlates with all the indicators were insignificant.

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CHAPTER-VI

SUMMARY OF CONCLUSIONS

The main objective of the present study was to measure the spatio-temporal impact of socio-economic factors on electoral behaviour by taking the case of parliamentary elections in Bihar for the years of 1971, 1977 and 1991. Those three points of time have been taken into consideration in order to obtain the electoral trend in this state. The study was carried out in three stages. Firstly, an attempt has been made to observe as to how the electorate respond to certain socio-economic and political issues through elections. Secondly, how the political parties and independents organise themselves in order to come victorious, and lastly, how some socio-economic factors affect the electorate responses.

The need of the present study stems from the fact that electoral behaviour varies over space as well as in time. These variations are a result of combination of factors, environmental and socio-political. The environmental factors of north Bihar provides for an economic base which draws its' sustenance mostly from agriculture. An agriculture based society has specific socio-political

characteristic and traditions.which is generally different from an industrial society.

The fertile plain of Bihar is able to produce a surplus of agricultural production which caters to maintain this area the traditional model of caste hierarchy. There the have nots like scheduled castes and other backward classes dependent socially and economically on the dominant castes. On the contrary, the Chotanagpur plateau does not provide the local tribal people the conditions favourable for surplus production. The people in the predominantly tribal region of Chotanagpur plateau have to work hard for their livelihood. The historical socio-economic situation did not allow for a hierarchical society to emerge in this region hence a political structure which was devoid of any clear political dominance.

In order to assess the electoral behaviour in Bihar sixteen indicators were chosen representing aspects of political agricultural and social development. Mean and standard deviation have been used to categorise the parameters of electoral behaviour Index of Opposition Unity has been worked out to see the Unity of the Oppositions against INC in the elections. Simple Coefficient of variation was used to examine the temporal variation of Opposition

Unity. The swing factor was employed to see the change in popularity of INC or the total Opposition parties. On the other hand, split factor was used to see the stability of opposition share of votes. The following points emerged from the study:-

(i) Over the period voting turn-out showed an increasing trends. The north Bihar plain remain traditionally high voting turn-out area whereas south Bihar plateau area remain traditionally low voting turn-out area. This indicates the people of south Bihar are apathetic or ignorant about the existing democratic system of elections. Percentage points change in voting turn-out for 1971-77 was high in north Bihar plain but during 1977-91 the same stood higher in south Bihar.

Overtime the percentage of invalid votes has been quite fluctuating but has had a declining trend. For 1971 and 1977 general elections the pattern of invalid votes were spatially very dispersed. But for 1991 the constituencies having predominantly tribal population showed the high percentage of invalid votes. For 1971 and 1977 the relationship between voting turn-out and invalid votes was negative whereas for 1991 the relationship was positive. Among the three time points the relationship in 1977 general election for voting

turn-out and invalid votes was significantly negative. So, the hypothesis that higher the voting turn-out lower will be the percentage of invalid votes can be accepted partially. The explanation which remains behind 1991 election is that this time the voting turn-out was higher in the tribal area. So, the relationship was positive. On the other hand, it may be said that the political mobilisation for this period was only among the less aware electorates.

(ii) Electoral performances of the parties show very close association with factors such as seat adjustment party alliance, understanding and agreement. For 1971 election the contest was between a couple of national parties. They brought down the index of Opposition Unity and margin of victory. This time there was high splitting in the opposition votes which ultimately helped INC to secure maximum number of seats. In 1977 the situation was totally changed. The four major national parties, INCO, BLD, BJS and the socialists came under the one single banner - the BLD. So, it raised the Index of Opposition Unity to the highest levels. However, the most important factor in 1977 was a massive swing against INC. Swing was again backed by considerable negative split factor. The net

outcome was massive win for BLD with a large margin of votes and a historical debacle for INC.

The 1991 election showed another kind of political situation when in most of the constituencies the contests were triangular, between the BJP, INC and the National Front and Left Front allies. The National Front and Left Front contested on the basis of seat adjustments among themselves. This types of triangular contest helped INC to some extent in terms of percentage share of votes but not in terms of seats. However, for this triangular contest the Index of Opposition Unity reduced down to a greater extent than 1977 general election. This time the split factor worked against the opposition and the margin of victory reduced down than 1977 general election.

So, the hypothesis higher the number of national parties in the electoral fray lower will be the Index of Opposition Unity and higher the number of national parties in the electoral fray the lower will be the margin of victory has been established true.

(iii) The socio-economic factors behave in a different ways in the elections according to time as well as space.

Among the developmental indicators, viz, percentage of urban population, percentage of literate population and percentage of non-primary workforce, only the percentage of literate population showed significant correlation with voting turn-out, for 1971 and 1977. On the other hand, for 1991 it was insignificant but positive. So, the hypothesis that there exists a positive correlation between percentage of literate population and voting turn-out can be partially accepted. In case of other two development indicators the relationship has not been observed to be positive. Thus, they stand null and void.

Percentage of net irrigated area and percentage of gross cropped area however, showed the significant (at .001 level) and positive correlation with voting turn-out. So, the hypotheses, there exist positive relationship between percentage of net irrigated area and voting turn-out, and there exists a positive correlation between percentage of gross cropped area and voting turn-out hold true.

Among the social pluralism indicators, viz percentage of scheduled caste and scheduled tribe and Hindu population showed significant correlation with turn-out. The scheduled caste and Hindu population showed positive correlation while the scheduled tribe showed negative correlation. So, while

the scheduled tribes responded negatively with the electoral activities the other two social groups responded positively. The Muslim population showed insignificant positive correlation with turn-out for 1971 and 1977.

Among the developmental indicators, viz, the percentage of urban population, percentage of literate population and percentage of main male non-primary workforce. Only the first one showed positive significant correlation with invalid votes in 1971. It may be because of mass booth capturing and massive fake votes which had done in a random manner. For other periods, the same indicators showed insignificant correlations.

Among the agricultural indicators, viz, percentage of net irrigated area, percentage of gross cropped area only the later showed negative significant correlation with invalid votes. However, for the other periods, these two indicators showed negative correlations which were insignificant.

Among the social pluralism indicators only scheduled caste population showed negative significant correlation with invalid votes in 1971 while the percentage of scheduled tribe population for 1971 and 1977 showed significant (at .001 level) and positive correlation. This indicates

higher the percentage of scheduled tribe population higher will be the invalid votes. Rest of the social pluralism indicators showed insignificant correlations.

The correlation between the percentage share of votes for the parties and the indicators varies over time. So, no clear relationship is established for this.

Thus, it may be observed that the spatio temporal variation in electoral behaviour and the electoral performances of the parties are highly associated with a number of political and socio-economic factors. The variations observed in space and time bear testimony of the fact that electoral behaviour and performance of parties in different elections, under normal circumstances would generally be guided or influenced by contemporary and local consideration or perception of issues.

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APPENDIX - I

RANK OF THE CONSTITUENCIES IN TERMS OF TURNOUT, 1971,1977,1991.

Sl. no.	Constituencies	1971		1977		1991	
		Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates
1.	Bagaha(SC)	43	36.80	46	46.51	50	45.39
2.	Bettia	42	37.19	39	50.38	31	56.49
3.	Motihari	33	43.15	37	55.63	24	60.00
4.	Gopalganj	16	55.83	28	63.11	3	74.88
5.	Siwan	27	50.57	18	67.34	20	63.82
6.	Maharajganj	30	48.89	23	65.70	23	62.05
7.	Chapra	28	49.79	6	73.89	13	66.68
8.	Hajipur(SC)	6	64.51	1	77.07	1	76.44
9.	Vaishali	35	42.44	2	76.10	15	66.07
10.	Muzaffarpur	2	67.17	3	75.95	19	64.88
11.	Sitamarhi	1	67.32	12	69.81	18	64.93
12.	Sheohar	4	64.87	29	62.18	26	60.02
13.	Madhubani	11	60.13	15	68.40	16	65.43
14.	Jhanjharpur	19	54.98	4	74.71	9	68.58

Appendix-I (Contd.)

Sl. no.	Constituencies	1971		1977		1991	
		Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates
15.	Darbhanga	14	57.15	22	66.42	11	67.04
16.	Rosera(SC)	34	42.57	14	69.07	21	63.68
17.	Samastipur	18	55.24	10	70.69	14	66.08
18.	Barh	9	61.17	7	72.02	8	68.71
19.	Balia	*	*	33	59.92	37	53.10
20.	Sahasha	22	54.24	16	69.07	4	72.73
21.	Madhepura	23	53.73	9	71.58	5	71.28
22.	Araria(SC)	39	39.21	35	58.86	25	60.08
23.	Kishanganj	37	41.80	41	48.91	34	55.43
24.	Purnea	40	38.79	34	59.73		C.M.
25.	Katihar	26	50.80	32	60.17	28	58.02
26.	Rajmahal(ST)	52	26.30	50	43.51	32	56.27
27.	Dumka(ST)	47	31.60	52	41.42	38	52.15
28.	Godda	44	35.93	36	57.91	33	55.62
29.	Banka	29	49.19	38	55.14	43	50.43
30.	Bhagalpur	24	53.11	24	63.65	29	57.88

Appendix-I (Contd.)

Sl. no.	Constituencies	1971		1977		1991	
		Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates	Rank	Percentage turnout to total electorates
31.	Khagaria	17	55.60	27	63.14	27	59.28
32.	Monghyr	3	65.30	5	74.00	12	67.00
33.	Begusarai	15	56.87	26	63.22	10	67.06
34.	Nalanda	8	62.04	8	71.63	7	72.07
35.	Patna	13	57.26	17	68.02		C.M.
36.	Arrah	10	60.49	19	65.00	22	63.55
37.	Buxar	31	48.67	25	63.38	30	56.67
38.	Sasaram(SC).	25	52.62	20	64.98	46	49.21
39.	Bikramganj	21	54.84	31	61.39	36	53.14
40.	Aurangabad	12	59.25	30	61.44	41	50.57
41.	Jahanabad	5	64.75	21	66.44	2	75.12
42.	Nawada(SC)	7	63.11	11	69.87	6	70.48
43.	Gaya(SC)	32	47.04	13	69.29	17	64.94
44.	Chatra	51	29.25	42	47.97	47	46.59
45.	Koderma	*	*	51	43.38	39	51.42

Sl. no.	Constituencies	1971 Rank	1971 Percentage turnout to total electorates	1977 Rank	1977 Percentage turnout to total electorates	1991 Rank	1991 Percentage turnout to total electorates
46.	Giridih	46	34.03	40	50.03	40	50.96
47.	Dhanbad	36	41.82	49	45.39	42	50.54
48.	Hazaribagh	48	30.99	44	47.33	45	49.86
49.	Ranchi	45	34.70	43	47.84	44	50.39
50.	Jamshedpur	50	29.98	45	46.85	35	53.87
51.	Singhbhum(ST)	53	16.57	53	34.66	51	15.25
52.	Khunti(ST)	20	54.93	54	33.93	48	46.51
53.	Lohardaga(ST)	38	39.48	48	45.74	49	46.36
54.	Palamau(SC)	49	30.88	47	45.79	52	38.28
55.	Jamui	41	38.28	**	**	**	**

N.B. * Constituency was not existing that time

** Constituency not existing after 1971

CM Election Countermanded.

APPENDIX - II

RANK OF THE CONSTITUENCIES IN TERMS OF PERCENTAGE POINT CHANGE IN TURNOUT, 1971-77, 1977-91.

Sl. No.	Constituencies	Rank	1971-77 Percentage point change in turnout	Rank	1977-91 Percentage point change in turnout
1.	Bagaha (SC)	30	9.71	25	- 1.12
2.	Bettiah	21	13.19	10	6.11
3.	Motihari	24	12.48	12	4.97
4.	Gopalganj	37	7.28	3	11.77
5.	Siwan	15	16.77	33	- 3.52
6.	Maharajganj	14	16.81	34	- 3.65
7.	Chapra	4	24.1	46	- 7.21
8.	Hajipur (SC)	23	12.56	24	- 0.63
9.	Vaishali	1	33.6	49	- 9.88
10.	Muzaffarpur	33	8.78	51	-11.07
11.	Sitamarhi	48	2.57	39	- 4.96
12.	Sheohar	52	-2.69	29	- 2.16
13.	Madhubani	35	8.27	31	- 2.97
14.	Jhanjharpur	8	19.73	42	- 6.13
15.	Darbhanga	44.5	4.62	17.5	1.22
16.	Rosera (SC)	2	26.5	40	- 5.39
17.	Samastipur	17	15.45	37	- 4.61
18.	Barh	26	10.85	32	- 3.31

Appendix-II(Contd.)

Sl. No.	Constituencies	Rank	1971-77 Percentage point change in turnout	Rank	1977-91 Percentage point change in turnout
19.	Balia	*	*	44	- 6.82
20.	Saharsa	20	13.84	13	4.65
21.	Madhubani	11	17.85	23	- 0.3
22.	Araria (SC)	44.5	4.62	17.5	1.22
23.	Kishanganj	38	7.11	9	6.52
24.	Purnea	6	20.94	C.M.	C.M.
25.	Katihar	32	9.37	28	- 2.15
26.	Rajmahal (ST)	12	17.21	1	12.76
27.	Dumka (ST)	29	9.82	5	10.73
28.	Godda	5	21.98	30	- 2.29
29.	Banka	43	5.95	38	- 4.71
30.	Bhagalpur	28	10.54	41	- 5.27
31.	Khabazia	36	7.54	35	- 3.86
32.	Monghyr	34	8.70	45	- 7.00
33.	Begusarai	41	6.35	14	3.84
34.	Nalanda	31	9.59	22	0.44
35.	Patna	27	10.76	C.M.	C.M.
36.	Arrah	46	4.51	27	- 1.45
37.	Buxar	19	14.71	43	- 6.71
38.	Sasaram(SC)	25	12.36	52	-15.77

Sl. No.	Constituencies	Rank	1971-77 Percentage point change in turnout	Rank	1977-91 Percentage point change in turnout
39.	Bikramganj	40	6.55	48	- 8.25
40.	Aurangabad	49	2.19	50	-10.87
41.	Jahanabad	50	1.69	6	8.66
42.	Nawada (SC)	39	6.76	19	0.97
43.	Gaya (SC)	3	22.25	36	- 4.35
44.	Chatra	9	18.52	26	- 1.38
45.	Koderma	**	**	7	8.04
46.	Giridih	7	20.00	20	0.93
47.	Dhanbad	46	4.51	11	5.15
48.	Godda	16	16.34	16	2.53
49.	Ranchi	22	13.14	15	2.55
50.	Jamshedpur	13	16.87	8	7.02
51.	Singhbhum(ST)	10	17.89	4	10.79
52.	Khunti (ST)	51	- 1.00	2	12.58
53.	Lohardaga(ST)	42	6.26	21	0.62
54.	Palamau (SC)	18	14.91	47	- 7.51

N.B. * Constituency was not existing that time

** Constituency not existing after, 1971

C.M. Election Countermanded.

APPENDIX - III

RANK OF THE CONSTITUENCIES IN TERMS OF INVALID VOTES, 1971,1977,1991.

Sl. No.	Constituencies	1971		1977		1991	
		Rank	Percentage of invalid votes to the total votes polled	Rank	Percentage of invalid votes to the total votes polled	Rank	Percentage of invalid votes to the total votes polled
1.	Bagaha(SC)	29	1.76	11	2.60	36	1.20
2.	Bettia	27	1.89	34	1.74	10	1.84
3.	Motihari	31	1.61	24.5	2.01	9	1.94
4.	Gopal Ganj	43	1.20	43	1.33	17	1.76
5.	Siwan	42	1.24	42	1.34	52	0.62
6.	Maharajganj	47	0.96	51	1.12	26	1.50
7.	Chapra	41	1.30	53	0.74	28	1.44
8.	Hajipur(SC)	51	0.83	52	0.80	50	0.77
9.	Vaishali	35.5	1.57	54	0.70	48	0.88
10.	Muzaffarpur	49	0.90	50	1.15	33.5	1.25
11.	Sitamarhi	47	1.04	43	1.33	51	0.76
12.	Sheohar	50	0.89	39	1.47	42.5	0.96
13.	Madhubani	45	1.10	37	1.54	25	1.52
14.	Jhanjharpur	44	1.19	22	2.12	45	0.92

Appendix-III(Contd.)

Sl. no.	Constituencies	1971 Rank	1971 Percentage of invalid votes to the total votes polled	1977 Rank	1977 Percentage of invalid votes to the total votes polled	1991 Rank	1991 Percentage of invalid votes to the total votes polled
15.	Darbhanga	46	1.07	47	1.23	47	0.91
16.	Rosera(SC)	39	1.35	48	1.21	18.5	1.69
17.	Samastipur	52	0.81	49	1.20	38	1.11
18.	Barh	40	1.34	36	1.58	49	0.84
19.	Balia	*	*	15	2.43	16	1.78
20.	Saharsha	28	1.86	33	1.78	30.5	1.30
21.	Madhepura	38	1.39	26	2.00	1	6.98
22.	Araria(SC)	17	2.57	17	2.36	35	1.21
23.	Kishanganj	19	2.45	24.5	2.01	22	1.63
24.	Purnea	4	3.87	12	2.59	C.M.	C.M.
25.	Katihar	3	3.95	13	2.50	31	1.19
26.	Rajmahal(ST)	9	3.15	1	10.70	13.5	1.80
27.	Dumka(ST)	8	3.30	9	2.71	11.5	1.83
28.	Godda	12	2.98	27	1.96	30.5	1.30
29.	Banka	22	2.38	20.5	2.24	22	1.63
30.	Bhagalpur	15	2.68	19	2.25	27	1.45

Appendix-III(Contd.)

Sl. no.	Constituencies	1971 Rank	1971 Percentage of invalid votes to the total votes polled	1977 Rank	1977 Percentage of invalid votes to the total votes polled	1991 Rank	1991 Percentage of invalid votes to the total votes polled
31.	Khagaria	30	1.62	18	2.26	41	1.00
32.	Monghyr	37	1.44	41	1.39	33.5	1.25
33.	Begusarai	26	1.94	20.5	2.24	40	1.03
34.	Nalanda	32	1.60	29.5	1.88	39	1.06
35.	Patna	34	1.58	38	1.48	C.M.	C.M.
36.	Arrah	23	2.24	35	1.69	45	0.92
37.	Buxar	13	2.92	40	1.45	82	1.27
38.	Sasaram(SC)	20	2.44	31	1.82	29	1.35
39.	Bikramganj	24	2.08	29.5	1.88	42.5	0.96
40.	Aurangabad	25	2.02	23	2.01	24	1.60
41.	Jahanabad	35.5	1.57	32	1.80	2	4.42
42.	Nawada(SC)	53	0.38	46	1.24	45	0.92
43.	Gaya(SC)	21	2.43	44	1.25	3	2.90
44.	Chatra	16	2.65	16	2.38	18.5	1.69
45.	Koderma	*	*	3	3.81	15	1.79

Appendix-III(Contd.)

Sl. no.	Constituencies	Rank	Percentage of invalid votes to the total votes polled	Rank	Percentage of invalid votes to the total votes polled	Rank	Percentage of invalid votes to the total votes polled
46.	Giridih	10	3.07	7	3.27	8	1.97
47.	Dhanbad	11	3.05	14	2.49	13.5	1.80
48.	Hazaribagh	14	2.86	10	2.62	7	1.98
49.	Ranchi	6	3.50	6	3.34	11.5	1.83
50.	Jamshedpur	7	3.36	8	2.90	20	1.64
51.	Singhbhum(ST)	1	4.46	2	4.50	5	2.57
52.	Khunti(ST)	5	3.70	5	3.37	6	2.28
53.	Lohardaga(ST)	2	4.31	4	3.49	4	2.64
54.	Palamau(SC)	18	2.48	28	1.92	22	1.63
55.	Jamui	33	1.59	**	**	**	**

N.B. * Constituency was not existing that time

** Constituency not existing after 1971

C.M.Election Countermanded.

APPENDIX - IV

RANK OF THE CONSTITUENCIES IN TERMS OF I.O.U., 1971, 1977, 1991.

Sl. no.	Constituencies	1971 Rank	1971 IOU	1977 Rank	1977 IOU	1991 Rank	1991 IOU
1.	Bagaha(SC)	6.5	85	40.5	78	37.5	54
2.	Bettiah	16	64	35.5	82	29.5	59
3.	Motihari	43	35	51	63	33.5	57
4.	Gopalganj	3.5	93	3	99	14.5	76
5.	Siwan	5	91	14	96	37.5	54
6.	Maharajganj	t	t	3	99	49	43
7.	Chapra	29	51	20.5	94	132	58
8.	Hajipur(SC)	23.5	54	6.5	98	14.5	76
9.	Vaishali	t	t	3	99	4	87
10.	Muzaffarpur	1	98	28	89	2.5	89
11.	Sitamarhi	3.5	93	38	80	1	93
12.	Sheohar	12	71	17.5	95	27	61
13.	Madhubani	14	69	53	57	5.5	86
14.	Jhanjharpur	33.5	47	10	97	11.5	81
15.	Darbhanga	44	29	17.5	95	17	73
16.	Rosera(SC)	27	52	14	96	13	77
17.	Samastipur	26	53	25.5	91	9.5	84
18.	Barh	8.5	77	14	96	2.5	89
19.	Balia	*	*	54	51	11.5	81
20.	Saharsa	31	49	25.5	91	7.5	85

Appendix-IV(Contd.)

Sl. no.	Constituencies	1971 Rank	1971 IOU	1977 Rank	1977 IOU	1991 Rank	1991 IOU
21.	Madhepura	13	70	32	34	18	72
22.	Araria(SC)	10	76	6.5	98	23	67
23.	Kishanganj	32	48	32	84	39.5	52
24.	Purnea	47	25	38	80	C.M.	C.M.
25.	Katihar	30	50	14	96	41	50
26.	Rajmahal(ST)	23.5	54	23	92	35.5	55
27.	Dumka(ST)	35	45	48	67	25	64
28.	Godda	37	43	20.5	94	29.5	59
29.	Banka	42	37	20.5	94	21	70
30.	Bhagalpur	28	52	1	100	22	69
31.	Khagaria	46	27	45	72	24	65
32.	Monghyr	23.5	54	10	97	35.5	55
33.	Begusarai	36	44	46	70	9.5	84
34.	Nalanda	20.5	58	50	64	19.5	71
35.	Patna	t	t	34	83		
36.	Arrah	11	75	20.5	94	50	42
37.	Buxar	33.5	47	38	80	39.5	52
38.	Sasaram(SC)	6.5	85	6.5	98	16	44
39.	Bikramganj	18	62	40.5	78	29.5	59
40.	Aurangabad	2	95	25.5	91	26	63

Sl.no.	Constituencies	1971 Rank	1971 IOU	1977 Rank	1977 IOU	1991 Rank	1991 IOU
41.	Jahanabad			44	75	19.5	71
42.	Nawada(SC)	38	41	10	97	7.5	85
43.	Gaya(SC)	8.5	77	6.5	98	5.5	86
44.	Chatra	15	65	14	96	44	48
45.	Koderma	*	*	29.5	85	47	45
46.	Biridih	20.5	58	32	84	33.5	57
47.	Dhanbad	45	29	42.5	77	42.5	49
48.	Hazaribagh	40	39	42.5	77	51	39
49.	Ranchi	19	61	49	66	29.5	59
50.	Jamshedpur	41	38	47	68	42.5	49
51.	Singhbhum(ST)	t	t	29.5	85	46.5	46
52.	Khunti(ST)	t	t	52	60	45.5	46
53.	Lohardaga(ST)	39	41	35.5	82	52	36
54.	Palamau(SC)	17	63	25.5	91	48	44
55.	Jamui	23.5	54	**	**	*	*

N.B. * Constituency was not existing that time

** Constituency is not existing after, 1971

C.M. Election Countermanded

t Calculation not possible

APPENDIX - V

RANK OF THE CONSTITUENCIES IN TERMS OF SPLIT FACTOR, 1971-77, 1977-91.

Sl. No.	Constituencies	Rank	1971-77 Split factor	Rank	1977-91 split factor
1.	Bagaha (SC)	4	4.51	23	20.47
2.	Bettia	13	-12.89	22	21.67
3.	Motihari	22	-20.69	42	4.96
4.	Gopalganj	8	- 4.27	31	15.14
5.	Siwan	7	- 3.92	4	40.26
6.	Maharajganj	t	t	2	49.69
7.	Chapra	42	-39.30	7	33.66
8.	Hajipur (SC)	43	-40.27	25	18.96
9.	Vaishali	t	t	36	7.52
10.	Muzaffarpur	3	7.89	47	0.00
11.	Sitamarhi	2	8.53	50	-9.11
12.	Sheohar	14	-14.23	12	30.24
13.	Madhubani	1	9.07	51	-17.60
14.	Jhanjharpur	36	-33.93	35	9.99
15.	Darbhanga	46	-50.99	29	15.63
16.	Rosera(SC)	83	-32.33	30	15.48
17.	Samastipur	34	-32.49	41	5.08
18.	Barh	17	-15.05	43	4.62
19.	Balia	t	t	52	-19.86
20.	Saharsa	31	-31.10	44	4.09

Sl. No.	Constituencies	Rank	1971-77 split factor	Rank	1977-91 split factor
21.	Madhepura	11	-10.95	34	11.01
22.	Araria (SC)	16	-14.66	18	24.78
23.	Kishanganj	26	-24.96	15	27.12
24.	Purnea	41	-38.42	t	t
25.	Katihar	35	-33.34	9	32.01
26.	Rajmahal(ST)	28	-28.21	16	25.48
27.	Dumka (ST)	18	-16.14	45	2.72
28.	Godda	40	-37.93	14	29.25
29.	Banka	44	-43.65	26	17.39
30.	Bhagalpur	37	-34.44	19	23.45
31.	Khagaria	38	-35.91	39	5.87
32.	Monghyr	30	-29.18	10	31.68
33.	Begusarai	20	-16.63	49	- 6.82
34.	Nalanda	9	- 5.07	48	- 4.56
35.	Patna	t	t	t	t
36.	Arrah	15	-14.31	1	50.35
37.	Buxar	27	-26.80	21	22.21
38.	Sasaram	10	-10.38	32	14.46
39.	Bikramganj	12	-12.29	27	16.03
40.	Aurangabad	5	2.71	24	19.10
41.	Jahanabad	t	t	46	2.45
42.	Nawada (SC)	45	-48.66	37	7.30

Appendix-V(Contd.)

Sl. no.	Constituencies	Rank	1971-77 split factor	Rank	1977-91 split factor
43.	Gaya (SC)	19	-16.57	38	7.01
44.	Chatra	25	-24.12	5	38.40
45.	Koderma	t	t	13	29.60
46.	Giridih	21	-18.06	20	22.65
47.	Dhanbad	39	-37.78	17	25.28
48.	Hazaribagh	32	-32.06	8	33.30
49.	Ranchi	6	- 3.72	40	5.79
50.	Jamshedpur	23	-22.25	28	15.73
51.	Singhbhum (ST)	t	t	11	30.29
52.	Khunti (ST)	t	t	33	11.06
53.	Lohardaga (ST)	29	-28.30	6	35.51
54.	Palamau (SC)	24	-23.80	3	40.59
55.	Jamui	t	t	t	t

N.B. t Calculation not possible.

APPENDIX - VI

RANK OF THE CONSTITUENCIES IN TERMS OF SWING FACTOR, 1971-77, 1977-91.

Sl. No.	Constituencies	Rank	1971-77 Swing Factor	Rank	1977-91 Swing Factor
1.	Bagaha(SC)	42	-65.45	48	-37.20
2.	Bettiah	44	-72.65	50	-41.19
3.	Motihari	37	-56.61	33	-14.39
4.	Gopalganj	41	-63.11	18	10.51
5.	Siwan	39	-58.41	49	-34.28
6.	Maharajganj	t	t	41	-19.70
7.	Chapra	32	-50.54	26	- 4.09
8.	Hajipur(SC)	28	-39.41	17	10.61
9.	Vaishali	t	t	3	47.06
10.	Muzaffarpur	46	-95.38	1	57.38
11.	Sitamarhi	24	-33.31	31	- 8.01
12.	Sheohar	13	-22.73	52	-51.78
13.	Madhubani	35	-52.64	11	23.39
14.	Jhajharpur	2	7.63	16	10.68
15.	Darbhanga	12	-14.96	14	12.13
16.	Rosera (SC)	14	-24.53	39	-15.70
17.	Samastipur	36	-53.00	10	24.77
18.	Barh	31	-48.32	8	25.85
19.	Balia	t	t	12	16.49

Appendix-VI(Contd.)

SL No.	Constituencies	Rank	1971-77 Swing Factor	Rank	1977-91 Swing Factor
20.	Saharsa	23	-33.26	15	11.23
21.	Madhepura	30	-41.48	43	-24.91
22.	Araria (SC)	38	-58.40	44	-26.33
23.	Kishanganj	29	-41.23	46	-28.35
24.	Purnea	3	3.98	t	t
25.	Katihar	6	- 4.28	22	5.66
26.	Rajmahal (ST)	18	-29.28	32	-10.31
27.	Dumka (ST)	11	-12.73	47	-29.14
28.	Godda	21	-31.49	40	-17.85
29.	Banka	8	- 8.74	20	7.99
30.	Bhagalpur	15	-28.33	30	- 7.80
31.	Khagaria	4	- 1.14	29	- 7.02
32.	Monghyr	9	-11.30	38	-14.91
33.	Begusarai	1	33.94	9	25.96
34.	Nalanda	43	-66.94	7	31.60
35.	Patna	t	t	t	t
36.	Arrah	33	-51.92	51	-41.67
37.	Buxar	19	-30.22	23	3.40
38.	Sasaram (SC)	45	-86.54	6	38.77
39.	Bikramganj	34	-52.47	34	-13.46
40.	Aurangabad	7	- 6.51	24	- 0.65

Contd..

Sl. No.	Constituencies	Rank	1971-77 Swing Factor	Rank	1977-91 Swing Factor
41.	Jahanabad	t	t	4	44.08
42.	Nawada (SC)	26	-36.12	2	51.34
43.	Gaya (SC)	27	-36.99	5	40.61
44.	Chatra	25	-34.73	27	- 4.27
45.	Kodenma	t	t	19	8.86
46.	Giridih	10	-12.26	45	-26.51
47.	Dhanbad	22	-32.42	42	-20.48
48.	Hazaribagh	17	-23.91	28	- 5.77
49.	Ranchi	16	-28.63	35	-13.70
50.	Jamshedpur	5	- 2.35	36	-14.50
51.	Singh Bhum (ST)	t	t	13	15.10
52.	Khunti (ST)	t	t	21	7.09
53.	Lohardaga (ST)	20	32.15	37	-14.87
54.	Palamau (SC)	40	-59.10	25	- 2.60

N.B. t Calculation not possible.

APPENDIX - VII

RANK OF THE CONSTITUENCIES IN TERMS OF MARGIN OF VICTORY, 1971, 1977, 1991.

Sl. no.	Constituencies	1971		1977		1991	
		Rank	Margin of victory in percentage to total valid votes	Rank	Margin of victory in percentage to total valid votes	Rank	Margin of victory in percentage to total valid votes
1.	Begaha(SC)	3	46.7	51	14.8	33	12.4
2.	Bettiah	2	55.0	37	80.3	20	19.3
3.	Motihari	1	56.8	47	20.6	22	17.6
4.	Gopalganj	11	26.0	31	41.2	26	16.1
5.	Siwan	34.5	8.9	14	53.3	15	24.4
6.	Maharajganj	51	0.4	11	56.8	50	3.9
7.	Chapra	29	12.8	2	77.4	21	19.2
8.	Hajipur(SC)	48.5	1.7	1	80.8	1	49.4
9.	Vaishali	19	20.7	3	71.3	23	17.4
10.	Muzaffarpur	17	21.9	5	65.9	43	8.2
11.	Sitamarhi	38	6.9	49	18.1	4	35.0
12.	Sheohar	18	20.9	50	15.6	10	27.9
13.	Madhubani	14	24.9	53	12.2	31.5	12.6
14.	Jhanjharpur	33	9.0	35	33.9	30	13.1

Appendix-VII(Contd.)

Sl. no.	Constituencies	1971		1977		1991	
		Rank	Margin of victory in percentage to total valid votes	Rank	Margin of victory in percentage to total valid votes	Rank	Margin of victory in percentage to total valid votes
15.	Darbhanga	25.5	15.0	17	50.5	17	22.7
16.	Rosera(SC)	28	13.1	25	44.2	2	44.3
17.	Samastipur	16	22.3	7	63.7	6	33.2
18.	Barh	37	8.2	13	55.1	14	24.5
19.	Balia	*	*	52	12.7	19	19.6
20.	Saharsa	15	23.8	30	41.4	12	25.97
21.	Madhepura	36	8.8	26	43.6	3	43.3
22.	Araria(SC)	4	41.3	36	32.0	7	31.3
23.	Kishanganj	6	38.6	40	27.5	27	15.2
24.	Purnea	32	9.8	42	26.0	CM	CM
25.	Katihar	44	4.7	29	41.9	48	4.7
26.	Rajmahal(ST)	25.5	15.0	28	42.4	44	7.1
27.	Dumka (ST)	41.5	6.3	46	22.9	8	29.9
28.	Godda	13	25.0	24	44.4	18	19.7
29.	Banka	45	4.1	19	47.7	16	23.1

Sl. no.	Constituencies	1971 Rank	1971 Margin of victory in percentage to total valid votes	1977 Rank	1977 Margin of victory in percentage to total valid votes	1991 Rank	1991 Margin of victory in percentage to total valid votes
30.	Bhagalpur	23	19.5	27	43.0	9	28.0
31.	Khagaria	52	0.2	32	37.0	11	27.9
32.	Monghyr	39	6.7	34	34.0	24	16.4
33.	Begusarai	50	1.6	54	8.5	40	10.2
34.	Nalanda	8	33.6	41	26.8	35.5	11.7
35.	Patna	21	20.5	6	64.7	C.M.	C.M.
36.	Arrah	22	20.1	22	46.0	42	8.5
37.	Buxar	31	10.5	21	46.2	35.5	11.7
38.	Sasaram(SC)	5	38.8	10	58.3	47	4.8
39.	Bikramganj	10	28.0	33	36.4	5	33.9
40.	Aurangabad	12	25.7	38	29.7	38	10.9
41.	Jahanabad	43	5.8	16	51.2	49	4.6
42.	Nawada(SC)	27	13.5	4	70.9	34	12.2
43.	Gaya (SC)	46	2.9	12	56.5	41	8.8
44.	Chatra	40	6.4	15	52.8	39	10.3

Appendix-VII(Contd.)

Sl. No.	Constituencies	1971 Rank	1971 Margin of victory in percentage to total valid votes	1977 Rank	1977 Margin of victory in percentage to total valid votes	1991 Rank	1991 Margin of victory in percentage to total valid votes
45.	Kodema	*	*	23	45.6	52	2.9
46.	Giridih	47	2.4	39	27.9	25	16.3
47.	Dhanbad	9	30.7	20	47.4	51	3.74
48.	Hazaribagh	41.5	6.3	18	49.1	46	5.0
49.	Ranchi	34.5	8.9	45	23.5	13	25.9
50.	Jamshedpur	53	0.1	44	24.4	37	11.0
51.	Singhbhum(ST)	24	15.2	9	59.1	28.5	13.8
52.	Khunti(ST)	48.5	1.7	48	19.0	31.5	12.6
53.	Lohardagh(ST)	7	34.9	43	25.9	29.5	13.8
54.	Palamav(SC)	20	20.6	8	62.6	45	5.9
55.	Jamui	30	12.3	*	*	*	*

N.B. * Constituency not existing that time

** Constituency not existing after, 1971

C.M. Election Countermanded.

APPENDIX - VIII

CONSTITUENCIES BY PERCENTAGE OF VALID VOTES POLLED BY INC, 1971, 1977 AND 1991.

Sl no.	Constituencies	1971	1977	1991
1.	Bagaha (SC)	70.99	35.61	14.71
2.	Bettiah	72.70	28.40	5.77
3.	Motihari	68.04	26.11	17.28
4.	Gopalganj	61.61	28.91	34.19
5.	Siwan	52.22	21.64	4.15
6.	Maharajganj	t	21.17	11.27
7.	Chapra	42.08	8.61	6.50
8.	Hajipur (SC)	34.06	8.47	13.83
9.	Vaishali	t	13.71	37.36
10.	Muzaffarpur	60.49	12.32	42.68
11.	Sitamarhi	51.65	34.39	29.94
12.	Sheohar	53.98	40.69	11.06
13.	Madhubani	55.56	24.41	39.31
14.	Jhanjharpur	25.96	32.15	37.57
15.	Darbhanga	34.34	22.74	28.96
16.	Rosera(SC)	42.66	26.52	18.51
17.	Samastipur	49.14	14.50	27.47
18.	Barh	48.10	20.80	33.99
19.	Balia	*	22.87	33.79

Sl. No.	Constituencies	1971	1977	1991
20.	Saharsa	48.72	25.95	31.83
21.	Madhepura	46.21	21.81	8.27
22.	Araria (SC)	66.56	33.38	20.08
23.	Kishanganj	58.53	30.67	15.26
24.	Purnea	27.76	30.14	C.M.
25.	Katihar	30.37	27.52	30.41
26.	Rajmahal (ST)	44.77	25.76	31.13
27.	Dumka (ST)	35.41	26.63	9.18
28.	Godda	47.64	25.62	16.42
29.	Banka	29.80	23.42	27.54
30.	Bhagalpur	46.90	28.26	24.36
31.	Khagaria	21.09	20.19	16.11
32.	Monghyr	39.49	32.15	24.58
33.	Begusarai	12.46	36.03	51.30
34.	Nalanda	57.93	15.56	34.83
35.	Patna	t	8.25	C.M.
36.	Arrah	54.33	24.66	3.18
37.	Buxar	39.34	18.78	20.67
38.	Sasaram (SC)	66.93	20.15	39.73
39.	Bikramganj	55.60	23.21	15.65
40.	Aurangabad	35.48	32.14	31.80

Sl. No.	Constituencies	1971	1977	1991
41.	Jahanabad	t	13.66	38.85
42.	Nawada (SC)	38.73	13.11	39.17
43.	Gaya (SC)	41.99	21.09	41.60
44.	Chatra	43.24	22.19	20.01
45.	Koderma	*	21.21	26.00
46.	Giridih	38.28	30.52	16.11
47.	Dhanbad	46.42	21.29	9.72
48.	Hazaribagh	32.82	15.62	12.36
49.	Ranchi	43.32	25.54	17.29
50.	Jamshedpur	27.53	25.83	17.20
51.	Singhbhum (ST)	t	14.18	22.34
52.	Khunti (ST)	t	16.58	21.01
53.	Lohardaga (ST)	53.77	30.97	22.80
54.	Palamau (SC)	51.26	15.00	13.64
55.	Jamui	10.67	**	**

N.B. * Constituency was not existing that time

** Constituency not existing after, 1971

C.M. Election Countermanded

t INC not contested.

APPENDIX-IX

CONSTITUENCIES BY WINNER AND RUNNERS-UP PARTIES IN THREE GENERAL ELECTIONS

Sl. no.	Constituencies	1971		1977		1991	
		Winner	Runners-up	Winner	Runners-up	Winner	Runners-up
1.	Bagaha(SC)	INC	BJS	BLD	INC	JD	BJP
2.	Bettiah	INC	IND	BLD	INC	JD	BJP
3.	Motihari	INC	BJS	BLD	INC	CPI	BJP
4.	Gopalganj	INC	SSP	BLD	INC	JD	INC
5.	Siwan	INC	BJS	BLD	INC	JD	JP
6.	Maharajganj	SSP	CPI	BLD	INC	JD	JP
7.	Chapra	INC	BKD	BLD	INC	JD	JP
8.	Hajipur(SC)	INCO	INC	BLD	INC	JD	JP
9.	Vaishali	CPI	INCO	BLD	INC	JD	INC
10.	Muzaffarpur	INC	INCO	BLD	INC	JD	INC
11.	Sitamarhi	INC	SSP	BLD	INC	JD	INC
12.	Sheohar	INC	BJS	BLD	INC	JD	JP
13.	Madhubani	INC	SSP	BLD	CPI	CPI	INC
14.	Jhanjharpur	CPI	INC	BLD	INC	JD	INC
15.	Darbhanga	INC	BJS	BLD	INC	JD	INC
16.	Rosera(SC)	INC	SSP	BLD	INC	JD	INC
17.	Samastipur	INC	BJS	BLD	INC	JD	INC
18.	Barh	INC	INCO	BLD	INC	JD	INC
19.	Balia	*	*	BLD	CPI	CPI	INC
20.	Saharsa	INC	SSP	BLD	INC	JD	INC

Sl. no.	Constituencies	1971 Winner	1971 Runners-up	1977 Winner	1977 Runners-up	1991 Winner	1991 Runners-up
21.	Madhepura	INC	SHD	BLD	INC	JD	JP
22.	Araria(SC)	INC	INCO	BLD	INC	JD	BJP
23.	Kishanganj	INC	BJS	BLD	INC	JD	BJP
24.	Purnea	INC	CPI	BLD	INC	C.M.	C.M.
25.	Katihar	BJS	INC	BLD	INC	JD	INC
26.	Rajmahal(ST)	INC	PHJ	BLD	INC	JMM	INC
27.	Dumka (ST)	INC	CPI	BLD	INC	JMM	BJP
28.	Godda	INC	INCO	BLD	INC	JMM	BJP
29.	Banka	INC	CPI	BLD	INC	JD	INC
30.	Bhagalpur	INC	CPI	BLD	INC	JD	INC
31.	Khagaria	SSP	INC	BLD	INC	JD	BJP
32.	Monghyr	INC	SSP	BLD	INC	CPI	JP
33.	Begusarai	INCO	CPI	BLD	INC	INC	JD
34.	Nalanda	INC	BJS	BLD	CPI	CPI	INC
35.	Patna	CPI	BJS	BLD	CPI	C.M.	C.M.
36.	Arrah	INC	INCO	BLD	INC	JD	JP
37.	Buxar	INC	INCO	BLD	INC	CPI	BJP
38.	Basaram(SC)	INC	INCO	BLD	INC	JD	INC
39.	Bikramganj	INC	BJS	BLD	INC	JD	INC
40.	Aurangabad	INCO	INC	BLD	INC	JD	INC
41.	Jahanabad	CPI	BJS	BLD	INC	CPI	INC

Appendix-IX(Contd.)

Sl. no.	Constituencies	1971 Winner	1971 Runners-up	1977 Winner	1977 Runners-up	1991 Winner	1991 Runners-up
42.	Nawada(SC)	INC	IND	BLD	INC	CPM	INC
43.	Gaya (SC)	BJS	INC	BLD	INC	JD	INC
44.	Chatra	INC	JAP	BLD	INC	JD	BJP
45.	Koderma	*	*	BLD	INC	JD	BJP
46.	Giridih	INC	INCO	BLD	INC	JMM	BJP
47.	Dhanbad	INC	CPM	IND	INC	BJP	JMM
48.	Hazaribagh	INC	JAP	BLD	INC	CPI	BJP
49.	Ranchi	INC	BJS	BLD	INC	BJP	JD
50.	Jamshedpur	INC	CPI	BLD	INC	JMM	BJP
51.	Singhbhum(ST)	JKD	IND	JKP	INC	JMM	INC
52.	Khunti (ST)	IND	BJS	BLD	JKD	BJP	JP
53.	Lohardaga(ST)	INC	BJS	BLD	INC	BJP	INC
54.	Palamau(SC)	INC	BJS	BLD	INC	BJP	JD
55.	Jamui	CPI	INCO	*	*	**	**

N.B. * Constituency not existing that time

** Constituency is not existing after 1971

C.M. Election Countermanded.

APPENDIX - X

RANK OF THE CONSTITUENCIES IN TERMS OF NUMBER OF CANDIDATES

Sl. no.	Constituencies	1971 Rank	1971 No.of Candi-dates	1977 Rank	1977 No.of Candi-dates	1991 Rank	1991 No.of Candi-dates
1.	Bagaha(SC)	46.5	5	50	3	49	13
2.	Bettiah	50.5	4	23.5	6	31	21
3.	Motihari	46.5	5	32.5	5	52	11
4.	Gopalganj	39	6	50	3	49	13
5.	Siwan	39	6	23.5	6	35	18
6.	Maharajganj	39	6	50	3	35	18
7.	Chapra	5.5	12	23.5	6	22	24
8.	Hajipur(SC)	25	8	13.5	8	46	14
9.	Vaishali	53	3	32.5	5	7.5	37
10.	Muzaffarpur	50.5	4	10	9	3.5	46
11.	Sitamarhi	50.5	4	32.5	5	26	23
12.	Sheohar	12.5	10	32.5	5	13	27
13.	Madhubani	25	8	23.5	6	1	50
14.	Jhajharpur	17.5	9	32.5	5	26	23
15.	Darbhanga	12.5	10	13.5	8	10	30
16.	Rosera(SC)	17.5	9	42	4	39	17
17.	Samastipur	25	8	42	4	19	25
18.	Barh	17.5	9	5.5	11	4	43
19.	Balia	*	*	17.5	7	43.5	15
20.	Saharsa	39	6	23.5	6	26	23

Appendix-X(Contd.)

Sl. no.	Constituencies	1971 Rank	1971 No.of Candi-dates	1977 Rank	1977 No.of Candi-dates	1991 Rank	1991 No. of Can-did-ates
21.	Madhepura	39	6	42	4	42	19
22.	Araria(SC)	31.5	7	50	3	43.5	15
23.	Kishanganj	17.5	9	23.5	6	39	17
24.	Purena	9	11	13.5	8	C.M.	C.M
25.	Katihar	9	11	42	4	11	29
26.	Rajmahal(ST)	25	8	50	3	46	14
27.	Dumka(ST)	25	8	23.5	6	49	13
28.	Godda	39	6	32.5	5	29.5	22
29.	Banka	17.5	9	42	4	19	25
30.	Bhagalpur	46.5	5	54	2	16	26
31.	Khagaria	12.5	10	17.5	7	29.5	22
32.	Monghyar	39	6	50	3	13	27
33.	Begusarai	46.5	5	42	4	39	17
34.	Nalanda	25	8	10	9	26	23
35.	Patna	5.5	12	7.5	10	C.M.	C.M.
36.	Arrah	39	6	7.5	10	6	38
37.	Buxar	2.5	13	23.5	6	19	25
38.	Sasaram	25	8	50	3	33	19
39.	Bikramganj	2.5	13	3.5	12	13	27
40.	Aurangabad	39	6	17.5	7	24	22
41.	Jahanabad	39	6	5.5	11	9	35

Sl. no.	Constituencies	1971 Rank	1971 No.of Candi-dates	1977 Rank	1977 No.of Candi-dates	1991 Rank	1991 No.of Candi-dates
42.	Nanada(SC)	9	11	13.5	8	39	17
43.	Gaya(SC)	12.5	10	42	4	46	14
44.	Chatra	50.5	4	32.5	5	7.5	37
45.	Koderma	*	*	42	4	16	26
46.	Giridih	39	6	42	4	35	18
47.	Dhanbad	1	47	1.5	13	5	40
48.	Hazaribagh	31.5	7	32.5	5	16	26
49.	Ranchi	5.5	12	1.5	13	2.5	46
50.	Jamshedpur	5.5	12	3.5	12	26	23
51.	Singhbhum(ST)	17.5	9	10	9	24	22
52.	Khunti(ST)	25	8	32.5	5	51	12
53.	Lohardaga(ST)	25	8	32.5	5	39	17
54.	Palamau(SC)	31.5	7	17.5	7	32	20
55.	Jamui	31.5	7	**	**	**	**

N.B. * Constituency was not existing that time
** Constituency was ceased to exist after 1971
C.M. Election Countermanded.

APPENDIX - XI

RANK OF THE CONSTITUENCIES IN TERMS OF NUMBER OF CONTESTING PARTIES

Sl. no.	Constituencies	1971 Rank	1971 No. of Contesting Parties	1977 Rank	1977 No.of Contesting Parties	1991 Rank	1991 No. of Contesting Parties
1.	Bagaha(SC)	33	4	22	3	43.5	5
2.	Bettiah	51	2	22	3	24.5	7
3.	Motihari	33	4	22	3	34	6
4.	Gopalganj	33	4	45	2	34	6
5.	Siwan	44	3	45	2	24.5	7
6.	Maharajganj	44	3	45	2	24.5	7
7.	Chapra	8.5	6	22	3	24.5	7
8.	Hajipur(SC)	8.5	6	45	2	43.5	5
9.	Vaishali	44	3	45	2	34	6
10.	Muzaffarpur	51	2	5.5	4	24.5	7
11.	Sitamarhi	51	2	22	3	34	6
12.	Sheohar	19.5	5	45	2	24.5	7
13.	Madhubani	33	4	22	3	34	6
14.	Jhanjharpur	19.5	5	45	2	34	6
15.	Darbhanga	19.5	5	45	2	43.5	5
16.	Rosera (SC)	33	4	45	2	24.5	7
17.	Samastipur	33	4	22	3	18	8
18.	Barh	8.5	6	45	2	14	9
19.	Balia	*	*	22	3	43.5	5
20.	Saharsa	44	3	45	2	34	6

Appendix-XI (Contd.

Sl. no.	Constituencies	1971 Rank	1971 No.of Contesting Parties	1977 Rank	1977 No.of Contesting Parties	1991 Rank	1991 No.of Contesting Parties
21.	Madhepura	33	4	22	3	51.5	3
22.	Araria(SC)	19.5	5	45	2	49	4
23.	Kishanganj	33	4	22	3	43.5	5
24.	Purnea	8.5	6	5.5	4	C.M.	C.M.
25.	Katihar	2.5	9	45	2	34	6
26.	Rajmahal(ST)	19.5	5	22	3	51.5	3
27.	Dumka(ST)	19.5	5	5.5	4	34	6
28.	Godda	19.5	5	22	3	49	4
29.	Banka	2.5	9	45	2	34	6
30.	Bhasalpur	33	4	45	2	14	9
31.	Khagaria	19.5	5	22	3	49	4
32.	Monghyr	44	3	45	2	34	6
33.	Begusarai	33	4	22	3	43.5	5
34.	Nalanda	19.5	5	1.5	50	14	9
35.	Patna	8.5	6	5.5	4	C.M.	C.M.
36.	Arrah	19.5	5	22	3	1	13
37.	Buxar	19.5	5	22	3	2	12
38.	Sasaram(SC)	44	3	45	2	18	8
39.	Bikramganj	8.5	6	22	3	6	11
40.	Aurangabad	51	2	22	3	6	11

Sl. no.	Constituencies	1971 Rank	1971 No.of Contesting Parties	1977 Rank	1977 No.of Contesting Parties	1991 Rank	1991 No.of Contesti Parties
41.	Jahanabad	19.5	5	5.5	4	6	11
42.	Nawada(SC)	33	4	22	3	43.5	5
43.	Gaya(SC)	19.5	5	22	3	18	8
44.	Chatra	44	3	45	2	11	10
45.	Koderma	*	*	22	3	6	11
46.	Giridih	33	4	22	3	11	10
47.	Dhanbad	2.5	9	22	3	6	11
48.	Hazaribagh	8.5	6	22	3	11	10
49.	Ranchi	8.5	6	5.5	4	2.5	12
50.	Jamshedpur	2.5	9	1.5	5	18	8
51.	Singhbhum(ST)	51	2	22	3	24.5	7
52.	Khunti(ST)	44	3	22	3	43.5	5
53.	Lohardaga(ST)	33	4	22	3	18	8
54.	Palamau(SC)	19.5	5	45	2	6	11
55.	Jamui	44	3	**	**	**	**

N.B. * Constituency was not existing that time

** Constituency was ceased to exist after 1971

CM Election Countermanded.

APPENDIX-XII

RANK OF THE CONSTITUENCIES IN TERMS OF NUMBER OF INDEPENDENT CANDIDATES

Sl. no.	Constituencies	1971 Rank	1971 No.of Independent Candidates	1977 Rank	1977 No.of Independent Candidates	1991 Rank	1991 No.of Independent Candidates
1.	Bagaha(SC)	47	1	53	0	46.5	8
2.	Bettiah	38	2	26	3	28.5	14
3.	Motihari	47	1	35.5	2	52	5
4.	Gopalganj	38	2	46	1	7	49
5.	Siwan	29	3	5	8	38	11
6.	Maharajganj	29	3	46	1	38	11
7.	Chapra	6.5	6	26	3	20	17
8.	Hajipur	38	2	10.5	6	44	9
9.	Vaishali	52.5	0	26	3	5	31
10.	Muzaffarpur	38	2	14	5	2	39
11.	Sitamarhi	38	2	35.5	2	20	17
12.	Sheohar	13	5	26	3	13	20
13.	Madhubani	21	4	26	3	1	44
14.	Jhanjharpur	21	4	26	3	20	17
15.	Darbhanga	13	5	10.5	6	8.5	25
16.	Rosera(SC)	13	5	35.5	2	41.5	10
17.	Samastipur	21	4	46	1	20	17
18.	Barh	29	3	3	9	3.4	34
19.	Balia	*	*	18.5	4	41.5	10
20.	Saharsa	29	3	18.5	4	20	17

Appendix-XII (Cond.

Sl. no.	Constituencies	1971 Rank	1971 No.of Independent Candidates	1977 Rank	1977 No.of Independent Candidates	1991 Rank	1991 No.of Independent Candidates
21.	Madhepura	38	2	46	1	31	13
22.	Araria(SC)	47	1	46	1	38	11
23.	Kishanganj	13	5	26	3	34	12
24.	Purena	13	5	18.5	4	C.M.	C.M.
25.	Katihar	38	2	35.5	2	11	23
26.	Rajmahal(ST)	29	3	53	0	38	11
27.	Dumka(ST)	29	3	35.5	2	7	49
28.	Godda	47	1	35.5	2	15.5	18
29.	Banka	52.5	0	35.5	2	14	19
30.	Bhagalpur	47	1	53	0	20	17
31.	Khagaria	13	5	18.5	4	15.5	18
32.	Monghyr	29	3	46	1	12	21
33.	Begusarai	21	4	46	1	34	12
34.	Nalanda	29	3	18.5	4	28.5	14
35.	Patna	6.5	6	10.5	6	C.M.	C.M.
36.	Arrah	47	1	7	7	8.5	25
37.	Buxar	1	8	26	3	31	13
38.	Sasaram(SC)	13	5	46	1	38	11
39.	Bikramganj	3	7	3	9	24.5	16
40.	Aurangabad	21	4	18.5	4	31	13
41.	Jahanabad	47	1	7	7	10	24

Sl. no.	Constituencies	1971 Rank	1971 No.of Independent Candidates	1977 Rank	1977 No.of Independent Candidates	1991 Rank	1991 No.of Independent Candidates
42.	Nawada(SC)	3	7	14	5	34	12
43.	Saya(SC)	13	5	46	1	51	6
44.	Chatra	47	1	26	3	7	27
45.	Koderma	*	*	46	1	26.5	15
46.	Giridih	38	2	46	1	46.5	8
47.	Dhanbad	65	6	1	10	6	29
48.	Hazaribagh	47	1	35.5	2	24.5	16
49.	Ranchi	6.5	6	3.4	34	3.5	34
50.	Jamshedpur	29	3	7	7	26.5	16
51.	Singhbhum(ST)	3	7	10.5	6	20	17
52.	Khunti(ST)	13	5	35.5	2	7	49
53.	Lohardaga(ST)	21	4	35.5	2	44	9
54.	Palamau(SC)	38	2	14	5	44	9
55.	Jamui	21	4	**	**	**	**

N.B. * Constituency was not existing that time

** Constituency was ceased to exist after 1971

C.M. Election Countermanded

APPENDIX - XIII

CONSTITUENCIES BY PERCENTAGE OF URBAN POPULATION

Sl. no.	Constituencies	1971 Percentage of urban population to the total population.	1977 Percentage of urban population to the total population	1991 Percentage of urban population to the total population
1.	Bagaha(SC)	5.21	7.32	10.09
2.	Bettiah	5.21	7.32	10.09
3.	Motihari	5.21	4.5	5.68
4.	Gopalganj	4.2	4.99	5.67
5.	Siwan	4.2	4.41	5.25
6.	Maharajganj	4.2	8.13	9.14
7.	Chapra	4.2	8.13	6.69
8.	Hajipur (SC)	5.25	6.48	9.3
9.	Vaishali	5.25	8.08	9.3
10.	Muzaffarpur	5.25	8.08	5.58
11.	Sitamarhi	5.25	8.08	5.68
12.	Sheohar	5.21	4.65	3.63
13.	Madhubani	4.43	3.11	3.63
14.	Jhanjharpur	4.43	3.11	3.63
15.	Darbhanga	4.43	8.78	8.7

Sl. No.	Constituencies	1971 Percentage of urban population to the total population	1977 Percentage of urban population to the total population	1991 Percentage of urban population to the total population
16.	Rosera (SC)	4.43	4.16	4.96
17.	Samastipur	4.43	4.16	4.96
18.	Barh	22.54	37.12	37.96
19.	Balia	*	10.58	9.79
20.	Saharsa	4.53	5.6	6.82
21.	Madhepura	4.53	5.9	6.52
22.	Araria	4.53	5.6	6.82
23.	Kishanganj	6.34	8.39	6.34
24.	Purnea	6.34	8.39	C.M.
25.	Katihar	6.34	9.42	9.41
26.	Rajmahal (ST)	5.76	7.7	7.3
27.	Dumka (ST)	5.76	5.67	6.12
28.	Godda	5.76	12.58	13.63
29.	Banka	10.61	11.72	12.17
30.	Bhagalpur	10.61	11.72	12.17
31.	Khagaria	10.61	11.72	6

Appendix-XIII (Contd.)

Sl. No.	Constituencies	1971 percentage of urban population to the total population	1977 percentage of urban population to the total population	1991 Percentage of urban population to the total population
32.	Monghyr	11.87	16.59	16.6
33.	Begusarai	11.87	16.9	16.6
34.	Nalanda	22.54	13.6	14.77
35.	Patna	22.54	37.12	C.M.
36.	Arrah	8.22	10.72	11.37
37.	Buxar	8.22	10.72	11.37
38.	Sasaram (SC)	8.22	9.72	10.22
39.	Bikramganj	8.22	9.72	10.22
40.	Aurangabad	7.63	6.94	7.67
41.	Jahanabad	7.63	4.54	6.31
42.	Nawada(SC)	7.63	6.65	6.95
43.	Gaya (SC)	7.63	13.74	13.34
44.	Chatra	7.63	13.74	13.34
45.	Kodema	*	14.26	15.44
46.	Giridih	12.87	14.26	15.44

Sl. No.	Constituencies	1971 percentage of urban population to the total population	1977 percentage of urban population to the total population	1991 percentage of urban population to the total population
47.	Dhanbad	43.51	50.62	51.3
48.	Hazaribagh	12.87	15.11	18.07
49.	Ranchi	13.67	31.74	33.12
50.	Jamshedpur	26.24	50.87	52.92
51.	Singhbhum (ST)	26.24	14.58	15.82
52.	Khunti (ST)	13.67	31.74	33.12
53.	Lohardaga(ST)	13.67	3.96	4.45
54.	Palamau (SC)	4.69	5.64	5.34
55.	Jamui	11.87	**	**

N.B. * Constituency was not existing that time
** Constituency was ceased exist after 1971
C.M. Election Countermanded.