Chapter 7

Unemployment and the 1976 election in Germany: Some findings at the aggregate and the individual level of analysis

HANS RATTINGER

1. Introduction

Empirical investigations of the relationship between economic variables and voting behavior fall into two broad categories. On the one hand, there are studies which link actual voting outcomes or highly aggregated popularity series to time series of key macroeconomic indicators like rates of unemployment, inflation, income, or economic growth. This research generally follows longitudinal designs, and rarely are economic indicators and political outcomes broken down for regional units below the level of the nation state. On the other hand, one encounters analyses of cross-sectional survey data which focus on the impact of economic perceptions and expectations on indivdual voting behavior within specific elections.

In the Federal Republic, both research traditions have found adherents in recent years. Economists, on the whole, have tended to favor the first perspective. Following Frey's work several of his collaborators like Schneider (1974) and Kirchgässner (1977) have integrated their empirical investigations of the impact of macroeconomic performance on election outcomes or on government popularity into models of politicoeconomic interactions. Economic conditions are seen as key arguments of the utility functions of rational voters who cast their votes in order to maximize expected benefits. Politicians, on the other hand, who perceive the electoral impact of economic policy, use the government's economic instruments in order to secure re-election. Without doing too much injustice to individual contributions, most of these longitudinal analyses using macro data reach very similar conclusions, i.e. that economic conditions actually do have identifiable effects on government popularity or on the distribution of intentions to vote. Numerous studies have found similar effects in the United States (and other countries): economic downturns detract from the electoral support of the current government. This, of course, is highly compatible with the Downsian model of rational voting behavior.

Most political scientists in the Federal Republic, on the other hand, have preferred to work with micro data from mass surveys when analyzing the political effects of economic developments. And, what is more important, their conclusions have been far less positive. Kaltefleiter (1978) and especially Roth (1973) argue that respondents' evaluations of the overall economic situation largely reflect the propaganda of their preferred party while their evaluation of their individual economic situation mirrors their current prosperity. Thus, the direction of causality is the reverse of that in the macro studies: voters do not prefer one political party over another because of their economic perceptions, but they hold certain views on the state of the economy because they prefer a particular party. In his most recent article on the 1976 election Roth (1977) focuses on unemployment alone. He again concludes that attitudes on unemployment – who is blamed for it and who voters believe will be able to reduce it - are consequences, not causes, of party preference. Since rather few respondents are actually unemployed themselves, Roth declines to comment on the political behavior of that particular group.

Available research on the relationship between economic conditions and mass political behavior in the FRG is therefore characterized by an obvious inconsistency between findings at the macro and the micro level of analysis. Whereas longitudinal aggregate data studies have revealed patterns familiar in other countries, so far survey-based research has failed to corroborate these results. The purpose of this paper is not to overcome or to account for this contradiction but rather to take another look at the most recent federal election in the Federal Republic, that of 1976, using *both* kinds of data in a *cross-sectional* investigation of the political impact of unemployment. I shall concentrate on unemployment because it has emerged as the most important macroeconomic variable in the last few years.

This approach offers a more straightforward opportunity to compare results derived from these different kinds of data than is currently at hand. What is a powerful predictor of government popularity over time need not be so across individuals or regional aggregates. As there is no logical necessity that both approaches should yield congruent results, several arguments between analysts relying on longitudinal macro data and survey researchers are somewhat beside the point. Before presenting results first from aggregate and then from individual level data, I will first briefly discuss some hypotheses which describe what kind of relationships between unemployment and voting behavior one might expect to find in both data sets.

2. Some hypotheses

According to Downs (1957) it is useful to assume that voters cast their votes in order to maximize expected utility. Kramer (1971) has derived the implications of this axiom for the relationship between economic conditions and voting behavior. As long as economic performance is "good enough", supporters of the government will, ceteris paribus, remain loyal. But as a country experiences an economic downturn, defections from the governing party will increase in proportion to the severity of recession because many voters will place responsibility for handling the economy with the current political office-holders. I call this an "antigovernment hypothesis" since it predicts that incumbents will be blamed for all kinds of economic hardships - high and/or rising inflation or unemployment and low and/or declining income or growth rates - and as a result their electoral support will decline. For the 1976 elections in West Germany this implies that high and/or rising unemployment should have hurt the parties of the government coalition – the Social Democrats and Free Democrats. Whether there has been a corresponding positive effect of economic recovery will not concern us here.

Most empirical studies of politico-economic interactions have proceeded from the antigovernment hypothesis, and many have found evidence to support these ideas. It seems to me, however, that it is by no means the only plausible interpretation of voter rationality. Common sense suggests that different political parties pay attention to the economic interests of different segments of the electorate. In a cross-national analysis of macroeconomic policies in several major industrial societies, Hibbs (1977) has shown that the redistributive policies of bourgeois governments have systematically differed from those of governments led by socialist or workers' parties. In the case of unemployment this would imply that socialist governments on the whole should be more determined to fight unemployment while allowing for comparatively higher rates of inflation since their traditional supporters in the electorate are likely to be more hurt by unemployment than by inflation. For bourgeois governments these priorities should be reversed. If these patterns are perceived within the electorate – and there is evidence that they are - it is illogical to predict electoral defeat for a socialist government if unemployment rises. On the contrary, this should have a rallying effect among the governing party's traditional clientele and should pull unde-

1

cided voters who are worried about unemployment into its camp. For the same reasons a bourgeois government should be helped by high and/or rising inflation. These considerations, moreover, are independent of whether a party is a member of the governing coalition or not. If unemployment is a pressing problem and if socialists or social democrats are expected to do more about it than their competitors, they should benefit at the polls whether or not they have been in power. I call this the "clientele hypothesis" since it rests on the assumption that in formulating their macroeconomic policies political parties tend to take the economic interests of their traditional clientele into account and that over time this pattern shapes perceptions of who is likely to attack a given economic problem.

In the context of the 1976 election the clientele hypothesis predicts that the Social Democrats would benefit from unemployment at the expense of the bourgeois parties, the Christian Democrats and the Free Democrats. This hypothesis is beset by one great uncertainty, however. If it is true that high unemployment mobilizes support for the Social Democrats among their traditional supporters, it is equally conceivable that there is a similar rallying effect among bourgeois voters who are afraid of the inflationary side-effects of measures that a socialist government might take to fight unemployment. Thus, the overall effect of unemployment on the aggregate election outcome might be negligible, perhaps even the reverse of that hypothesized. The relative importance of these effects is, of course, an open empirical question. I will now turn to examining the merits of both the antigovernment and clientele hypotheses for describing the consequences of unemployment on the 1976 election, drawing first on aggregate and later on survey data.

3. The 1976 election at the district level

Most longitudinal studies of the relationship between macroeconomic variables and voting outcomes have concluded that previous election results should be included among the set of independent variables. The arguments supporting this specification also hold for cross-sectional analyses, but in our particular case there is a severe practical obstacle to proceeding accordingly. For all 223 federal election districts which are being analyzed here vote shares of the two major parties in the 1976 election correlate higher than 0.99 with those in 1972 so that there is virtually no variance left to be explained by unemployment if the lagged endogenous variables are in a first step entered into regression models.

Therefore, the overall regional distribution of votes cast in 1976 for the three major parties is accounted for by relating their district vote shares to district percentages of Catholics, of blue-collar workers, of agricultural employees, and of high-school degree graduates (Abitur) which are available from census data.¹ In a first step each of these four variables was allowed to take different slopes in each of the ten states. In a second step, states for which similar slopes for a given independent variable had been found were grouped together on this particular variable so that in the end there were three groups of states for the education and agriculture variables and two groups of states for the religion and class variables, making a total of ten structural predictor variables. Correcting for degrees of freedom, these models account for 85.4 percent in the variance of the 1976 district vote shares for the CDU/CSU, 81.0 percent for the SPD, and 72.6 percent for the FDP.

Proceeding from these models as null models, unemployment will now be entered as an additional predictor variable. Unemployment figures for a given district at a given time are due to the overall business cycle but also to the structure of the regional labor market. The business cycle component will be measured by the change in the district rate of unemployment between September 1976 (the election was held in October) and September 1975. The structural component will be measured by the district rate of unemployment of September 1972 which has a mean value of 0.9 percent, a minimum of 0.2 and a maximum of 2.3 percent. These figures indicate a tight labor market where unemployment in many districts may be ignored. At the same time there are a number of districts for which unemployment is more than double the nation-wide average. If one examines these districts more closely, it is obvious that comparatively high 1972 district rates of unemployment correspond to certain exceptional problems of regional economic structure. The correlation between both indicators of structural unemployment and of business cycle unemployment is 0.39, indicating that unemployment due to the business cycle strikes particularly severely and recovery takes longer in disadvantaged areas. On the other hand, the collinearity between the two explanatory variables is not too great to prevent a simultaneous assessment of the separate effects of both dimensions of unemployment.

Parameter estimates derived from entering both indicators of unemployment separately and jointly into the null models are presented in

¹ Data from the 1970 census and election statistics have been made available by *Statistisches Bundesamt*, Wiesbaden. Unemployment statistics come from the *Bundesanstalt für Arbeit*, Nuremberg.

For Bundestag elections there are 248 electoral districts. Census data, however, are not available for districts but for towns and cities. As long as districts are larger than cities, it is a simple matter to aggregate appropriate census data. For 14 cities in 39 districts this is not the case and each city must be treated as one district. This brings the total number of units of analysis down to 223.

		CDU/CSU			SPD			FDP	
Rate of unemployment, September 1972	-0.022 (0.006)		-0.013 (0.006)	0.034 (0.006)		0.025 (0.006)	-0.011 (0.002)		-0.011 (0.002)
Change in the rate of unemployment, September 1975– September 1976		-0.030 (0.006)	-0.026 (0.006)		0.034 (0.006)	0.026 (0.006)		-0.03 (0.002)	0.001 (0.002)
\overline{R}^2	0.863	0.872	0.874	0.835	0.837	0.848	0.773	0.729	0.772
S.E.	0.038	0.037	0.037	0.038	0.038	0.036	0.011	0.012	0.011

Table 7.1 Regression of party vote shares on null model variables and on unemployment.

Standard errors in parentheses.

table 7.1. Unemployment due to the business cycle is found to have no significant effect on the vote share of the liberal party, the FDP. For the CDU/CSU and the SPD, on the other hand, a significant impact can be established with the Social Democrats scoring above the null model's prediction at the expense of the Christian Democrats in case of rising unemployment and vice versa for decreasing rates of unemployment. The increase in adjusted R^2 is 1.8 percent for the CDU/CSU and 2.7 percent for the SPD.

Structural unemployment has significant effects on the vote shares of all three parties. Where unemployment had been high in 1972, in 1976 the SPD generally scored above the prediction of its null model while CDU/CSU and FDP remained below the predictions of their respective null models. *Ceteris paribus*, a district unemployment rate of 1 percent above average in 1972 in the 1976 election translated into an advantage of 3.4 percent for the Social Democrats, of which two-thirds came from the Christian Democrats and one-third from the Free Democrats.

Together with the results on unemployment induced by the business cycle, we find that the Downsian antigovernment hypothesis does not adequately describe the relationship between unemployment and election outcomes in the German 1976 election. Rises in unemployment over the last 12 months preceding the election hurt the opposition and helped the governing Social Democrats. The presence of problems with the regional economic structure hurt the two bourgeois parties, and again helped the SPD. This supports the clientele hypothesis that high and/or rising unemployment should, *ceteris paribus*, increase the electoral support of socialist parties at the expense of bourgeois parties. Since the analysis reported here proceeds from structural null-models controlling for class, religion, education, and agriculture, there is no reason to suspect that these results are due to the common dependence of unemployment and election outcomes on social structure.

As a final step in the analysis of the aggregate data I will now look briefly at the regional stability of these patterns. A simple way to check the stability of these results is to estimate the coefficients of the two unemployment indicators for each state separately. For the change of the unemployment rate over the twelve months preceding the election this procedure reveals homogeneous relationships across all states, and uniform relationships are also found between the vote share of the FDP and structural unemployment. On the other hand, the effects of structural unemployment on vote shares of the two major parties do not seem to be stable across regions. How can we account for these differences?

One plausible explanation can be derived from the observation that districts with high structural unemployment tend to be strongholds of one of the two major parties rather than marginal constituencies. Structural unemployment has not emerged in the mid-seventies, but has been a more or less permanent challenge in the areas concerned. If this challenge has not been an obstacle to the establishment of party strongholds, why should it adversely affect the electoral success in 1976 of the party which has enjoyed a solid majority in the past?

One can go even further than that. CDU/CSU strongholds with comparatively high unemployment in 1972 tend to be agricultural constituencies, notably in Bavaria. Structural unemployment there predominantly results from reduced demand for labor within agriculture and thus affects traditional clients of the CDU/CSU. Most SPD strongholds with comparatively high structural unemployment, on the other hand, are highly industrialized districts where structural unemployment results from industrial modernization and from the shrinking of industries like mining. Many of the people affected there are traditional SPD leaners. This suggests that the regional instability of the relationship between CDU/CSU and SPD vote shares and structural unemployment might be due to the combination of two factors: that the effects of structural unemployment are different in strongholds of the two major parties and that these strongholds are unevenly distributed.

If these considerations are correct there should be an interaction effect between the vote shares of the two major parties and structural unemployment. In agricultural districts, where the SPD tends to be weak, structural unemployment is an agricultural problem, the SPD does not gain support when unemployment rises. In industrial regions, where the

	CDU/SCU	SPD
Rate of unemployment, September 1972	0.165 0.016)	-0.159 (0.016)
Interaction term (rate of unemployment 1972 × SPD share 1976)	-0.385 (0.034)	0.396 (0.033)
Change in the rate of unemployment, September 1975-September 1976	-0.010 (0.005)	0.010 (0.005)
\overline{R}^2	0.922	0.911
S .E.	0.029	0.028

Table 7.2

Regression of party vote shares on null model variables and on unemployment specifying interaction.

Standard errors in parentheses.

SPD in 1976 (%)	Coefficient of the rate of unemployment of September 1972				
	CDU/CSU	SPD			
20	0.088	-0.079			
25	0.069	-0.060			
30	0.050	-0.040			
35	0.030	-0.020			
40	0.011	0.000			
45	-0.008	0.020			
50	-0.027	0.039			
55	-0.047	0.059			
60	-0.066	0.079			
65	-0.085	0.099			

Table 7.3 Coefficients of the rate of unemployment of September 1972 for different SPD vote shares.

SPD tends to be strong, structural unemployment is an industrial problem and the SPD benefits from rising unemployment. This kind of interactions is easily specified, and table 7.2 summarizes the estimation results. Interaction obviously plays a major role, all coefficients are significantly different from zero, and the introduction of the interaction term into the models of table 7.2 raises the adjusted R^2 by 4.8 percent for the CDU/CSU and by 6.3 percent for the SPD.

Table 7.3 reveals that the coefficients of the district rate of unemployment of September 1972 are heavily dependent upon the distribution of votes among the two major parties. If both parties receive average shares there is virtually no effect of structural unemployment. In CDU/CSU strongholds with high structural unemployment the SPD remains far below the expectations derived from the null model, while in the SPD's own strongholds comparatively high rates of unemployment in September 1972 are associated with 1976 SPD vote shares far above the predictions of the null model. Thus, the clientele hypothesis, though correct in regard to fluctuations in unemployment associated with the business cycle, must be modified in order to describe the political impact of structural unemployment in the 1976 German election. If this kind of unemployment occurs within a solid CDU/CSU milieu with strong agricultural components where there are few traditional SPD clients, then the position of this traditionally dominant party is considerably enhanced.

4. Unemployment as an issue and personal experience with unemployment

Further evidence on the effect of unemployment on the 1976 election may be found in survey data. The data base consists of the same threewave panel-survey that Roth (1977) has analyzed.² There were 2076 respondents in the first wave in May 1976, 1529 respondents in the second wave in August/September, and 1196 respondents in the postelection wave in October/November 1976. Among numerous other items, respondents were asked for their evaluation of the situation in the labor market, whom they thought most competent to deal with unemployment, and whether they or their friends were currently without a job. Table 7.4 shows the relationship between vote intention and the salience of unemployment in the first wave of the panel. Respondents are categorized into four groups: those who believe that securing jobs is very important, those who believe that current unemployment is going to grow worse or at least is going to stay with us for quite some time, and those who have unemployed persons among their friends or who themselves are unemployed.

If we assume that the intention to vote is independent of evaluations of unemployment or from having experienced it, then the distribution of voting intentions in all four subsamples should correspond to the total sample. This is true only for respondents who think that securing jobs is *very* important. However, a sizable majority of respondents who believe that unemployment is a permanent rather than a temporary problem intend to vote for the CDU/CSU opposition. A majority of those who are unemployed themselves or who have unemployed friends, on the other hand, intend to vote for the Social Democrats while in the total sample the CDU/CSU enjoys an advantage of 2.7 percent. The first deviation is highly significant and seems to support the antigovernment hypothesis; the latter deviation is compatible with the clientele hypothesis.

These relationships turn out to be spurious, however, if we control for party identification. Almost 60 percent of the SPD identifiers believe that high unemployment is a transient phenomenon while about 70 percent of the CDU/CSU identifiers think it will remain at these levels permanently or even worsen still further. Major party identifiers who have expectations on the future development of unemployment tend to reproduce the campaign propaganda of their preferred parties. As 57 percent of those respondents who believe high unemployment to be a lasting problem are CDU/CSU identifiers it is no surprise that an almost

² Data were made available by the Zentralarchiv für empirische Sozialforschung, Cologne (Study no. 823).

Intention	Totai n	sample	Secur.	ing jobs	Unemp	oloyment Japent	Fri	iends inloved	Respo	ndent
SPD	742	43.7	604	43.5	332	34.3	140	49.1	28	49.1
CDU/CSU	789	46.4	650	46.9	554	57.3	117	41.1	26	45.6
FDP	168	9.9	133	9.6	81	8.4	28	9.8	3	5.3
Total	1699	······	1387		967		285		57	

Table 7.4 Intentions to vote in the first panel-wave, May-June 1976

identical percentage intends to vote for the opposition. Similarly, as slightly more than 50 percent of the respondents who are unemployed themselves or have unemployed friends are SPD identifiers, voting intention among these respondents again merely reflects party identification.

The overriding role of party identification is also well illustrated in table 7.5. Here we find the percentages of CDU—CSU and SPD identifiers actually intending to vote for their preferred party in the total sample and the four subsamples of table 7.4. If the antigovernment hypothesis were true, the likelihood of SPD identifiers voting for the SPD should decrease with growing personal relevance of unemployment, and simultaneously the likelihood of CDU identifiers to vote in accordance with their party identification should increase. If the clientele hypothesis were true we should find the opposite pattern. Instead, we see that the likelihood to vote consistently with one's party identification is the same across all groups. Our evidence therefore supports Roth's judgement that opinions on unemployment reflect party allegiance and do not influence electoral behavior and that political effects of having experienced unemployment cannot be detected in his survey data.

5. Perceived competence to fight unemployment and vote choice

In a recently published study of the role of economic perceptions in the 1976 election Jung (1978) analyzed a different three-wave panel survey, which was in the field in 1973, 1975, and 1976. One of his aims was to identify that part of the electorate for whom a change in this perception of which party was most competent to cope with economic problems caused a subsequent change in their voting intention. For this purpose he classified respondents according to their party identification, perceived economic issue competence, and intention to vote at different points in time, and concluded that between 4 and 6 percent of the respondents could be shown to have adjusted their party identification and/or voting

panel-wave.					
Party identification	Total sample	Securing jobs very important	Unem- ployment permanent	Friends unem- ployed	Respon- dent un- employed
SPD	92.4	92.5	92.0	93.3	89.3
CDU/CSU	95.7	95.5	95.6	93.8	94.4

Table 7.5 Intention to vote for preferred party (%) among CDU/CSU and SPD identifiers, first

intention to conform with a previous change in perceived competence of the parties in dealing with economic problems.

Jung's procedure is replicated here with Roth's data. We have three variables – party identification, vote intention (recall in the third wave), and perceived competence to fight unemployment – measured at three points in time. Modifying Jung's classification somewhat, we arrive at the following seven categories.

(1) Party identification remains constant, but issue competence and vote intention change simultaneously or change in issue competence precedes parallel change in intention to vote.

(2) Change in issue competence precedes changes in party identification and vote intentions.

(3) Vote intention remains constant, but issue competence and party identification change simultaneously or change in issue competence precedes parallel change in party identification.

(4) Party identification and intention to vote remain constant, but perceived issue competence changes without consequences for party identification or vote intention.

(5) All three variables remain consonant and constant across all three panel-waves.

(6) Patterns not conforming to categories (1) - (5) without missing observations.

(7) At least one out of the nine observations missing.

Those respondents whose vote-choice clearly depends upon their perceptions of issue competence obviously fall into categories (1) and (2). This is not to say that perceived issue competence is meaningless for the voting behavior of other respondents, but for those in, for example, category (5) our analysis cannot tell whether constant party preference

Table 7.6 Classification of voters by perceived competence, vote intention, and party identification.

Category	Percent (number of respondents)					
1	0.1%	(1)				
2	0.5%	(6)				
4	1.6%	(19)				
5	50.2%	(600)				
6	28.6%	(342)				
7	18.8%	(225)				
	100.1%	(1196)				

is a function, or, more plausibly, a determinant of consistent perceptions of issue competence.

Only 1196 respondents were interviewed in all three waves. The classification of these 1196 respondents according to the categorization discussed above is shown in table 7.6. Notice that only seven (0.6 percent) individuals fall into categories (1) and (2) so that it appears very few votes were cast because people had shifted their perceptions of which party was most competent to fight unemployment. Again these survey data support Roth's assertion that economic evaluations, expectations, and perceptions are to a great extent determined by party loyalties. Seven lonesome "rational" voters stand against 600 steady party adherents. That we even fail to find in Roth's data the same percentage of category (1) and (2) voters that Jung found in his data is not so puzzling, however. Jung's panel covers a much longer period, and his definition of perceived issue competence is much broader, encompassing not only unemployment but all kinds of economic problems.

6. Conclusions

The present paper highlights several important aspects of the relationship between unemployment and election outcomes. Theoretically, it shows that the Downsian antigovernment hypothesis that "bad times hurt the ins" is not the *only* satisfactory interpretation of utility-maximizing voter rationality. The alternative clientele hypothesis is compatible with the rationality axiom as well, and it is less at variance with well-established findings of electoral research. For example, many studies have demonstrated the importance of party identification in voting, though party identification need not to be limited to affective orientations but may also include stable beliefs on which party generally will better serve one's interests. At the present time it seems impossible to choose between the Downsian and clientele hypotheses on *a priori* basis, and those who hold that this issue has theoretically settled long ago in favor of the Downsian hypothesis must face the possibility that it might rest on grossly oversimplified assumptions.

The empirical findings reported in this paper do not in all respects corroborate previous work, though, in part, this might be because we are exclusively relying on a cross-sectional design. In this kind of aggregate data, unemployment has two distinct dimensions reflecting, on the one hand, the business cycle, and, on the other hand, problems of regional economic structure. Both dimensions here must be distinguished analytically, which is impossible, of course, in longitudinal analyses. The most surprising finding is that for both components in the German 1976 election the clientele hypothesis is superior to the antigovernment hypothesis. To determine the generalizability of this result, it would be useful to replicate this study for different elections and for different nations.

Combining cross-sectional analyses of aggregate and individual level data for one particular election provided an opportunity for mutual validation of conclusions. These hopes were in vain. The effects of unemployment on the 1976 election outcome found in aggregate district data do not emerge at the individual level. In the survey data respondents' evaluations of unemployment were found to reflect, not to influence, their partisan affiliations. One major problem with this conclusion, however, is that we have had to rely on those respondents who have exhibited a particular sequence of *changes* in perceived issue competence, party identification, and intention to vote to identify clearly "rational" issue voters on the unemployment issue. Setting aside the question whether we actually *should* have expected a higher percentage of such voters, we are still left with a formidable task for future research; namely, how can we determine whether there were other voters who also cast their votes according to their perceptions of a party's competence to deal with unemployment but for whom this did not imply that they had to change their party allegiance?

References

Downs, A., 1957, An Economic Theory of Democracy (Harper, New York).

- Hibbs, D.A., 1977, Political parties and macroeconomic policy, American Political Science Review 71, 1467-1487.
- Jung, H., 1978, Ökonomische Einstellungen und das Wahlverhalten auf dem Hintergrund sozialstruktureller Variablen, in: D. Oberndörfer, ed., Wählerverhalten in der Bundesrepublik Deutschland (Duncker & Humblot, Berlin) 391-464.
- Kaltefleiter, Werner, 1978, The impact of economic variables on voting behavior in the German federal election of 1976, mimeo.
- Kirchgässner, G., 1977, Wirtschaftslage und Wählerverhalten: Eine empirische Studie für die Bundesrepublik Deutschland von 1971 bis 1976, Politische Vierteljahresschrift 18, 510-536
- Kramer, G.H., 1971, Short-term fluctuations in U.S. voting behavior, 1896-1964, American Political Science Review 65, 131-143.
- Roth, D., 1973, Ökonomische Variablen und Wahlverhalten: Eine empirische Untersuchung zur Validität von Einschätzungsfragen, Politische Vierteljahresschrift 14, 257-274.
- Roth, D., 1977, Ökonomische Situation und Wahlverhalten: Das Beispiel Arbeitslosigkeit, Politische Vierteljahresschrift 18, 537-550.
- Schneider, F., 1974, Politisch-ökonomische Konjunkturzyklen: Ein Simulationsmodell, Schweizerische Zeitschrift für Volkswirtschaft und Statistik 110, 519-549.