

THE
ECONOMIC & SOCIAL
RESEARCH INSTITUTE

Alphabetical Voting: A Study of the 1973
General Election in the Republic of Ireland

CHRISTOPHER ROBSON and BRENDAN M. WALSH



JUNE, 1973

PAPER No. 71

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE
COUNCIL 1972-73

- *T. K. WHITAKER, M.SC. (ECON.), D.ECON.SC., *President of the Institute.*
- *G. O'BRIEN, D.LITT., LITT.D., *Chairman of the Council.*
T. J. BARRINGTON, *Director, Institute of Public Administration.*
- *J. P. BEDDY, D.ECON.SC., LL.D. (H.C.).
R. D. C. BLACK, PH.D., *Professor, Department of Economics, The Queen's University, Belfast.*
- *F. B. CHUBB, M.A., D.PHIL., *Professor, Department of Political Science, Trinity College, Dublin.*
VERY REV. D. GREGAN, G.M., *President, St. Patrick's Training College, Drumcondra, Dublin.*
G. DEAN, M.D., F.R.G.P., *Director, Medico-Social Research Board.*
REV. PETER DEMPSEY, O.F.M.GAP., M.A., PH.D., *Professor, Department of Applied Psychology, University College, Cork.*
- N. J. GIBSON, B.SC. (ECON.), PH.D., *Professor, Department of Economics, The New University of Ulster, Coleraine.*
- *W. A. HONOHAN, M.A., F.I.A., *Secretary, Department of Social Welfare.*
- *THE MOST REV. JAMES KAVANAGH, M.A., S.T.L., *Bishop of Zerta.*
- *KIERAN A. KENNEDY, M.ECON.SC., B.PHIL., PH.D., *Director of the Institute.*
IVOR KENNY, M.A., *Director, Irish Management Institute.*
T. P. LINEHAN, B.E., B.SC., *Director, Central Statistics Office.*
P. LYNCH, M.A., *Associate Professor of Political Economy, University College, Dublin.*
CHARLES McCARTHY, B.L., *Chairman, Human Sciences Committee.*
- *M. D. McCARTHY, M.A., PH.D., D.SC., *President, University College, Cork.*
J. J. McELLIGOTT, M.A., LL.D., *Past President of the Institute.*
G. A. MEAGHER, B.COMM., D.P.A., *Deputy Secretary, Department of Local Government.*
- *J. F. MEENAN, M.A., B.L., *Professor of Political Economy, University College, Dublin.*
- *C. H. MURRAY, *Secretary, Department of Finance.*
J. C. NAGLE, M.COMM.
D. NEVIN, *Assistant General Secretary, Irish Congress of Trade Unions.*
RIGHT REV. MONSIGNOR J. NEWMAN, M.A., D.PH., *President, St. Patrick's College, Maynooth.*
TADHG Ó GEARBHAILL, *Secretary, Department of Labour.*
REV. E. F. O'DOHERTY, M.A., B.D., PH.D., *Professor, Department of Logic and Psychology, University College, Dublin.*
D. P. O'MAHONY, M.A., PH.D., B.L., *Professor, Department of Economics, University College, Cork.*
LABHRAS Ó NUALLAIN, D.ECON.SC., *Professor of Economics, University College, Galway.*
- *W. J. L. RYAN, M.A., PH.D., *Professor of Political Economy, Trinity College, Dublin.*
P. G. SHERRY, M.SC., PH.D., *Confederation of Irish Industry.*
T. WALSH, D.SC., *Director, An Foras Taluntais.*

*Members of Executive Committee.

Alphabetical Voting: A Study of the 1973 General
Election in the Republic of Ireland

*Copies of this paper may be obtained from the Economic and Social Research Institute,
4, Burlington Road, Dublin 4.*

Price £1.00
(Special rate for students £0.50)

*Alphabetical Voting: A Study of the 1973
General Election in the Republic of Ireland*

BRENDAN M. WALSH and CHRISTOPHER ROBSON

© ECONOMIC AND SOCIAL RESEARCH INSTITUTE
DUBLIN, 1973

Brendan M. Walsh is a Senior Research Officer with the Economic and Social Research Institute and Christopher Robson is an Architect working in Dublin. The paper has been accepted for publication by the Institute, which is not responsible for either the content or the views expressed therein.

CONTENTS

	<i>Page</i>
Acknowledgements	9
Introduction	11
Historical Background	16
First Preference Votes	18
Rank Within Party	20
Overall Position on Ballot	24
Transfer Votes	28
Regression Analysis of Voting Behaviour	31
First Preference Votes	31
Parties' Share of Valid Poll	37
The 1969 General Election	40
Summary of Findings	44
Conclusion	46

LIST OF TABLES

<i>Table</i>	<i>Page</i>
1. Alphabetical Distribution of Candidates' and T.D.s' Surnames. General Election, 1973	12
2. Alphabetical Distribution of T.D.s' Names in Selected Dála since 1922	17
3. Distribution of First Preference Votes Received According to Alphabetical Grouping of Candidates' Surnames. General Election, 1973	19
4. Electoral Performance Analysed by Candidates' Alphabetical Rank Among the Candidates of their Own Party in same Constituency. General Election, 1973	21
5. Electoral Performance Analysed by Candidates' Alphabetical Rank Among the Candidates of Their Own Party in Same Constituency, Distinguishing Incumbents and Non-Incumbents. General Election, 1973 facing	22
6. Percentage of Party's First Preference Vote in Constituency Received by Candidates who were Alphabetically First (Last) Among the Candidates from Their Party in the Constituency Classified by Whether They Were in First (Last) Position on the Ballot. General Election, 1973	25
7. Party's Share of Valid Poll in Constituencies Classified According to Whether Party had a Candidate in First (Last) Position on Ballot General Election, 1973	26
8. Party's Share of Valid Poll in 1973 as Percentage of its Share in 1969	27
9. Distribution of Transfers Within a Party According to Alphabetical Rank of Candidates. General Election, 1973	29

<i>Table</i>	<i>Page</i>
10. Regression Coefficients of Candidates' First Preference Votes Regressed on Alphabetical Rank Among Candidates of Same Party in Constituency and Position on Ballot Paper, with <i>t</i> -ratios in Parentheses. General Election, 1973	33
11. Estimated Net Effect of Various Situations on a Candidate's First Preference Vote, with Standard Errors in Parentheses. General Election, 1973	36
12. Regressions on Parties' Share of Valid Poll in Each Constituency. General Election, 1973	38
13. Average First Preference Vote Classified by Rank Among Candidates from Party, Incumbents and Non-Incumbents. General Election, 1969	41
14. Candidates and T.D.s Elected, Classified by Rank among Candidates from Party, Incumbents and Non-Incumbents. General Election, 1969	42

Acknowledgements

The authors are indebted to Miss Annette O'Toole for her assistance in the preparation of this paper. Mr B. J. Whelan provided invaluable statistical and computational advice. Helpful comments on earlier versions of the study were received from Dr R. C. Geary, Dr K. A. Kennedy, and Mr J. O'Meara, all from Economic and Social Research Institute, from Mr Brian Farrell (UCD), Mr C. McCarthy (Foras Forbartha), and Mr J. P. Neary (TCD), and from the Referee.

Responsibility for the views expressed and for any remaining errors is, of course, solely ours.

Introduction

IT is popularly believed that the requirement in Irish elections that candidates' names be printed in alphabetical order on the ballot paper results in a bias against those whose surnames begin with the later letters of the alphabet. One journalist recently went so far as to assert that "the spelling of a candidate's name has in many cases been almost as important as his politics in ensuring success at the polls".¹ On the other hand, the importance and even the existence of such a bias has been questioned. The issue was debated at some length in Dáil Éireann in connection with the Electoral Bill, 1962, when an Amendment to randomise the ballot paper was withdrawn after a discussion in the course of which little empirical evidence was advanced.² One authority on electoral systems concluded that "in the Irish constituencies the initial letter of a candidate's name has . . . only a trifling effect on his chance of election".³ It is also notable that political analysts very rarely mention alphabetical bias in any detailed discussion of an election. The purpose of the present study is to assess whether an important alphabetical bias can be shown to exist and, if so, to explore the exact mechanisms by which it operates.

To establish whether or not an alphabetical distortion is present in the distribution of Dáil Deputies' (or T.D.s') names, it is necessary to ascertain the distribution of names in the Irish population as a whole. We have used as our benchmark the alphabetical distribution of 2,100 names obtained as a national random sample from the electoral registers.⁴ Using the percentage distribution of these names between five groupings of the letters of the alphabet (with approximately one fifth of all names in each group), we have studied the distribution of the surnames of both the candidates and the T.D.s elected in the February 1973 General Election. The results are set out in Table 1.

This table shows that major discrepancies exist between the alphabetical

¹"Getting Elected is as Simple as ABC", *Sunday Independent*, 4 March 1973.

²See Dáil Éireann, Parliamentary Debates, Vol. 200, No. 3 (27 February 1963), Cols. 492-516, and Vol. 201, No. 6 (2 April, 1963), Cols. 815-821. The issue is not discussed in the Reports of the Joint Committee on Electoral Law, Dublin: The Stationery Office, 1962 (Pr. 6363).

³Enid Lakeman, *How Democracies Vote: A Study of Majority and Proportional Electoral Systems*, London: Faber and Faber, 1970, p. 149. It should be noted, however, that the author was comparing the Irish system with the block voting system in London Borough Council Elections.

⁴These names were kindly supplied to us by the Survey Unit of the Economic and Social Research Institute. It is interesting to note that the alphabetical distribution of these names corresponded to within 0.5 per cent in each category to a simple estimate based on the personal names in the 1973 Telephone Directory.

TABLE I: *Alphabetical distribution of candidates' and T.D.s' surnames.*
General Election, 1973 (percentages)

	<i>First letter of surname</i>					<i>Total no.</i> <i>(= 100</i> <i>per cent)</i>
	<i>A-C</i>	<i>D-G</i>	<i>H-L</i>	<i>M-O</i>	<i>P-Z</i>	
<i>Random sample of Irish population</i>	20.3	17.9	17.2	25.3	19.4	2,100
All candidates	27.1	18.8	17.6	22.5	14.0	335*
T.D.s elected	32.6	22.2	16.0	15.3	13.9	144*
Incumbent candidates	33.6	20.9	16.4	17.2	11.9	134*
Non-incumbent candidates, members of one of the three major parties	24.9	17.8	18.5	23.6	15.3	157
Non-incumbent candidates, not members of a major party	15.9	15.9	18.2	34.1	15.9	44
Fianna Fáil candidates	29.4	19.3	21.9	21.0	8.4	119*
Fianna Fáil T.D.s Elected	31.9	23.2	17.4	17.4	10.1	69*
Fine Gael candidates	28.8	21.6	15.3	19.8	14.4	111
Fine Gael T.D.s Elected	35.2	25.9	14.8	13.0	11.1	54
Labour Party candidates	26.8	14.3	14.3	23.2	21.4	56
Labour Party T.D.s Elected	26.3	10.5	15.8	15.8	31.6	19
Independent and other candidates	18.4	16.3	16.3	30.6	18.4	49
Independent and other T.D.s	(50.0)	—	—	—	(50.0)	2

*Includes outgoing Ceann Comhairle (Speaker).

distribution of Irish names in general, on the one hand, and of candidates' and T.D.s' names on the other. Candidates and, to an even greater degree, T.D.s are far more likely to have names starting with the letters A, B, and C than the population in general. Similarly, names starting with M, N or O are relatively much less frequent among the politicians than among the population. There is an increasing distortion evident as one moves from candidates to T.D.s; thus, whilst only 20 per cent of the population have names beginning with A, B or C, 27 per cent of the candidates and 33 per cent of the T.D.s elected have such names. Similarly, 25 per cent of population have names in the M, N, O category, but only 23 per cent of the candidates and 15 per cent of the T.D.s. In terms of Dáil seats, there are 18 more T.D.s in the A-C category and 6 more in the D-G category than one might expect, and correspondingly fewer in the other categories.

It is evident from Table 1 that incumbent⁵ candidates were distributed very similarly to T.D.s, but that non-incumbents were closer to the Irish population. Non-incumbents who were members of one of the three major political parties occupied an intermediate position, showing some tendency towards the same alphabetical bias evident among incumbents, but to a much smaller degree. Thus, 32 per cent of incumbents who were party members had names starting with A, B, or C compared with 25 per cent of non-incumbents who were party members, and only 16 per cent of non-incumbents who were not party members.

We have used chi-squared tests to test the hypothesis that the alphabetical distributions of candidates' and deputies' names are consistent with random sampling from the Irish population. Following are the results of testing the relevant hypotheses:

Null Hypothesis: That the group is alphabetically a random sample of the Irish population:

<i>Group</i>	<i>Chi-squared</i>
All candidates	14.1**
Incumbent candidates	19.7**
Non-incumbent candidates (total)	2.5
Non-incumbent candidates who were members of a major party	3.3
Fianna Fáil candidates	14.8**
Fine Gael candidates	7.7†
Labour Party candidates	2.0
Independent and minor party candidates	0.7
T.D.s elected (total)	20.4**

Null Hypothesis: That the T.D.s elected are alphabetically a random sample of the relevant set of candidates:

<i>Group</i>	<i>Chi-squared</i>
T.D.s elected (total)	5.4
Non-incumbents elected	4.8
Incumbents not re-elected	0.4

**Significant, 99 per cent confidence level. †Significant, 90 per cent confidence level.

⁵We use this term, for convenience, to refer to "sitting" or "outgoing" T.D.s. It does not include the two cases (R. Burke, Dublin North County, and J. G. Esmond, Wexford) where the candidate was a close relative of the outgoing deputy.

The highly significant values obtained for all candidates and incumbent candidates in the first half of this table confirm the validity of the impressions conveyed by Table 1. It is interesting to note that non-incumbent candidates, both members of major parties and others, did not differ significantly in alphabetical distribution from the general population. Among the major parties, Fianna Fáil and Fine Gael showed a very similar distortion in the alphabetical distribution of their candidates (although there were markedly fewer Fianna Fáil candidates in the P-Z group), but Labour Party, minor party and Independent candidates were much more randomly distributed. This contrast is partially due to the much higher proportion of incumbents among Fianna Fáil candidates (55 per cent, compared with 42 per cent of Fine Gael, 29 per cent of Labour candidates, and 10 per cent of other candidates), partially to the fact that the Labour Party ran one candidate only in 21 constituencies, and partially to the varying importance in the different parties of the voting patterns discussed later in this paper.

If non-incumbent candidates who were members of a major party are compared with independent and minor party candidates, it may be seen that their alphabetical distributions are similar. This may mean that the parties are not influenced by alphabetical considerations in their choice of new candidates, though it is equally possible that a tendency to choose high-ranking candidates is offset by an opposite tendency on the part of powerful incumbents to try to ensure that newcomers on the ballot do not rank higher than themselves.

The tests of the hypothesis that the T.D.s elected are a random sample of the candidates are less conclusive. In the case of incumbent T.D.s who were not re-elected, it is clear that no alphabetical bias is evident. Among non-incumbents who were elected, there is evidence of bias, although the chi-squared test is significant at only a low confidence level ($P(X^2) = .30$). Whilst in any one election the relevant null hypothesis is that those elected are a random sample of the *candidates* who ran in that election, it is arguable that if all elections had been uninfluenced by alphabetical factors, the T.D.s elected should be a random sample of the *population*. It is evident from the chi-squared value of 20.4 that this null hypothesis cannot be maintained. It is obvious that the impact of alphabetical factors in the election of T.D.s has been cumulative, and far greater than the evidence from a single election will show.

As a summary of the effect of alphabetical factors in the 1973 election results, the disparity between the actual and the expected distribution of non-incumbents elected may be considered:

Distribution of surnames of non-incumbents who were elected:	<i>A-C</i>	<i>D-G</i>	<i>H-L</i>	<i>M-O</i>	<i>P-Z</i>	<i>Total</i>
Actual	8	7	4	3	6	28
Expected on the basis of the alphabetical distribution of non-incumbent candidates, members of a major party	7.0	5.0	5.2	6.6	4.3	28
Expected on the basis of the alphabetical distribution of the Irish population	5.6	5.0	4.8	7.1	5.4	28

The candidates elected are more heavily concentrated in the A-G group than expected on the basis of the alphabetical distribution either of all Irish names or of non-incumbent candidates who belonged to a major party.⁶ The under-representation of H-O names among the elected is very striking. These figures illustrate the operation of the alphabetical bias in the election of new members to the 1973 Dáil, and the composition of this Dáil reflects the cumulative impact of this bias in successive elections.

⁶All the non-incumbents elected in this Election belonged to a major party.

Historical Background

It is of interest to trace the chronology of the alphabetical bias in the names of Dáil members. Our research on this aspect of the subject has not been intensive, but we believe the data of Table 2 are suggestive. It may be seen that the extent of the bias has increased since the foundation of the State, at least until 1966.⁷ The Dáil of 1922 was notable for the over-representation of M, N, O names and all successive Dála have seen a remarkable shrinking of the proportion in this category. Parallel with this development, there has been a growing concentration of names in the A-G groups, but this tendency has slowed down since 1961. It is natural to speculate whether the slight decline in the bias of T.D.s names since 1965 can be attributed to the Electoral (Amendment) Act of 1963, which introduced the parties' names on the ballot paper. It certainly seems plausible that before this change the effect of alphabetical factors on voting patterns would have been greater than it is today, and possibly operated less through ranking of candidates within a party, and more through the influence of overall position on the ballot. Another possible influence is the decreasing number of constituencies in which parties run three or more candidates. The temporary interruption of past trends in 1948 is noticeable. Detailed research on voting patterns in previous elections is necessary if further conclusions are to be drawn from the data of Table 2.

In 1922 Dáil members were essentially the candidates who had been successful in the 1918 Election, which was held under the straight voting system, and Table 2 shows that their names were not significantly different from the population as a whole. The progressive increase in the bias in T.D.s' names since the Second Dáil points to the role of the Proportional Representation system of voting in producing this result. It must be stressed, however, that this bias does not follow simply from the existence of Proportional Representation: it is the operation of Proportional Representation through ballot papers that are arranged alphabetically that results in distortion.

⁷We are assuming that no significant change has occurred since 1922 in the alphabetical distribution of names in the population of the 26 counties.

TABLE 2: *Alphabetical distribution of T.D.s' names in selected Dála since 1922 (percentages)*

<i>Dáil and year</i>	<i>First letter of surnames</i>					<i>No. of T.D.s (=100 per cent)</i>	<i>Chi-squared^a</i>
	<i>A-C</i>	<i>D-G</i>	<i>H-L</i>	<i>M-O</i>	<i>P-Z</i>		
(Sample of Irish Population, 1971)	(20.3)	(17.9)	(17.2)	(25.3)	(19.4)		
Second Dáil, 1922 ^b	22.6	17.7	13.7	33.1	12.9	124	6.8
Seventh Dáil, 1932	27.3	18.0	14.7	26.7	13.3	150	7.1
Eleventh Dáil, 1943	32.1	16.8	15.3	21.2	14.6	137	12.4*
Thirteenth Dáil, 1948	29.3	16.3	15.6	23.1	15.6	147	7.6
Fifteenth Dáil, 1954	29.9	20.4	15.0	23.8	10.9	147	13.3**
Sixteenth Dáil, 1957	32.0	19.0	15.6	21.1	12.2	147	15.1**
Seventeenth Dáil, 1961	34.7	20.8	13.9	20.8	9.7	144	22.3**
Eighteenth Dáil, 1965	33.3	22.2	18.1	18.1	8.3	144	25.7**
Nineteenth Dáil, 1969	34.7	20.8	17.4	16.0	11.1	144	25.5**
Twentieth Dáil, 1973	32.6	22.2	16.0	15.3	13.9	144	20.4**

**=significant, 99 per cent confidence level (Null hypothesis: T.D.s a random sample of the population.)

*=significant, 95 per cent confidence level.

Notes: (a) Chi-squared values for test of the hypothesis that the T.D.s were alphabetically a random sample of the 1971 population.

(b) The 124 names for this Dáil include all those elected in the 1918 General Election except the four members for Dublin University.

First Preference Votes

HAVING documented the existence of an alphabetical bias in the distribution of both T.D.s' and candidates' names, it is necessary to study the voting patterns that have caused this bias.

Table 3 summarises the alphabetical distribution of first preference votes according to the names of the candidates who received them. It may be seen that the candidates in the A-C group obtained far more than their proportionate share of the first preference votes cast, and that those in the M-O group obtained less than their share. This pattern is evident in both Fianna Fáil and Fine Gael, but not in the Labour Party. It may be seen that incumbents in the A-C group obtained somewhat more than its proportionate share of first preference votes, but in other groups there was little difference. Among non-incumbents from the major parties, however, the A-C group gained far more than its proportion of first preferences, and the M-O group far less. Among other non-incumbents an even greater bias in first preference votes in favour of the upper and lower end of the alphabet and against those in the middle is evident. Thus, Table 3 documents the fact that when voters are choosing between candidates many of whom are not very well known (e.g. non-incumbents), they are more likely to give first preference votes to those with names drawn from the first letters of the alphabet, whilst those with names in the middle of the alphabet are least likely to get the first preference vote.⁸

Our major hypothesis regarding voting behaviour is that a significant proportion of voters decide first which party to vote for, and then allocate their preferences to the party's candidates in the order in which they appear on the ballot paper. According to this hypothesis it is not uncommon for voters to have strong preferences between parties but to be undecided between the candidates put forward by each party. If this is the case it is quite rational to allow alphabetical factors to decide the allocation of preferences within a party⁹. (This voting pattern would, however, be modified by the tendency for incumbents to attract first preference votes regardless of their rank among

⁸Independent and other parties' candidates resemble the two largest parties in this table, whereas in Table 1 they resembled the Labour Party. This apparent contradiction can be readily explained by the fact that Mr Blaney obtained 12.5 per cent of all the first preference votes obtained by "Independents and other parties' candidates". It is also relevant that although some distortion is evident in the alphabetical distribution of first preference votes among Independents, most candidates in this category received a very low vote, and only two were elected.

⁹The voter may be encouraged to do this by the tendency for campaign literature to list the party's candidates alphabetically.

TABLE 3: *Distribution of first preference votes received according to alphabetical grouping of candidates' surnames. General Election, 1973 (percentages)*

	<i>First letter of surname</i>					<i>Total no. (=100 per cent)</i>
	<i>A-C</i>	<i>D-G</i>	<i>H-L</i>	<i>M-O</i>	<i>P-Z</i>	
<i>Random sample of Irish names</i>	20.3	17.9	17.2	25.3	19.4	2,100
All candidates:						
First preferences (Candidates)	33.4 (26.9)	19.2 (18.9)	15.9 (17.7)	17.9 (22.5)	13.6 (14.1)	1,350,537 (334)*
Incumbent candidates:						
First preferences (Candidates)	36.0 (33.1)	19.2 (21.1)	15.8 (16.5)	17.2 (17.3)	11.8 (12.0)	834,529 (133)*
Non-incumbent candidates, members of one of the three major parties:						
First preferences (Candidates)	29.7 (24.9)	19.4 (17.8)	16.2 (18.5)	18.7 (23.6)	16.0 (15.3)	471,333 (157)
Non-incumbent candidates, not members of a major party:						
First preferences (Candidates)	23.5 (15.9)	17.5 (15.9)	13.8 (18.2)	24.1 (34.1)	21.1 (15.9)	44,675 (44)
Fianna Fáil candidates:						
First preferences (Candidates)	33.8 (28.8)	18.0 (19.5)	19.4 (22.0)	19.6 (21.2)	9.2 (8.5)	624,530 (118)*
Fine Gael candidates:						
First preferences (Candidates)	35.9 (28.8)	23.4 (21.6)	13.0 (15.3)	14.7 (19.8)	12.9 (14.4)	473,779 (111)
Labour Party candidates:						
First preferences (Candidates)	26.3 (26.8)	13.4 (14.3)	13.7 (14.3)	21.2 (23.2)	25.4 (21.4)	185,117 (56)
Independent and other candidates:						
First preferences (Candidates)	31.8 (18.4)	16.7 (16.3)	9.2 (16.3)	16.1 (30.6)	26.2 (18.4)	67,111 (49)

*Excluding outgoing Ceann Comhairle.

the candidates of their party.) As a test of this hypothesis we shall explore the influence on first preference votes of rank among candidates from the same party.

In the Dáil debate on the Electoral Bill, 1962 referred to in footnote 2 above, great emphasis was placed on the existence of 200 to 300 "illiterate or semi-

illiterate" voters in each constituency, who vote up or down the ballot, in the order in which the names are printed, without regard to party. As a test of this hypothesis, we shall explore the effect of a candidate being in first or last place on the ballot paper on the share of the total valid poll his party obtains and on his share of his party's total first preference vote.

Rank Within Party

In order to gain further insight into the voting process behind these patterns, it is helpful to turn our attention to the rank of the candidates on the ballot papers in their individual constituencies. In particular, our first hypothesis about voting patterns leads us to concentrate on a candidate's rank on the ballot paper relative to that of the other candidates from his party in his constituency. In the majority of cases there were either two or three candidates from each major party on the ballot. The main exception was the large number of constituencies—(21 in all)—where only one Labour candidate ran. To illustrate the hypothesised effect of alphabetical rank on voting patterns, consider the following fictitious ballot paper:

ADAMS, P. J. (Non-Party)
 BROPHY, J. J. (F.F.)
 CARTON, M. (F.G.)
 DIGNAN, G. A. (F.G.)
 HACKETT, P. (Lab.)
 HILL, T. F. (F.F.)
 KEOGH, P. J. (Non-Party)
 O'KELLY, D. (F.G.)
 O'TOOLE, M. J. (F.F.)
 SMITH, T. (Lab.)

Our assumption is that a voter who had decided to vote Fianna Fáil, for example, is more likely to give his first preference to Brophy than to Hill or O'Toole. Similarly, a Fine Gael voter is more likely to vote first preference for Carton than for Dignan or O'Kelly, and a Labour voter for Hackett rather than for Smith.¹⁰ Of course there will be numerous voters who will not vote "the straight party ticket" and others who will have strong preferences between the individual candidates within a party. However, if there is a significant number of voters who select their party first, and for whom the ranking of the candidates within a party is of secondary importance, then we expect the

¹⁰This expectation would, however, be modified by any effect attributable to Smith being in last position on ballot. See, statistical analysis, below.

TABLE 4: Electoral performance analysed by candidates' alphabetical rank among the candidates of their own party in same constituency. General Election, 1973

Alphabetical rank among candidates of same party in constituency	Fianna Fáil			Fine Gael			Labour Party			Three Major Parties		
	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s
<i>Three candidates from party in constituency</i>												
<i>Numbers</i>												
1	29	173,978	20	22	116,645	13	7	27,525	2	58	318,148	35
2	29	117,595	13	22	87,517	9	7	16,715	2	58	221,827	24
3	29	127,143	13	22	65,134	7	7	18,088	2	58	210,365	22
<i>Total</i>	87	418,716	46	66	269,296	29	21	62,328	6	174	750,340	81
<i>Percentage distribution</i>												
1	33.3	41.6	43.5	33.3	43.3	44.8	33.3	44.2	(33.3)	33.3	42.4	43.2
2	33.3	28.1	28.3	33.3	32.5	31.0	33.3	26.8	(33.3)	33.3	29.6	29.6
3	33.3	30.4	28.3	33.3	24.1	24.1	33.3	29.0	(33.3)	33.3	28.0	27.2
<i>Total</i>	100	100	100	100	100	100	100	100	(100)	100	100	100
<i>Two candidates from party in constituency</i>												
<i>Numbers</i>												
1	11	79,639	10	18	95,694	13	7	24,829	3	36	200,162	26
2	11	83,731	8	18	69,501	7	7	21,012	2	36	174,244	17
<i>Total</i>	22	163,370	18	36	165,195	20	14	45,841	5	72	374,406	43
<i>Percentage distribution</i>												
1	50.0	48.7	55.6	50.0	57.9	65.0	50.0	54.2	(60.0)	50.0	53.5	60.5
2	50.0	51.3	44.4	50.0	42.1	35.0	50.0	45.8	(40.0)	50.0	46.5	39.5
<i>Total</i>	100	100	100	100	100	100	100	100	(100)	100	100	100

Notes: (a.) Numbers in brackets are percentages of totals less than 10.

(b.) For Fianna Fáil and Fine Gael the data in this Table include all constituencies except Laois-Offaly and Carlow-Kilkenny (where there were either 4 or 5 candidates from those parties).

(c.) For the Labour Party, the data do not include the 21 constituencies where only one Labour candidate ran, nor the 7 constituencies where there was no Labour candidate.

order in which the candidates' names appear on the ballot to influence voting patterns in favour of those who appear first among their party's candidates.¹¹

In Table 4 we present a summary of the evidence from the 1973 election returns.¹² The results have been analysed separately for the three major political parties and for cases in which there were two and three candidates from a party in a constituency. In addition to the distribution of first preference votes by candidates' rank within party, we present a summary of electoral performance in terms of candidates elected. It may be seen that the table lends strong support to our thesis: in almost all cases the candidates who ranked higher among their party's candidates fared better than those who ranked lower. These findings are summarised by the fact that 35 out of the 58 first-ranked candidates were elected compared with only 22 out of the same number of third-ranked candidates. In cases where there were only two candidates per party, 26 out of the 36 first-ranked candidates were elected, compared with only 17 out of the 36 second-ranked candidates. There were no major contrasts in voting patterns between the three major parties in the three-candidate cases. In the two-candidate cases, the Fianna Fáil first preference votes did not display the expected pattern, although Fine Gael and Labour Party votes did.¹³ Finally, a study of Independent and minor party candidates in constituencies where there were two such candidates seemed at first to reveal the same pattern found in the major parties' votes, with 63 per cent of first preferences going to the Independent candidates who were higher on the ballot, but when Mr. Blaney's constituency was removed, the pattern in the remaining 10 constituencies was more random, with only 51 per cent of the votes going to the first-ranked candidates.

We have already seen the importance of distinguishing between incumbent and non-incumbent candidates. The data of Table 4 should be interpreted with caution, as no distinction is made between the two types of candidates. In Table 5 a more detailed analysis of the same data is presented. The first conclusion supported by Table 5 is that incumbents on average enjoy a high alphabetical ranking among their party's candidates. Forty per cent of incumbents were first in rank among the (three) candidates of their party, for example, compared with only 28 per cent of non-incumbents.¹⁴ This

¹¹The importance of voting the "full party ticket" has been documented in one study of Irish voting patterns, where it was found that 66 per cent of a sample of voters voted for all the candidates in a party and for no-one else. Cf. Paul M. Sacks, "Bailiwicks, Locality, and Religion: Three Elements in an Irish Dáil Constituency Election", *Economic and Social Review*, Vol. 1, No. 4, July 1970, p. 540.

¹²Our data source was the *Irish Times*, 3 March 1973, with corrections, and corroborative data from *Election Results and Transfer of Votes in General Election (June, 1969)*, Dublin, The Stationery Office, 1970.

¹³The Fianna Fáil case is readily accounted for by Mr Lynch's performance in Cork City North-West. Despite this, however, it will be noted that more first-ranked than second-ranked candidates were elected for the party in the country as a whole.

¹⁴The chi-squared values for the association between incumbency and rank are 4.2 in the 3 candidate case and 2.0 in the two candidate case. The critical values of test (.05 significance level) are 5.99 and 3.84, respectively.

TABLE 5. Electoral performance analysed by candidates' alphabetical rank among the candidates of their own party in same constituency, distinguishing incumbents and non-incumbents. General Election, 1973

Alphabetical rank among candidates of same party in constituency	Fianna Fáil						Fine Gael						Labour Party						Three major parties					
	Incumbents			Non-incumbents			Incumbents			Non-incumbents			Incumbents			Non-incumbents			Incumbents			Non-incumbents		
	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s	Candidates	First preference vote	Elected T.D.s
	Three candidates from party in constituency																							
NUMBERS																								
1	16	110,508	14	13	63,470	6	13	85,963	12	9	30,682	1	2	17,639	2	5	9,886	0	31	214,110	28	27	104,038	7
2	15	79,509	12	14	38,086	1	8	54,171	6	14	33,346	3	3	11,637	2	4	5,078	0	26	145,317	20	32	76,510	4
3	12	73,803	10	17	53,340	3	6	26,345	5	16	38,789	2	2	10,818	2	5	7,270	0	20	110,966	17	38	99,399	5
Total	43	263,820	36	44	154,896	10	27	166,479	23	39	102,817	6	7	40,094	6	14	22,234	0	77	470,393	65	97	279,947	16
PERCENTAGE DISTRIBUTION																								
1	37.2	41.9	38.9	29.5	41.0	(60.0)	48.1	51.6	52.2	23.1	29.8	(16.7)	(28.6)	44.0	(33.3)	35.7	44.4	—	40.3	45.5	43.1	27.8	37.2	43.8
2	34.9	30.1	33.3	31.8	24.6	(10.0)	29.6	32.5	26.1	35.9	32.4	(50.0)	(42.9)	29.0	(33.3)	28.6	22.8	—	33.8	30.9	30.8	33.0	27.3	25.0
3	27.9	28.0	27.8	38.6	34.4	(30.0)	22.2	15.8	21.7	41.0	37.7	(33.3)	(28.6)	27.0	(33.3)	35.7	32.7	—	26.0	23.6	26.2	39.2	35.5	31.2
Total	100	100	100	100	100	(100)	100	100	100	100	100	(100)	(100)	100	(100)	100	100	—	100	100	100	100	100	100
Two candidates from party in constituency																								
NUMBERS																								
1	8	58,531	8	3	21,108	2	11	68,587	11	7	27,107	2	3	19,126	3	4	5,703	0	22	146,244	22	14	53,918	4
2	9	74,282	7	2	9,449	1	5	26,535	5	13	42,966	2	2	8,531	2	5	12,481	0	16	109,348	14	20	64,896	3
Total	17	132,813	15	5	30,557	3	16	95,122	16	20	70,073	4	5	27,657	5	9	18,184	0	38	255,592	36	34	118,814	7
PERCENTAGE DISTRIBUTION																								
1	47.1	44.1	53.3	(60.0)	69.1	(66.7)	68.7	72.1	68.8	35.0	38.7	(50.0)	(60.0)	69.2	(60.0)	(44.4)	31.4	—	57.9	57.2	61.1	41.2	45.4	(57.1)
2	52.9	55.9	46.7	(40.0)	30.9	(33.3)	31.3	27.9	31.3	65.0	61.3	(50.0)	(40.0)	30.8	(40.0)	(55.6)	68.6	—	42.1	42.8	38.9	58.8	54.6	(42.9)
Total	100	100	100	(100)	100	(100)	100	100	100	100	100	(100)	(100)	100	(100)	(100)	100	—	100	100	100	100	100	(100)

Notes: (a) Numbers in brackets are percentages of totals less than 10.
(b) For coverage of the parties, cf. note to Table 4.

pattern is very pronounced in both two and three candidate cases in Fianna Fáil and Fine Gael, but not in the Labour Party. This finding is a natural reflection of the operation of the forces we are discussing over successive elections, and its consequences have already been seen in the contrast between the alphabetical distribution of incumbents' and non-incumbents' names.

In addition to confirming that there is a relation between incumbency and rank on the ballot, Table 5 shows that even when incumbency is allowed for, those who appear at the top of their party's list on a ballot have a better chance of being elected than those in the middle or at the bottom. The importance of this factor is shown by the fact that 7 out of 27 non-incumbents who were first in rank among their party's three candidates on the ballot gained election, compared with only 5 out of the 38 who were in third rank. This tendency is less clear among incumbents than among non-incumbents, since very high proportions of incumbents were re-elected regardless of rank on ballot. It is also evident from this more detailed analysis that candidates who ranked second and third were about equally at a disadvantage compared with those in first rank; in cases where the party put forward three candidates, the main consideration was to be first among these—being second rather than third was of much smaller advantage.

These findings may be summarised in another manner by considering the average first preference vote of candidates in the 1973 Election classified according to their rank on the ballot, combining the data for the three major parties:

<i>Alphabetical rank among party's candidates</i>	<i>Incumbents</i>	<i>Non-incumbents</i>	<i>Total</i>
	<i>Three candidates per party</i>		
1	6,907	3,853	5,485
2	5,589	2,391	3,825
3	5,548	2,616	3,627
<i>Two candidates per party</i>			
1	6,647	3,851	5,560
2	6,834	3,245	4,840

These figures clearly illustrate the operation of the factors we have been discussing. It is arguable that the higher average vote received by third-, as compared with second-, ranked non-incumbents in the three-candidate case reflects either the advantage gained by some of these candidates in being in last position on the ballot, or, less probably, some slight tendency for voters to vote up the ballot paper in reverse alphabetical order within party.

Table 5, therefore, shows two important factors at work. First, the superior average alphabetical rank of incumbent candidates adds to the electoral advantage they presumably already enjoy by virtue of their incumbency. This is a conservative factor, tending to minimise change in the composition of successive Dála. Secondly, those candidates whose surnames rank them second or third among a party's candidates are at a serious disadvantage compared with those whose names place them first from their party on the ballot paper. However, when a party ran only two candidates in a constituency, the advantage gained by being first was far less pronounced. Thus, the fact that Fianna Fáil ran three candidates in 29 constituencies, Fine Gael ran three in 22, and Labour in only 7, helps to account for the varying extent of the alphabetical distortion between the parties evident in Table 1.

Overall Position on the Ballot

Up to this point we have been exclusively concerned with the effect of rank within the party on the first preference vote obtained by a candidate. The popular impression seems to be that a candidate's rank on the ballot as a whole is also important. It seems to be widely believed, for example, that the position of Adams, at the top of our fictitious ballot, would bestow on him a special electoral advantage. Similarly it could be argued that Smith's position, in last place on the ballot, would tend to increase his first preference vote. As a test of the influence of the effect of overall rank on the ballot on voting patterns, we have compared the proportions of their parties' first preference votes obtained by two sets of candidates. We confined our attention to those candidates who were in first (last) rank among the candidates of their own party, and distinguished between those who were in first (last) position on the ballot paper and those who were preceded (succeeded) by a candidate of another party. Table 6 sets out the results of this investigation. It may be seen that the difference between the proportions of the parties' first preference votes received by the two types of candidates is not on average large, nor is it always in the expected direction. The number of constituencies involved in some of these comparisons is very small, and any judgement on the significance of these findings is deferred to the more extensive statistical analysis, below.

A further possibility is that a party attracts additional votes by having a candidate in first or last position on the ballot. If this is found to be the case, it would lend support to the hypothesis of the 200 or 300 "illiterate or semi-illiterate" voters mentioned above. Table 7 summarises the association between a party's share of the valid poll and the affiliation of the candidates in first and last place on the ballot. The data are tabulated according to the number of candidates put forward by the party in the constituency, which is closely related to the total number of candidates on the ballot. It may be seen

TABLE 6: *Percentage of party's first preference vote in constituency received by candidates who were alphabetically first (last) among the candidates from their party in the constituency classified by whether or not they were in first (last) position on the ballot. General Election, 1973*

	Incumbents		Non-incumbents	
	<i>Candidate in first position on ballot</i>	<i>Candidate first in party but not in first position on ballot</i>	<i>Candidate in first position on ballot</i>	<i>Candidate first in party but not in first position on ballot</i>
	<i>Three candidates from party in constituency</i>			
Fianna Fáil	44.9 (7)	49.3 (10)	31.9 (7)	33.8 (5)
Fine Gael	57.4 (6)	55.9 (7)	28.9 (3)	26.4 (6)
Labour Party	—	—	—	—
	<i>Two candidates from party in constituency</i>			
Fianna Fáil	64.1 (4)	40.2 (6)	—	—
Fine Gael	69.8 (3)	66.2 (8)	52.6 (3)	38.8 (4)
Labour Party	—	—	—	—
	<i>Candidate in last position on ballot</i>	<i>Candidate last in party but not in last position on ballot</i>	<i>Candidate in last position on ballot</i>	<i>Candidate last in party but not in last position on ballot</i>
	<i>Three candidates from party in constituency</i>			
Fianna Fáil	42.8 (3)	41.0 (9)	25.0 (4)	21.0 (13)
Fine Gael	54.2 (1)	29.8 (5)	21.8 (7)	19.8 (9)
Labour Party	80.0 (1)	64.6 (1)	3.4 (1)	20.3 (4)
	<i>Two candidates from party in constituency</i>			
Fianna Fáil	63.5 (2)	51.0 (7)	—	—
Fine Gael	58.2 (1)	59.7 (4)	43.0 (5)	29.5 (8)
Labour Party	—	—	42.6 (2)	40.1 (3)

NOTES:

(a) The percentages recorded above are the average of the percentages in the constituencies in question.

(b) The number of constituencies involved in each calculation is given in parentheses.

(c) — indicates that party did not have candidates in both situations.

that the evidence does not support the view that having a candidate first on the ballot exercises a strong influence on the party's share of the valid poll, but there is more support for the hypothesis that having a candidate in last place raises a party's share of the valid poll. (It is of interest that the only two candidates not members of a major party who were elected in this Election were respectively in first and last place on their ballot papers.) The apparent importance of being in last place on the ballot sheds light on the fact that,

among Labour Party and non-party candidates, those with P-Z names obtained more than their share of the first preference vote (see Table 3).¹⁵ Once again, the assessment of the statistical significance of these findings is deferred.

As a further test of the influence of first and last position on the ballot, we examined all cases in which the candidate in first or last place in a constituency changed between the Election of 1969 and 1973 from a member of one party to a member of another. Table 8 sets out the results of this exercise. It is clear that, for all three parties, where the party's candidate was *displaced* from the top position on the ballot in 1973, the party *improved* on its national performance. In cases where Fianna Fáil and Fine Gael were *displaced* from last position on the ballot in 1973, they also *improved* on their national performance. The Labour Party actually did relatively worse in constituencies where its candidates obtained first or last position on the ballot in 1973 than in other constituencies. Thus, the comparison of 1969 and 1973 results suggests that having a candidate in first or last position on the ballot has little, if any, effect on the parties' performance in a constituency in one election compared with another.

TABLE 7: *Party's share of valid poll in constituencies classified according to whether party had a candidate in first (last) position on ballot. General Election, 1973*

	(Percentages)			
	<i>Party had candidate in first position on ballot</i>	<i>Party did not have candidate in first position on ballot</i>	<i>Party had candidate in last position on ballot</i>	<i>Party did not have candidate in last position on ballot</i>
	<i>Three candidates from party in constituency</i>			
Fianna Fáil	46.4 (14)	44.8 (15)	44.4 (7)	45.9 (22)
Fine Gael	35.6 (9)	38.0 (13)	39.9 (8)	35.4 (14)
Labour	—	25.1 (7)	28.4 (2)	23.8 (5)
	<i>Two candidates from party in constituency</i>			
Fianna Fáil	48.1 (5)	51.3 (6)	52.4 (2)	49.3 (9)
Fine Gael	27.9 (5)	33.6 (13)	36.0 (6)	30.0 (12)
Labour	—	17.1 (7)	16.9 (2)	17.2 (5)
	<i>One candidate from party in constituency</i>			
Labour	15.3 (2)	11.7 (19)	19.2 (4)	10.3 (17)

NOTE: Number of constituencies in parentheses.

¹⁵In the light of these findings, the remarks of the then Minister for Local Government, Mr Blaney, during the 1963 Dáil debate, assume a new significance: "So long as you are not cluttered up and crowded out in the middle, you are all right. At either end of the paper, you have a good chance. If someone knows you are at the bottom he will not miss the bottom. He will not miss the top either. If you are in the middle, the possibility is your bitterest enemy will get your vote". Dáil Debates, Vol. 200, No. 3, Cols. 517, 518.

TABLE 8: *Party's share of valid poll in 1973 as percentage of its share in 1969*

Fianna Fáil:	
All constituencies	101.3
Constituencies where a Fianna Fáil candidate was FIRST on ballot in 1973 but not in 1969 (9 cases)	103.1
Constituencies where Fianna Fáil candidate was FIRST on ballot in 1969 but not in 1973 (3 cases)	103.2
Constituencies where a Fianna Fáil candidate was LAST on ballot in 1973 but not in 1969 (5 cases)	106.0
Constituencies where a Fianna Fáil candidate was LAST on ballot in 1969 but not in 1973 (6 cases)	104.0
Fine Gael:	
All constituencies	102.8
Constituencies where a Fine Gael candidate was FIRST on ballot in 1973 but not in 1969 (3 cases)	108.9
Constituencies where a Fine Gael candidate was FIRST on ballot in 1969 but not in 1973 (3 cases)	105.9
Constituencies where a Fine Gael candidate was LAST on ballot in 1973 but not in 1969 (5 cases)	110.8
Constituencies where a Fine Gael candidate was LAST on ballot in 1969 but not in 1973 (5 cases)	102.2
Labour Party:	
All constituencies*	84.0
Constituencies where a Labour Party candidate was FIRST on ballot in 1973 but not in 1969 (1 case)	64.3
Constituencies where a Labour Party candidate was FIRST on ballot in 1969 but not in 1973 (6 cases)	85.0
Constituencies where a Labour Party candidate was LAST on ballot in 1973 but not in 1969 (3 cases)	77.0
Constituencies where a Labour Party candidate was LAST on ballot in 1969 but not in 1973 (7 cases)	83.9

*Constituencies where the Labour Party ran candidates in both the 1969 and 1973 elections.

Transfer Votes

A further aspect of voting patterns under the system of the Single Transferable Vote may be documented from the 1973 Election results. There is some evidence in Tables 4 and 5 of a slight tendency for candidates who ranked last of three in a party to have done worse in terms of election or defeat than would have been expected on the basis of their first preference votes. Thus, last-ranked candidates (non-incumbents) received 35.5 per cent of their parties' first preference votes, but accounted for only 31.2 per cent of the elected T.D.s. Among Fine Gael non-incumbents, those in second position received the lowest average first preference vote (2,382, compared with 3,409 and 2,424 for those in first and last rank, respectively), but had the highest proportion of candidates elected—3 out of 14, compared with 1 out of 9 and 2 out of 16 in the other ranks.

Non-incumbents of course tend to be quite dependent on transfers in gaining election. It is easy to imagine that once a voter has selected the candidate to whom he gives his first preference vote the position of the remaining candidates in the same party affects their chances of receiving his second and third preferences. On our fictitious ballot, if a voter "votes the Fine Gael Ticket", for example, we have seen that he is most likely to give his first preference to Carton. If Carton receives the first preference vote, then it seems reasonable to assume that the voter is more likely to vote his second preference for Dignan and his third preference for O'Kelly, rather than to give his second preference to O'Kelly and his third to Dignan. Similarly, if the candidate in third rank among these three gets the first preference vote (itself a less common occurrence), it seems more likely that the one in the second rank would get the second preference and the one at the top would get the third preference. When the candidate in the middle gets the first preference, it seems about equally likely that either of the other two would get the second or third preference. These voting patterns may be illustrated from our fictitious ballot as follows: (ignoring the non-Fine Gael candidates)

	<i>Voting Pattern</i>					
	A	B	C	D	E	F
			<i>(Preferences)</i>			
Carton, M. (F. G.)	1	1	2	3	3	2
Dignan, G. A. (F. G.)	2	3	1	1	2	3
O'Kelly, D. (F. G.)	3	2	3	2	1	1

There are two possible patterns of transfer votes corresponding to each of the three possible first preference votes. Our hypothesis is that voting pattern *A* is more frequent than *B*, and *E* than *F*. We expect little difference between *C* and *D*. These hypothesis can be tested by looking at the pattern of transfers from candidates such as Carton, Dignan and O'Kelly, provided the distribution of their votes occurs when there are still two candidates from their party in the contest. Obviously, this can happen for only one of the candidates in a constituency where the party runs three candidates. In Table 9 the relevant data are summarised, showing the proportion of transfers going to candidates

TABLE 9: *Distribution of transfers within a party according to alphabetical rank of candidates. General Election, 1973*
(Two candidates from the party still in the contest at the time of the distribution)

<i>Alphabetical rank within party of candidates receiving transfers:</i>	<i>Fianna Fáil</i> <i>No. per cent</i>	<i>Fine Gael</i> <i>No. per cent</i>	<i>Labour Party</i> <i>No. per cent</i>	<i>Three major parties</i> <i>No. per cent</i>
<i>Candidates whose votes were distributed ranked first within party</i>				
2	13,812 68.5	7,071 65.3	1,922 80.6	22,805 68.3
3	6,359 31.5	3,761 34.7	464 19.4	10,584 31.7
<i>Total</i>	20,171 100 (10)*	10,832 100 (8)	2,386 100 (1)	33,389 100 (19)
<i>Candidates whose votes were distributed ranked second within party</i>				
1	6,688 52.3	3,610 44.4	374 39.0	10,672 48.8
3	6,090 47.7	4,521 55.6	586 61.0	11,197 51.2
<i>Total</i>	12,778 100 (6)*	8,131 100 (5)	960 100 (1)	21,869 100 (12)
<i>Candidates whose votes were distributed ranked third within party</i>				
1	6,951 42.1	3,319 34.3	1,814 29.9	12,084 37.5
2	9,542 57.9	6,355 65.7	4,244 70.1	20,141 62.5
<i>Total</i>	16,493 100 (11)*	9,674 100 (7)	6,058 100 (4)	32,225 100 (22)

*Number of distributions on which based.

NOTES:

(a) If these percentages are regarded as samples from a point binomial distribution, *all* of the differences between pairs of ranks recorded above are highly significant statistically.

(b) The distribution of surplus votes is based on the total second preference vote. The surplus votes included in the above table have not been "grossed up" to reflect the total number of second preferences involved, since it is only the surplus that affects the election results.

of the same party according to their rank among the party's candidates. The results confirm our expectations very strongly. It seems to be quite common for a voter, having chosen which of a party's candidates gets his first preference vote, to allow alphabetical considerations to dictate the allocation of his second preference vote.¹⁶

These patterns also hold for votes transferred across party lines. There were 16,185 votes transferred to candidates of parties that had three remaining candidates ranked alphabetically below the candidate whose transfers were being distributed (equivalent to what would happen on the elimination or election of Adams on our ballot). Of these transfers 42.5 per cent went to the candidates who ranked first among the three, 37.4 to the second-ranked and only 20.1 per cent to the third-ranked. Where there were only two remaining candidates in a party at the time of the distribution, the first-ranked candidates obtained 56.3 per cent of the transfers, the second-ranked 43.7 per cent (there were 7,984 transfers involved). These cross-party transfers tend to be more numerous in a Coalition situation than in the 1969 Election.

This factor may be seen to operate to the detriment of those who rank last, and to a smaller extent, those who rank first, among the party's candidates. The candidate in the middle benefits due to his relative proximity to both the first and the third candidate. The foregoing calculations concentrate exclusively on rank and take no account of the proximity on the ballot of the candidates involved in the distribution. In general we believe that rank is of more importance than proximity, although in many situations both factors may play a role. To explore this approach, we calculated the effect of proximity on the transfers received by the Fine Gael party. Of the 58,600 transfers received by Fine Gael candidates while there were still at least two Fine Gael candidates in the contest, 59.1 per cent went to the candidate who was "nearest" the name whose transfers were being distributed. This analysis of the effect of proximity seems to support the view that this is also a meaningful way of analysing the manner in which second and lower preference votes are assigned.

¹⁶The data of Table 9 were analysed separately for distributions involving elected and eliminated candidates without any differences between the two situations emerging.

Regression Analysis of Voting Behaviour

First Preference Votes

MANY readers may be content to take the tabulations of the 1973 Election results as significant in themselves, without regard to technical statistical considerations. This point of view gains support from the consideration that Tables 3-9 summarise *all* the votes cast in the specified situations in the Election. Our commentary has, however, tended to use these data as the basis for inference about voting behaviour of a wider significance than merely the outcome of one election. We have implied that the patterns evident in the 1973 returns may be deemed characteristic of voting behaviour under Proportional Representation with alphabetically arranged ballots. To substantiate such inferences it is necessary to undertake more intensive statistical testing.

We have adopted the following approach to the statistical testing of hypotheses based on the 1973 Election data. Treating the number of first preference votes obtained by a candidate as the dependent variable, a number of "independent variables" or regressors have been defined. These regressors were almost all dichotomous (0, 1) in nature, designed to reflect whether or not a candidate fell into a specified category or situation. Thus, the regression analysis performed on these data consisted of regressing a continuous dependent variable on a set of dichotomous or dummy regressors. This procedure is equivalent to an analysis of variance approach, but yields estimates of the magnitude of the effects of various situations on candidates' first preference votes.

The principal regressors used were

$X_1 = 1$ if candidate was first in alphabetical rank among his party's candidates in constituency,
0 otherwise.

$X_2 = 1$ if candidate was third in alphabetical rank among his party's candidates in constituency,
0 otherwise.

$X_3 = 1$ if candidate was in first place on the ballot in his constituency,
0 otherwise.

$X_4 = 1$ if candidate was in last place on the ballot in his constituency,
0 otherwise.

These four variables measure the candidates' alphabetical rank among all candidates (X_3 and X_4) and among their party's candidates (X_1 and X_2) in a constituency. The statistical significance of these variables is a test of the hypotheses discussed in this paper. Our main emphasis has been on the influence of rank among party candidates (X_1 and X_2), but we saw that there was some evidence to suggest that a position at one or other extremity of the ballot (X_3 and X_4) also influenced the number of votes obtained. It should be stressed that our hypothesis concerning position at either extremity of the ballot is a relatively crude one, since presumably being second-last may be more advantageous than being third-last, and so on. We have not tested more detailed hypotheses of this nature.

In addition to these variables, other regressors were introduced to control for the effect of factors that might be expected to exercise a major influence on voter behaviour:

$X_5 = 1$ if candidate was an incumbent,
0 otherwise.

$X_6 = 1$ if candidate was a member of Fine Gael,
0 otherwise.

$X_7 = 1$ if candidate was a member of the Labour Party,
0 otherwise.

$X_8 = 1$ if candidate's party ran only two candidates in constituency,
0 otherwise.

$X_9 = 1$ if candidate was party's only candidate in constituency,
0 otherwise.

$X_{10} = 1$ if candidate was a close relative of an incumbent (see footnote 5),
0 otherwise.

$X_{11} =$ the number of incumbents (other than the candidate) from the candidate's party running in the constituency.

Numerous other, more explicitly "political", considerations might be taken into account in a more detailed study, but these variables seemed adequate to allow us to isolate the net influence of variables 1 to 4.

Our regression model may be viewed as an attempt to isolate the effect, singly or in combinations, of the 10 situations measured by variables X_1 to X_{10} ,

TABLE 10: Regression coefficients of candidates' first preference votes regressed on alphabetical rank among candidates of same party in constituency and position on ballot paper, with *t*-ratios in parentheses. General Election, 1973

Equation number	Intercept	First among party's candidates X_1	Third among party's candidates X_2	First place on ballot X_3	Last place on ballot X_4	Other variables included in regression	\bar{R}^2	F-value (degrees of freedom)
1	2655** (7.22)	1,540** (2.79)	488 (1.01)	<i>Fianna Fáil: 3 candidates in a constituency</i> 183 (0.28) 503 (0.69)		X_5, X_{10}	0.48	14.02** (6,80)
2	6188** (4.70)	-702 (0.53)		<i>Fianna Fáil: 2 candidates in a constituency</i> 1,724 (1.13) 1,826 (0.92)		X_5	0.0	0.97 (4,17)
3	2620** (6.79)	747 (1.31)	-1,092* (1.97)	<i>Fine Gael: 3 candidates in a constituency</i> -221 (0.32) 1,367+ (1.91)		X_5, X_{10}	0.56	14.99** (6,59)
4	2676** (6.09)	1,267* (2.12)		<i>Fine Gael: 2 candidates in a constituency</i> -140 (0.20) 1,619* (2.29)		X_5	0.46	8.55** (4,31)
5	497 (0.83)	2,174** (2.90)	1,005 (1.21)	<i>Labour Party: 3 candidates in a constituency</i> -626 (0.53)		X_5	0.70	12.53** (4,16)
6	1706* (2.67)	271 (0.36)		<i>Labour Party: 2 candidates in a constituency</i> 871 (0.79)		X_5	0.63	8.44** (3,10)
7	2699** (6.08)			<i>Labour Party: 1 candidate in a constituency</i> 1,985 (1.56) 1,209 (0.93)		X_5	0.41	5.60** (3,17)
8	2712** (9.56)	1,419** (3.99)	5 (0.0)	<i>Three major parties: 3 candidates in a constituency</i> -62 (0.14) 678 (1.42)		X_5, X_6, X_7, X_{10}	0.55	27.39 (8,165)
9	4988** (8.81)	510 (1.01)		<i>Three major parties: 2 candidates in a constituency</i> 499 (0.75) 1,307+ (1.96)		X_5, X_6, X_7	0.59	15.32** (6,65)
10	3113** (11.99)	929** (3.26)	-274 (0.87)	<i>Three major parties: all candidates</i> 366 (1.01) 1,028** (2.90)		$X_5, X_6, X_7, X_8, X_9, X_{10}$	0.54	32.33** (10,256)
11	6154** (15.80)	784 (1.62)	-633 (1.05)	<i>Three major parties: all incumbents</i> 281 (0.48) 1,328+ (1.73)		X_6, X_7, X_8, X_9	0.06	1.87+ (8,110)
12	3768** (9.66)	968** (2.92)	-37 (0.11)	<i>Three major parties: all non-incumbents</i> 638 (1.46) 800* (2.45)		$X_6, X_7, X_8, X_9, X_{10}, X_{11}$	0.39	10.32** (10,137)

**Significant, 99 per cent confidence level. * = Significant, 95 per cent confidence level. + = Significant, 90 per cent confidence level. (Two-tailed tests)

The reference situation (whose average first preference vote is estimated by the equation's intercept) is a Fianna Fáil non-incumbent candidate who is alphabetically second among the three candidates from his party in his constituency, and who is in neither first nor last position on the ballot.

Table 10 sets out the coefficients estimated for the four principal regressors for the entire sample of 267 major party candidates and for several sub-samples.¹⁷ The estimated *t*-values of the coefficients are also shown in Table 10, as well as the \bar{R}^2 and *F*-value for each equation. It may be seen that X_1 (first among party's candidates) is significant in six of the equations in Table 10 and sometimes at a very high confidence level. Last position on ballot (X_4) is also significant in some important equations. Third among party's candidates (X_2) and first position on ballot (X_3) are generally not significant at any high confidence level, although the predominance of coefficients with the expected sign is to be noted. There is, however, considerable variation between the equations in the estimates of the individual coefficients, as is to be expected in the light of the relatively large standard errors associated with these coefficients.

The high¹⁸ \bar{R}^2 s recorded in equations 1 to 9 (with the exception of equation 2) reflects, of course, the importance of factors such as incumbency (X_5) and party affiliation (X_6, X_7). Hence it is of great interest to see that when the sample is divided into incumbents and non-incumbents, the \bar{R}^2 falls almost to zero for incumbents (equation 11) but remains relatively high (0.39) for non-incumbents (equation 12).¹⁹ None of the variables in equation 11 is statistically significant, nor is the whole equation significant by the *F*-test although the individual coefficients all have the expected signs. On the other hand, in equation 12 several variables are highly significant (including X_1 and X_4) and the overall equation is very significant by the *F*-test. These two equations are given in full below: (dependent variable = candidate's first preference vote)

Incumbents:

$$6154 + 784X_1 - 633X_2 + 281X_3 + 1328X_4 - 681X_5$$

(15.80) (1.62) (1.05) (0.48) (1.73) (1.64)

$$-998X_7 + 380X_8 + 321X_9 \quad \bar{R}^2 = 0.06$$

(1.52) (0.87) (0.25)

¹⁷For various sub-samples, the reference situation must be appropriately adjusted. For the Labour Party candidates running in constituencies where only one Labour Party candidate ran (equation 7 in Table 10), the reference situation is a non-incumbent Labour Party candidate who is in neither first nor last position on the ballot.

¹⁸High, that is, in view of the very limited range of factors measured by our regressors.

¹⁹The separation of incumbents and non-incumbents is of interest from a political viewpoint, even though the *F*-test for differential slopes is not significant for these two equations.

Non-incumbents:

$$3768 + 968X_1 - 37X_2 + 638X_3 + 899X_4$$

(9.66) (2.92) (0.11) (1.46) (2.45)

$$-1183X_6 - 2371X_7 + 799X_8 + 1479X_9$$

(4.20) (6.39) (2.48) (2.67)

$$+4203X_{10} - 533X_{11} \quad \bar{R}^2 = .388$$

(4.10) (2.41)

It is striking that incumbents' votes seem largely unrelated to the variables we have included in our analysis, as is clear from the near-zero \bar{R}^2 . The estimated coefficients of variables X_6 to X_{11} , and the contrasts between incumbents and non-incumbents are of great interest and of a wider significance than the performance of variables X_1 to X_4 , which are the main focus of the present study. Detailed discussion of these findings would, however, be out of place in the present context.

Both of these equations include "intercept shift" dummy variables to take account of such major factors as party affiliation, number of party candidates in constituency, etc. A test was performed to assess whether or not the slopes of variables X_1 to X_4 are homogeneous in all of these situations (is there, for example, a significant difference between the slope of X_1 between the three major parties or between cases where a party ran three, two, or only one candidate?). This test consisted of introducing "interaction variables" defined as the product of X_1 , X_2 , X_3 and X_4 separately with each of X_6 , X_7 and X_8 . In the case of incumbents, the \bar{R}^2 without any interaction terms was 0.072, and the maximum \bar{R}^2 attained with interactions was 0.077. For non-incumbents the R^2 rose from 0.388 to a maximum of 0.408. In both cases, there was some evidence of significant interaction between first place on ballot and the Labour Party, and first rank in party and the Labour Party. These interactions may be summarised for non-incumbents as follows: (with standard errors in parentheses)

<i>Net effect of:</i>	<i>Candidate from</i>	
	<i>Labour Party</i>	<i>Fianna Fáil or Fine Gael</i>
First place on ballot (X_3)	1,965 (1,021)	14 (470)
First among party candidates (X_1)	36 (594)	1,485 (387)

(The coefficients in the equation above may be seen as a weighted average of these.)

TABLE II: *Estimated net effect^a of various situations on a candidate's first preference vote, with standard errors^b in parentheses*

<i>First among party's candidates and first position on ballot</i>	<i>First among party's candidates but not first position on ballot</i>	<i>Third among party's candidates but not last position on ballot</i>	<i>Third among party's candidates and last position on ballot</i>
<i>Incumbents</i>			
+1,066† (565)	+784 (485)	-633 (601)	+695 (837)
<i>Non-incumbents</i>			
+1,606** (407)	+968** (333)	-37 (334)	+863* (418)

**Significantly different from zero, 99 per cent confidence level.

*Significant, 95 per cent confidence level.

†Significant, 90 per cent confidence level.

^aThat is, estimated increase or decrease in vote by comparison with candidate who was alphabetically second among those put forward by his party in a constituency, and in neither first nor last position on the ballot. Based on equations 11 and 12 in Table 9.

^bFor first and third columns, based on formula $\text{Var. } (X_1 + X_3) = \text{Var. } X_1 + \text{Var. } X_3 + 2 \text{ Cov. } X_1 X_3$.

In evaluating the results for the first four variables it must be borne in mind that there is a high correlation between X_1 and X_3 and between X_2 and X_4 : most of those who were in first position on the ballot were also first of three or two candidates from their party, and most of those who were last on the ballot were also last of three candidates from their party.²⁰ The correlation coefficients are:

	<i>Incumbents</i>	<i>Non-incumbents</i>
X_1 and X_3	0.50	0.47
X_2 and X_4	0.24	0.31

These intercorrelations are not unduly high in the light of the R^2 for the equations, but in situations where a candidate was coded 1 in any two of these categories, more importance should be attached to the sum of the coefficients than to either of them singly. For this reason, equations 11 and 12 have been used to calculate the results presented in Table II. In this table, the estimated effect on first preference votes of being in various combinations of situations may be seen. (The results for incumbents are not significantly different from zero in any case.) It may be seen that the most advantageous situation is to be both first among the party's candidates and in first position on the ballot, the next most advantageous situation is first among the party's candidates even

²⁰The main exceptions are those Labour Party candidates who were in first or last position on the ballot in constituencies where only one Labour Party candidate ran.

while not in first position on the ballot. The least advantageous situation is to be third among the party's candidates while not in last position on the ballot. These findings must be used in conjunction with the standard errors recorded in Table 11, which in some cases would not support the hypothesis of a significant difference between the effects of various situations. This analysis is an extension of that presented in Table 5 and shows that, for non-incumbents at least, the vote obtained is significantly influenced by position on ballot and position among party's candidates.

Parties' Share of Valid Poll

In the earlier analysis, the importance of first and last position on the ballot was assessed by examining the share of the valid poll obtained by the parties in constituencies where their candidates occupied these positions. As a formal test of the hypotheses that first and/or last position on the ballot influences a party's share of the poll, we now use the percentage of the total first preference vote in a constituency obtained by a party as the dependent variable in a regression analysis employing the following regressors:

X_{12} = the number of incumbents put forward by the party in a constituency divided by the total number of incumbents running in the constituency.²¹

X_{13} = the number of non-incumbents put forward by the party divided by the total number of non-incumbents in the constituency.

and X_3 , X_4 —dummies for first and last place,

X_6 , X_7 —dummies for Fine Gael, Labour Party.

(X_{12} and X_{13} are not dummy variables, but they are restricted in range from 0 to 1, and assume only a limited number of values in this range.)

In Table 12 the results of this analysis are presented. The first equation is very satisfactory (in the light of \bar{R}^2 , etc.) but it is clear from equations 2, 3 and 4 that disaggregation is important, because the estimated coefficients of the regressors differ quite markedly between the three major parties. The extremely high levels of significance of X_{12} and X_{13} are satisfactory, but are not our main concern. It is however, worth drawing attention to the fact that the coefficient of X_{13} was always very much smaller than that of X_{12} : it is clearly far more important for a party to put forward a high proportion of the incumbents, than of the non-incumbents, in a constituency. Our main interest lies in the coefficients of X_3 and X_4 . It may be seen that neither of these is

²¹The two "sons of incumbents" were classified as incumbents in this analysis.

TABLE 12: Regressions on parties' share of valid poll in each constituency. General Election, 1973
(regression coefficients, with t-ratio in parentheses)

Equation number	Intercept	Independent variables						\bar{R}^2	F-value (degrees of freedom)
		Incumbents from party divided by total number of incumbents in constituency X_{12}	Non-incumbents from party divided by total number of non-incumbents in constituency X_{13}	Party candidate first on ballot X_3	Party candidate last on ballot X_4	Fine Gael X_6	Labour X_7		
1	25.24** (10.26)	32.56** (9.88)	Three major parties combined 18.77** (4.91)	-0.05 (0.04)	2.55* (2.14)	-9.53** (7.56)	-18.53** (10.02)	0.86	125.29** (6,112)
2	31.56** (8.03)	27.04** (4.86)	Fianna Fáil 11.64 + (1.78)	-1.60 (0.83)	-1.74 (0.79)		0.35	6.61** (4.37)	
3	17.60** (5.00)	28.34** (5.38)	Fine Gael 15.20* (2.42)	0.27 (0.15)	4.61* (2.31)		0.47	10.21** (4.37)	
4	-0.84 (0.37)	51.38** (8.40)	Labour Party 38.64** (5.26)	6.94* (2.11)	3.71 + (1.92)		0.73	23.46** (4.30)	

**=Significant, 99 per cent level; *=Significant, 95 per cent level; +=Significant, 90 per cent level.

Notes: (a) For equation 1, Fianna Fáil constitutes the reference category.

(b) Dependent variable is measured as per cent.

(c) The value of the F-test for differential slopes between the three parties is 2.56, with 8 and 104 degrees of freedom, significant at the 95 per cent level.

(d) The relatively low \bar{R}^2 for equation 2 may be due, at least in part, to the small variance of the dependent variable. The coefficients of variation for the dependent variables of the four equations are, in order, 43.7 per cent, 14.2 per cent, 21.5 per cent, and 53.5 per cent.

significant for Fianna Fáil (equation 2), but both are for the Labour Party and X_4 is for Fine Gael. Thus, having a candidate in last place on the ballot does seem to have attracted votes to Fine Gael and the Labour Party, and having a candidate in first place attracted votes to the Labour Party.²² These results suggest that the effect of being last, and to a lesser degree, first, on the ballot is not so much to attract votes away from other candidates of the same party as to attract votes away from candidates of other parties. The existence of this effect, and the fact that it seems to operate for Fine Gael and Labour only, is an important finding.²³ It should, however, be recalled that the net effect of simply being first among the candidates of one's party has been seen in Tables 9 and 10 to exceed that of being in first or last place on the ballot.²⁴

In concluding this section, it may be claimed that the regression analysis supports the conclusions arrived at by the simple tabulation of the statistical material. Although our analysis has not been very intensive, we believe we have shown certain regularities in the data that have a much wider interest than simply establishing the existence of alphabetical voting. Refinements of the analysis used here have occurred, and been suggested, to us during the course of the present study. It might be desirable, for example, to refine our measure of "incumbency" to take account of whether a candidate held ministerial rank. Among non-incumbents, it has been suggested that whether the candidate ran in the last election may influence his vote in this election. Both these points might be taken care of by using "first preference vote in previous election" as an independent variable, but some difficulties may arise from that procedure. Similarly, it would be possible to refine the analysis so that a continuous variable is used to replace "first" or "last" on ballot, and statistical criteria are used to assess the optimal position on a ballot of a given size. Furthermore, the highly significant intercept terms in the shares' equations (Table 12, equations 3 and 4) suggest that further attention needs to be paid to the specification of these equations, with a view to exploring the existence of non-linearities. We have not pursued these possibilities in the present paper, believing as we do that although refinements might increase the sophistication of the analysis, they are unlikely to alter our main conclusions about alphabetical voting.

²²This finding is consistent with our earlier discussion of the interaction between Labour Party and first on ballot. However, it is important to point out that the Labour Party occupied the first position on the ballot in only two constituencies.

²³We tested the hypothesis that the two Coalition parties gained at each others' expense, and found less support for this hypothesis than for the one tested in Table 12.

²⁴This holds true for non-incumbents, although the differences may not be statistically significant. For incumbents, last place on ballot seems to be worth more than first among party's candidates, but both coefficients are subject to very large standard error.

The 1969 General Election

IN order to test our hypotheses on additional data, we have performed some analysis on the 1969 Election. This Election differed from that of 1973 in a number of ways, most importantly in that there were 17 cases where the major parties ran 4 candidates in a constituency (compared with 2 cases of 4 candidates and 2 of 5 in 1973, all of which were excluded from our analysis). Moreover, the number of major party non-incumbents running in 1969 was 229, compared with 148 in 1973. Finally, in 1969 Fine Gael and the Labour Party did not form a Coalition. Some or all of these factors may have implications for the voting patterns we have shown existed in the 1973 Election.

In Table 13 the average first preference vote received by candidates is set out, classified by incumbency, number of candidates running, and rank among candidates from the party. If attention is confined to the last column, (incumbents and non-incumbents combined) it may be seen that those in first rank always obtained the highest average first preference vote: this is in conformity with Table 4, for the 1973 Election. When, however, incumbents and non-incumbents are studied separately, the pattern is less clear. In the cases where a party ran four candidates, the second rank among the four obtained the lowest first preference vote, but those in third place did quite well. Where there were three candidates from a party in a constituency, incumbents conformed to the expected pattern, but non-incumbents did not. When there were two candidates, non-incumbents conformed to the expected pattern, but incumbents did not. In Table 14, the results are set out in terms of candidates and T.D.s elected. The same pattern of conformity and discrepancy with the expected pattern is evident in this table as was seen in Table 13. The most striking departure from the 1973 pattern is the very high proportion of middle-ranked non-incumbents who were elected in cases where the party ran three candidates (13 out of 40, compared with only 6 out of 37 first-ranked candidates). At first this may appear very strong evidence against the hypothesis that the patterns described for the 1973 Election also operated in 1969. It should, however, be recalled that Table 13 showed a difference of only 62 (or 2 per cent) between the average first preference votes of candidates in these ranks. The very high proportion of second-ranked candidates elected must, therefore, reflect the advantage enjoyed by these candidates in obtaining transfer votes. Looking at the within-party transfers received by second-ranked candidates, a pattern similar to that shown by Table 9 for 1973 emerges. Candidates who

TABLE 13: Average first preference vote per candidate, three major parties combined. General Election, 1969.

Alphabetical rank among candidates of same party in constituency	Incumbents	Non-incumbents	Total
<i>Four candidates from party in constituency</i>			
1	6,737	3,060	3,925
2	4,826	1,302	2,131
3	6,768	2,210	2,746
4	5,389	1,721	2,369
<i>Three candidates from party in constituency</i>			
1	6,684	2,864	4,509
2	5,757	2,926	4,015
3	5,723	2,495	3,488
<i>Two candidates from party in constituency</i>			
1	5,429	2,973	3,623
2	6,787	1,841	2,587

ranked second out of three from the same party received 43,901 transfers from within their party when there were two candidates left at the time of the distribution, compared with 26,160 received by those in first rank, and 26,071 by those in third rank.

Thus the 62-vote (or 2 per cent) advantage in average first preference vote obtained by second-ranked candidates is overshadowed by the 266 (or 27 per cent) advantage in their average transfer from another candidate of the same party in situations where two party candidates remained in the race at the time of the distribution. This advantage in transfer votes reflects the voting pattern in which second preference is given to the party's candidate who is nearest the candidate who received the first preference vote. This feature of the 1969 results is consistent with the within-party transfer voting pattern discussed in connection with the 1973 Election.

Finally, the regression analysis developed for the 1973 results was applied to the 1969 data. Two additional variables were defined to cope with the 17 cases where a party ran 4 candidates, namely,

$$X_{14} = 1 \text{ if candidate is 4th among party's candidates,} \\ 0 \text{ otherwise}$$

$$\text{and } X_{15} = 1 \text{ if party ran four candidates in constituency,} \\ 0 \text{ otherwise}$$

The only equations run were for all incumbents and all non-incumbents. The results were (dependent variable = candidates first preference vote),

Incumbents:

$$\begin{aligned}
&6205 + 4X_1 + 108X_2 - 193X_{14} + 1360X_3 \\
&\quad (0.01) \quad (0.25) \quad (0.14) \quad (2.03) \\
&+ 136X_4 - 759X_6 - 1416X_7 + 386X_8 \\
&\quad (0.20) \quad (1.67) \quad (2.08) \quad (0.70) \\
&+ 2737X_9 + 310X_{15} \\
&\quad (2.37) \quad (0.43) \quad R^2=0.07
\end{aligned}$$

Non-incumbents:

$$\begin{aligned}
&3985 + 591X_1 + 15X_2 - 311X_{14} - 62X_3 \\
&\quad (10.54) \quad (1.81) \quad (0.08) \quad (0.49) \quad (0.13) \\
&- 142X_4 - 789X_6 - 2199X_7 \\
&\quad (0.34) \quad (2.26) \quad (5.44) \\
&+ 14X_8 - 354X_9 - 298X_{15} \\
&\quad (0.04) \quad (0.39) \quad (0.76) \\
&- 589X_{11} \\
&\quad (2.44) \quad R^2=0.14
\end{aligned}$$

As with the 1973 results, the equation is more successful for non-incumbents than for incumbents. However, the 1969 results are statistically far less conclusive than were the 1973 results. The only variables relating to position on

TABLE 14: *Number of candidates and T.D.s elected classified by alphabetical rank among candidates from same party. General Election, 1969*

<i>Alphabetical rank among candidates of same party in constituency</i>	<i>Incumbents</i>		<i>Non-incumbents</i>		<i>Total</i>	
	<i>Candidates</i>	<i>Elected</i>	<i>Candidates</i>	<i>Elected</i>	<i>Candidates</i>	<i>Elected</i>
<i>Four candidates from party in constituency</i>						
1	4	4	13	4	17	8
2	4	4	13	0	17	4
3	2	2	15	4	17	6
4	3	3	14	0	17	3
<i>Three candidates from party in constituency</i>						
1	28	26	37	6	65	32
2	25	16	40	13	65	29
3	20	15	45	6	65	21
<i>Two candidates from party in constituency</i>						
1	9	6	25	6	34	12
2	12	11	22	2	34	13

the ballot paper that are significant for the 1969 data are first rank in party, X_1 , for non-incumbents (significant at the 10 per cent confidence level) and first place on the ballot, X_3 , for incumbents (significant at the 5 per cent level). The estimated coefficient of X_1 for non-incumbents is lower than that obtained for the 1973 data (591 compared with 968) but the coefficient for first place on ballot among incumbents is very large (1360, compared with only 281 for the 1973 data). Where the coefficients of the other variables included in these equations are significant, they broadly agree with those estimated for the 1973 data, but fewer of them are significant. The contrast with the 1969 results is most evident among non-incumbent candidates. It is possible to speculate that the larger number of non-incumbents may have led to fewer voters being influenced by position on the ballot paper in choosing between candidates within a party.

We believe that the findings of this brief analysis of the 1969 Election provide some further support for our general hypothesis that position on ballot influences the first preference and transfer votes obtained by candidates in Irish elections. But this investigation also suggests that these factors have operated in varying degree in different elections. This much was already evident from Table 2 and our survey of the historical background. Much further research could be done on the historical data in the hope of pinpointing the conditions under which alphabetical voting has been most important in Irish elections.

Summary of Findings

WE believe that this paper has established the following main points.

1. The alphabetical distribution of surnames among the T.D.s elected to Dáil Éireann in the 1973 General Election is markedly biased in comparison with that of a random sample of the Irish population. This bias is most evident in the overrepresentation of names beginning with A, B and C, which account for 33 per cent of the T.D.s, but only 20 per cent of the population. On the other hand, the M, N, O group is conspicuously underrepresented among T.D.s, accounting for only 15 per cent of their names, compared with 25 per cent of the general population. If the T.D.s were distributed exactly as the Irish population there would be 24 fewer deputies with A—G surnames.

2. A similar bias is evident among the names of the incumbent candidates who stood in the General Election, but the names of the non-incumbent candidates were distributed similarly to those of the general population.

3. The principal mechanism operating to produce this distortion is the advantage a candidate enjoys if he is alphabetically first among the candidates from his party in a constituency. It appears that a significant proportion of voters vote "the party ticket" by giving their first two or three preferences to the party's candidates in the order in which they appear on the ballot.

The average first preference vote received in the 1973 Elections by first-ranked non-incumbents in constituencies where their party ran three candidates was 1,462 higher than that received by those in second rank. We estimate that the net effect of being alphabetically first in this situation, after allowing for the influence of other relevant factors, is to increase the candidate's first preference vote by 968 (the standard error of this estimate is 333).

4. There is also evidence that voters are influenced by candidates' overall position on the ballot (as distinct from position relative to other members of the same party). In particular, being in the last position on the ballot appears to bestow some advantage on a candidate, and this partially offsets the disadvantage of being last among the candidates put forward by the party. The evidence suggests that Fine Gael and the Labour Party obtained a significantly higher share of the valid poll in constituencies where they had a candidate in last place on the ballot.

5. These effects (namely, 3 and 4 above) have been shown to operate with greater force on non-incumbents than on incumbents. It has also been seen that the level of statistical significance attached to these effects is much higher among non-incumbents. Thus the voting patterns discussed in this paper derive their main importance from their implications for the electoral prospects of candidates who are not members of the outgoing Dáil.

6. It was seen that incumbents were relatively favourably placed on the ballot papers compared with non-incumbents, being in particular far more likely to rank first among their party's candidates in a constituency. The disadvantages associated with a middle or low position on the ballot paper thus not only have a greater impact on non-incumbents than on incumbents, but non-incumbents are also considerably more likely to experience these disadvantages.

7. Once a voter has decided on his first preference vote, he appears to be strongly influenced in the allocation of lower preferences by the position on the ballot of the remaining candidates from the party of the candidate who received his first preference. This factor favours candidates in the middle of three in obtaining transfers, by virtue of their proximity to both the first and last-ranked candidates of their party.

8. The voting patterns described above appear to have been important in many of the Elections since the introduction of Proportional Representation with alphabetically arranged ballots in Ireland. The result is a much greater distortion in the alphabetical distribution of T.D.s' names than can be accounted for by the voting patterns in a single election. This is reflected in the distortion of incumbent candidates' names noted at 2, above.

9. A study of the 1969 General Election returns provided evidence of the operation of voting patterns similar to some of those revealed in the 1973 data.

Conclusion

If the analysis put forward in this paper is accepted, and if it is generally agreed that alphabetical influences on voting behaviour are undesirable, the remedial action is obvious. Reform could be achieved in two stages. The first stage would be to randomise the order in which names appear on the ballot paper in each constituency. No serious practical or administrative obstacle seems to stand in the way of this proposal. If implemented, it would, over a series of elections, remove the cumulative effects of the advantage currently enjoyed by candidates with names beginning with an early letter of the alphabet. This change would, according to our analysis, make itself felt most clearly among non-incumbents, thereby removing an arbitrary distortion from the election prospects of new candidates.

The reform of randomising the ballot would not, however, eliminate the advantage enjoyed by candidates who do well in the draw for position on the ballot in any one election. To obviate this problem a second reform would be required, such as the use of a "rotating ballot". This is a procedure under which the order of the candidates (first decided by a random draw) is rotated at regular intervals during the printing of a ballot, so that if for example there are 10 candidates in a constituency each candidate would head the ballot on one tenth of the papers. This system was used in New York City elections, from 1937 to 1947,²⁵ and similar schemes are common practice in market surveys and social research generally.

Obviously these proposals would complicate matters at both the printing and counting stages of an election, but their cost would be slight in relation to the total cost of a General Election.

²⁵Cf. Lakeman, *op. cit.*, p. 150 and p. 261.

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

Broadsheet Series:

- | | |
|---|---|
| 1. <i>Dental Services in Ireland</i> | P. R. Kaim-Caudle |
| 2. <i>We Can Stop Rising Prices</i> | M. P. Fogarty |
| 3. <i>Pharmaceutical Services in Ireland</i> | P. R. Kaim-Caudle |
| | assisted by Annette O'Toole and Kathleen O'Donoghue |
| 4. <i>Ophthalmic Services in Ireland</i> | P. R. Kaim-Caudle |
| | assisted by Kathleen O'Donoghue and Annette O'Toole |
| 5. <i>Irish Pensions Schemes, 1969</i> | P. R. Kaim-Caudle and J. G. Byrne |
| | assisted by Annette O'Toole |
| 6. <i>The Social Science Percentage Nuisance</i> | R. C. Geary |
| 7. <i>Poverty in Ireland: Research Priorities</i> | Brendan M. Walsh |

Publication Series:

- | | |
|--|---|
| 1. <i>The Ownership of Personal Property in Ireland</i> | Edward Nevin |
| 2. <i>Short Term Economic Forecasting and its Application in Ireland</i> | Alfred Kuehn |
| 3. <i>The Irish Tariff and The E.E.C.: A Factual Survey</i> | Edward Nevin |
| 4. <i>Demand Relationships for Ireland</i> | C. E. V. Leser |
| 5. <i>Local Government Finance in Ireland: A Preliminary Survey</i> | David Walker |
| 6. <i>Prospects of the Irish Economy in 1962</i> | Alfred Kuehn |
| 7. <i>The Irish Woollen and Worsted Industry, 1946-59: A Study in Statistical Method</i> | R. C. Geary |
| 8. <i>The Allocation of Public Funds for Social Development</i> | David Walker |
| 9. <i>The Irish Price Level: A Comparative Study</i> | Edward Nevin |
| 10. <i>Inland Transport in Ireland: A Factual Survey</i> | D. J. Reynolds |
| 11. <i>Public Debt and Economic Development</i> | Edward Nevin |
| 12. <i>Wages in Ireland, 1946-62</i> | Edward Nevin |
| 13. <i>Road Transport: The Problems and Prospects in Ireland</i> | D. J. Reynolds |
| 14. <i>Imports and Economic Growth in Ireland, 1947-61</i> | C. E. V. Leser |
| 15. <i>The Irish Economy in 1962 and 1963</i> | C. E. V. Leser |
| 16. <i>Irish County Incomes in 1960</i> | E. A. Attwood and R. C. Geary |
| 17. <i>The Capital Stock of Irish Industry</i> | Edward Nevin |
| 18. <i>Local Government Finance and County Incomes</i> | David Walker |
| 19. <i>Industrial Relations in Ireland: The Background</i> | David O'Mahony |
| 20. <i>Social Security in Ireland and Western Europe</i> | P. R. Kaim-Caudle |
| 21. <i>The Irish Economy in 1963 and 1964</i> | C. E. V. Leser |
| 22. <i>The Cost of Irish Industry, 1950-60</i> | Edward Nevin |
| 23. <i>A Further Analysis of Irish Household Budget Data, 1951-1952</i> | C. E. V. Leser |
| 24. <i>Economic Aspects of Industrial Relations</i> | David O'Mahony |
| 25. <i>Psychological Barriers to Economic Achievement</i> | P. Pentony |
| 26. <i>Seasonality in Irish Economic Statistics</i> | C. E. V. Leser |
| 27. <i>The Irish Economy in 1964 and 1965</i> | C. E. V. Leser |
| 28. <i>Housing in Ireland: Some Economic Aspects</i> | P. R. Kaim-Caudle |
| 29. <i>A Statistical Study of Wages, Prices and Employment in the Irish Manufacturing Sector</i> | C. St. J. O'Herlihy |
| 30. <i>Fuel and Power in Ireland: Part I. Energy Consumption in 1970</i> | J. L. Booth |
| 31. <i>Determinants of Wage Inflation in Ireland</i> | Keith Cowling |
| 32. <i>Regional Employment Patterns in the Republic of Ireland</i> | T. J. Baker |
| 33. <i>The Irish Economy in 1966</i> | The Staff of The Economic and Social Research Institute |
| 34. <i>Fuel and Power in Ireland: Part II. Electricity and Turf</i> | J. L. Booth |
| 35. <i>Fuel and Power in Ireland: Part III, International and Temporal Aspects of Energy Consumption</i> | J. L. Booth |
| 36. <i>Institutional Aspects of Commercial and Central Banking in Ireland</i> | John Hein |
| 37. <i>Fuel and Power in Ireland; Part IV, Sources and Uses of Energy</i> | J. L. Booth |
| 38. <i>A Study of Imports</i> | C. E. V. Leser |
| 39. <i>The Irish Economy in 1967</i> | The Staff of The Economic and Social Research Institute |
| 40. <i>Some Aspects of Price Inflation in Ireland</i> | R. C. Geary and J. L. Pratschke |
| 41. <i>A Medium Term Planning Model for Ireland</i> | David Simpson |

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

Publication Series:—continued.

- | | |
|---|--|
| 42. <i>Some Irish Population Problems Reconsidered</i> | Brendan M. Walsh |
| 43. <i>The Irish Brain Drain</i> | Richard Lynn |
| 44. <i>A Method of Estimating the Stock of Capital in Northern Ireland Industry; Limitations and Applications</i> | C. W. Jefferson |
| 45. <i>An Input-Output Analysis of the Agricultural Sector of the Irish Economy in 1964</i> | R. O'Connor with M. Breslin |
| 46. <i>The Implications for Cattle Producers of Seasonal Price Fluctuations</i> | R. O'Connor |
| 47. <i>Transport in the Developing Economy of Ireland</i> | John Blackwell |
| 48. <i>Social Status and Inter-Generational Social Mobility in Dublin</i> | Bertram Hutchinson |
| 49. <i>Personal Incomes by County, 1965</i> | Miceal Ross |
| 50. <i>Income Expenditure Relations in Ireland, 1965-1966</i> | John L. Pratschke |
| 51. <i>Costs and Prices in Transportable Goods Industries</i> | W. Black, J. V. Simpson, D. G. Slattery |
| 52. <i>Certain Aspects of Non-Agricultural Unemployment in Ireland</i> | R. C. Geary and J. G. Hughes |
| 53. <i>A Study of Demand Elasticities for Irish Imports</i> | Dermot McAleese |
| 54. <i>Internal Migration in Ireland with Appendix</i> | R. C. Geary and J. G. Hughes |
| 55. <i>Religion and Demographic Behaviour in Ireland</i> | C. J. Gillman |
| 56. <i>Views on Pay Increases, Fringe Benefits and Low Pay</i> | B. M. Walsh |
| 57. <i>Views on Income Differentials and the Economic Situation</i> | H. Behrend, A. Knowles and J. Davies |
| 58. <i>Computers in Ireland</i> | H. Behrend, A. Knowles and J. Davies |
| 59. <i>National Differences in Anxiety</i> | F. G. Foster |
| 60. <i>Capital Statistics for Irish Manufacturing Industry</i> | Richard Lynn |
| 61. <i>Rural Household Budget—Feasibility Study</i> | C. W. Jefferson |
| 62. <i>Effective Tariffs and the Structure of Industrial Protection in Ireland</i> | Sile Sheehy and R. O'Connor |
| 63. <i>Methodology of Personal Income Estimation by County</i> | Dermot McAleese |
| 64. <i>Further Data on County Incomes in the Sixties</i> | Miceal Ross |
| 65. <i>The Functional Distribution of Income in Ireland, 1938-70</i> | Miceal Ross |
| 66. <i>Irish Input-Output Structures, 1964 and 1968</i> | J. G. Hughes |
| 67. <i>Social Status in Dublin: Marriage, Mobility and First Employment</i> | E. W. Henry |
| 68. <i>An Economic Evaluation of Irish Salmon Fishing; 1: The Visiting Anglers</i> | Bertram Hutchinson |
| 69. <i>Women and Employment in Ireland: Results of a National Survey</i> | R. O'Connor and B. J. Whelan |
| 70. <i>Irish Manufactured Imports from the UK in the Sixties: The Effects of AIFTA.</i> | Brendan M. Walsh assisted by Annette O'Toole |
| 71. <i>Alphabetical Voting: A Study of the 1973 General Election in the Republic of Ireland</i> | Dermot McAleese and John Martin |
| | Christopher Robson and Brendan M. Walsh |