

BUREAUCRATIC BEHAVIOR IN DEMOCRACY:  
A CASE STUDY

by

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I. TWO APPROACHES TO BUREAUCRACY

Economic theories of public bureaucracy<sup>1</sup> employ two rather distinct lines of approach: One set looks at bureaucracy as a *supplier* of goods and services holding a *monopoly* position; the other concentrates exclusively on the *demand* for public goods and services expressed by individual bureaucrats in their role as *consumers/voters*.

A. *Monopoly of Bureaucracy*

This line of Public Choice theory originates in a sophisticated version of the neoclassical theory of the private firm. It assumes not only that a firm acts as if it were maximizing profits, but also that the managers act as if they were maximizing *their own utility*. The firm's owners are unable to fully control the managers and therefore have to leave a large range of behavior to their discretion. The individual owners are normally badly informed and have little incentive to interfere with management due to the free rider effect (see Monsen and Downs [24]). Williamson [38, esp. p. 34 ff.] suggests that managers gain utility by having a larger staff than they could under profit-maximizing conditions.<sup>2</sup>

Niskanen [25, 26, esp. Ch. 4] has applied this model of the firm to *public* bureaucracy with the assumption that bureaucrats reap utility from a large budget because it is closely tied to such things as salary, perquisites of office, prestige, etc. As in the usual neoclassical analyses of the theory of the firm, it is assumed that bureaucracy (and/or a particular bureau) acts as an *entity*. The internal interactions (Downs [12] and Tullock [34]) are not considered, nor are the interactions among

the various bureaus (e.g., Faith [14] and Miller [23]). The public bureaucracy holds a monopolistic position vis à vis parliament (which represents the voters) and it offers its total output as a package in exchange for the budget (and not in individually priced units of output, as firms in the marketplace do). Public bureaucracy extracts a large part of the consumer surplus created by its services, and its budget will therefore be higher than it would in a perfectly competitive set-up.

It is reasonable to assume that Williamson's suggestion that bureaucrats have a preference for large staff also applies to the public area. As the number of subordinates per supervisor is rather rigidly fixed in the public administration hierarchy, the more members a government department has, the more superior positions there are and the larger the absolute number of administrators with (relatively) high incomes.<sup>3</sup> Williamson's approach can be combined with Niskanen's view of public bureaucracy as a perfectly discriminating monopolist (see Migué and Bélanger [22]). This does not apply, however, if the bureau's task is easily defined and tightly controllable as is the case with capital intensive public utilities. Here the public bureaucracy may have more incentive to increase capital input relative to labor input, as this most easily allows for a growth in budget expenditures (see De Alessi [11] for empirical evidence for this proposition).

Still another view (Lindsay [20]) suggests and empirically tests with good results the suggestion that bureaucrats provide relative to their total output an excessive quantity of especially that kind of output which is easily visible to and measured by the public sponsor, and too little of that whose characteristics are less tangible.

The supply-oriented theory of bureaucracy thus yields two testable propositions:<sup>4</sup> 1) That public bureaucracies have a larger output and produce at higher cost than firms in a competitive market; 2) the higher costs are mostly reflected in an oversized staff.<sup>5</sup>

B. *The Voting Power of Bureaucrats*

The second approach looks at individual bureaucrats in their capacity as voters.<sup>6</sup> Unlike other voters, public officials benefit not only from the public supply of goods and services as consumers, but also from its provision, as this may result in increased prestige and higher salaries for them. They therefore show a preference for high public expenditure in their voting decisions, particularly when their own department is affected. They may also support increases in public expenditures for other departments as they may (rightly) expect that, because of government bureaucracy's rigid structure, an increase in one kind of expenditure will lead to an increase in other expenditures as well. It should be noted that this approach looks at bureaucrats as individual decision-makers, and not as forming a pressure group of their own.

Public bureaucrats have *voting power* far in excess of their numbers. Because their costs of information and political participation are relatively low due to problems of public affairs being their daily "business", they participate much more in all types of political activities, and particularly in voting. Their above average educational level<sup>7</sup> also helps them to be more efficient in political activities. Their superior voting power gives public bureaucrats greater weight on the demand side of the political process.

### C. Evaluation

The approaches discussed point to important aspects of the behavior of public bureaucrats, but both are unsatisfactory because they are considered in too isolated a fashion. The total *politico-economic framework* surrounding bureaucracy is not sufficiently considered. In particular, the interrelationship with government is not sufficiently accounted for.

The monopoly power approach was developed with little consideration of government's actions and reactions. Clearly, government fulfills bureaucracy's direct demands to different degrees according to how its re-election chances and its own utility are affected. The voting power approach disregards government behavior completely, assuming in the tradition of median voter models (see Black [4, esp. Ch. 5]), that the voters alone determine public output, and that government adjusts in a completely passive way. Various recent studies such as Breton and Wintrobe [8], Hettich [17], and Miller [23] have come to the same conclusion that this last view is too restrictive. In particular, Niskanen [27] stresses in his most recent contribution that the relationship to government as sole "buyer" of the service provided by the bureau must be considered. The relationship is thus one of bilateral monopoly. As is well known, output is indeterminate within a range in such a situation, but the conditions affecting the bargaining process between the bureau and government are unaffected. It is assumed that an elected legislature establishes the demand for public services and monitors the bureau's behavior, following the principles of majority rule decision-making and vote maximizing behavior of legislators. The actual review process for each bureau is carried out by a committee. In the United States (for which Niskanen's model is constructed and applied) most committees are dominated by legislators whose demands for the services under their review are much higher than the median level of demand for those services of the whole legislature. The decisions reached by the committee are very rarely amended or reversed by the whole legislature. Legislators have a substantial amount of discretion over the use of their time and other resources (staff in particular), some of which result in benefits directed specifically to the legislator's constituency and/or campaign contributors. The benefits of careful review and control of public bureaus,

on the other hand, accrue to all the legislators and the whole society. There is thus a considerable "free rider" problem within legislatures and it may be expected that careful monitoring with a view towards economizing will be neglected. The result is similar to that reached in Niskanen's two earlier studies [25, 26]: The level of output preferred by a bureau is greater than that preferred by the median legislator and median voter.

This elaboration of the monopoly model of bureaucracy is an important step forward but is still unsatisfactory because the interactions between bureaucracy and various groups of decision-makers in the context of different institutional frameworks is not taken into account.

### D. Contribution of this Paper

This paper analyzes bureaucracy within the context of the politico-economic framework. Two main aspects are considered:

- a) Bureaucracy is taken as interacting with *various groups of decision-makers*, and with voters and government in particular.
- b) The different degrees of control afforded to the voters by different collective decision-making mechanisms are explicitly accounted for. In particular, representative democracy with and without the institution of the referendum is considered.

The following *general hypotheses* of bureaucratic behavior are proposed:

1. Bureaucracy has a *strong* impact on political outcomes in its function as *supplier* of public services in representative democracies in which voters *cannot* directly influence the executive. In this situation, the voters have to leave a relatively large amount of power to the executive branch, and part of this power is assimilated by the bureaucracy.
2. Bureaucrats have the possibility of influencing policy outcome as *voters* in those representative democracies in which voters *have* the institution of obligatory and/or optional referendum. This influence is expected to be considerably *weaker* than in the above case, because the bureaucrats' influence is only indirect and is comparable to that of other groups in the society with similar voting habits.

These hypotheses are developed in Part II of this paper. Part III presents empirical tests of the above hypotheses with data for Swiss cities. The results suggest that:

- there is little evidence for any significant influence on policy outcome by bureaucrats qua voters;
- there is some evidence that bureaucracy has a direct influence on policy outcome on the supply side;
- bureaucrats' behavior is constrained by government's effort to achieve re-election.

## II. BUREAUCRACY IN REPRESENTATIVE DEMOCRACIES

Two other political decision-makers besides bureaucracy are explicitly considered here: the *voters* and *government*. These are discussed at the outset, in order to make clear that bureaucracy's role depends on the politico-economic framework within which it acts.

The *voters* are assumed to maximize their utility from the consumption of privately and publicly supplied goods and services in their capacity as consumers and taxpayers. In cities *with* the institution of referendum, they can, under appropriate conditions, operationalize their preferences by voting. With simple majority voting, the median is the equilibrium outcome.<sup>8</sup> In cities *without* the referendum, voters may express their preferences only at general elections occurring at discontinuous intervals. They can then vote for the party that proposes the program most in accordance with their wishes.

*Government* is assumed to maximize its own utility mainly by putting its (ideological) views into reality. Government is subject to a re-election<sup>9</sup> and, in some cases, to a referendum constraint. In political systems *not having* the referendum, voters are forced to leave a greater discretionary range to the other two decision-makers. Government politicians can then more easily pursue policies according to their ideological predilections, and may more easily yield to pressure from bureaucracy and (other) interest groups. This tends to result in an increase in overall public expenditures.<sup>10</sup> As voters tend to discount past events, government may undertake policies that deviate from median voter preferences at the beginning of an election term, and then move back towards voters' preferences towards the end of the term in order to secure re-election. In cities *with* the referendum, voters may continually influence government policy; i.e., they have more chances to make their wishes known. Parliamentary elections are accordingly less important than in cities without the referendum, in which they are the main means of direct political participation.

*Bureaucrats* try to actualize their wishes under both systems. If a referendum exists, bureaucracy has only a weak direct influence (on the supply side), because voters have the chance to continually influence policy, and government is forced to resist bureaucracy's demands when they run counter to those of the voters. Bureaucrats must therefore act mainly in their role as voters (demand side influence) if they want to affect policy outcome.

Bureaucracy has a stronger direct influence on the supply side when the institution of referendum *does not exist*: Voters are unable to control government (except at election time), and government is thus more susceptible to bureaucracy's pressure.

We can now state the hypotheses to be empirically tested.

### *Hypothesis A*

Bureaucrats' *indirect* influence through their voting power is *strong* in representative democracies *with* the referendum. Direct bureaucratic influence (through the supply side) is accordingly weak.

### *Hypothesis B*

In representative democracies *with* the referendum, voters' influence is *strong* and the executive branch's discretionary power is accordingly weak. It may be indirectly concluded that bureaucracy has little room for action here, and thus only a small impact on public expenditures.

### *Hypothesis C*

In representative democracies *without* the referendum government adjusts its policy to voters' preferences towards the end of the election period. This results in a further narrowing down in public bureaucracy's discretion.

## III. EMPIRICAL TEST OF THE PROPOSITIONS

The following estimation equation will be used to test these hypotheses:

$$(1) \quad \ln E_j = \text{const.} + \alpha \ln Y_j + \beta \ln \tau_j + \gamma \ln n_j + \eta TBE_j^{-1} + \zeta VPB_j + \epsilon_j$$

where

$E_j$  = aggregate public expenditures in city  $j$  ( $j = 1, \dots, m$ ) per inhabitant;<sup>11</sup>

$Y_j$  = median income in  $j$  (after deduction of federal and state taxes);

$\tau_j$  = median tax share in  $j$  (local taxes only);

$n_j$  = residential population in  $j$ ;

$TBE_j$  = "time before election" which a government of municipality  $j$ , acting at the beginning of the period considered (here January 1, 1970) has available to it before the next election;

$VPB_j$  = voting power of bureaucrats (to be defined below);

$\epsilon_j$  = error term with zero mean and constant finite variance.

The data are for the 62 largest Swiss cities with *representative* democracy and refer to 1970.<sup>12</sup> Thirty-five municipalities have the institution of referendum (obligatory or option); the other twenty-seven do not.

The first three variables  $Y_j$ ,  $\tau_j$ ,  $n_j$  on the right side of equation (1) capture the *demand components* as they are used in traditional median voter models. They are in logarithmic form so that the respective parameters  $\alpha$ ,  $\beta$ , and  $\gamma$  showing the

influence on the log of expenditures may be interpreted as demand elasticities relative to income, price, and the number of users of publicly supplied goods and services respectively. The expected parameter signs are  $\alpha > 0$ ,  $\beta < 0$ ,  $\gamma < 0$  (see Bergstrom and Goodman [3] and Pommerehne [30]).

The next two variables,  $TBE_j^{-1}$  and  $VPB_j$  capture the influences on the *supply side* of the political process. The inverse of  $TBE$  is used to indicate that, the closer elections (i.e., the smaller  $TBE$ ), the more government is forced to adjust to voters' preferences. We can expect  $\eta$  to be negative because government is now forced to reduce expenditures which, when  $TBE$  is greater, expand more rapidly due to the pressure of bureaucrats and other interest groups.

It has been argued above that bureaucrats on the whole tend to vote the same way when public expenditures are concerned. Their voting power index may then be defined as:<sup>13</sup>

$$(2) \quad VPB_j = \frac{1}{1 + \frac{VPR_{NBj}}{VPR_{Bj}} \left( \frac{1}{g_j} - 1 \right)}$$

where

$VPR_{Bj}$  = voting participation rate of non-bureaucrats of local referenda in city  $j$ ;

$VPR_{NBj}$  = voting participation rate of bureaucrats at local referenda in city  $j$ ;

$g_j$  = percent of bureaucrats in the labor force in city  $j$ .

The voting participation rate of non-bureaucrats has been (due to a lack of data) residually determined from the overall participation rate in the various cities  $j$ , and by assuming that bureaucrats participate in all cities at the same rate (assumed to be uniformly 80 %).<sup>14</sup> The lower the non-bureaucrats' participation ( $VPR_{NB}$ ) and the higher the share of bureaucrats in the labor force ( $g$ ), the higher the bureaucrats's voting power  $VPB$ .

The estimation results for each of the two institutional types of representative democracy are shown in Table 1.

Equations (3a) and (4a) give the estimates of the "pure" median voter model solely concerned with the demand side. According to the  $F$ -test applied to residual variances, equation (3a) performs significantly better than (4a) at a level of confidence of 95 %. The parameters in both equations have the expected sign ( $\hat{\alpha} > 0$ ;  $\hat{\beta}$ ,  $\hat{\gamma} < 0$ ), but median income does not have a statistically significant influence. As a whole, the median voter model equation (3a) yields clearly superior results; this suggests that voters' influence is stronger in democracies *with* the institution of referendum. This finding *supports Hypothesis B*.

Equations (3b) and (4b) add the effect of time before election to the median voter model. In cities with the referendum,  $TBE$  turns out to be of little importance:

The  $t$ -value of the  $\eta$ -coefficient is only  $-0.31$ . This suggests that voters control government continuously. In cities without the referendum, government has to adjust its expenditure policy to voters' preferences towards the end of the election period, and the corresponding  $\eta$ -coefficient (equation 4b)) is highly significant. While the inclusion of  $TBE$  adds nothing to the overall performance of the equation in democracies with the referendum, the  $R^2$  is almost doubled (from 15 % to 29 %) in democracies without the referendum, thus pointing to the importance of  $TBE$  in the latter equation. These findings support *Hypothesis C*.

TABLE 1

Influence of Bureaucracy in Representative Democracy With and Without Referenda:  
Aggregate per Capita Expenditure (Swiss cities, 1970)<sup>a</sup>

Institutional Characteristics	Constant	Demand Elasticities With Respect to			Inverse of Time to Election ( $\eta$ )	Voting Power of Bureaucrats ( $\xi$ )	Test Statistics	
		Median Income ( $\alpha$ )	Median Tax Share ( $\beta$ )	Residential Population ( $\gamma$ )			$\bar{R}^2$	Residual Variances
3a	-9.03	0.88 (1.64)	-0.47** (-3.72)	-0.37* (-2.26)	---	---	0.37	0.08
3b Democracies With Referenda	-8.84	0.86 (1.58)	-0.48** (-3.49)	-0.32* (-2.15)	-0.18 (-0.31)	---	0.35	0.08
3c	-9.26	0.90 (1.65)	-0.47** (-3.63)	-0.33* (-2.24)	---	0.26 (0.39)	0.35	0.08
4a Democracies Without Referenda	-4.12	0.44 (0.97)	-0.43* (-2.78)	-0.51* (-2.34)	---	---	0.15	0.16
4b	-4.59	0.47 (1.14)	-0.31* (-2.03)	-0.27 (-1.19)	-3.00* (-2.37)	---	0.29	0.13

<sup>a</sup> Figures in parentheses below the parameter estimates indicate the  $t$ -values. An asterisk indicates statistical significance at the 95% level, two asterisks at the 99% level of security.

Equation (3c) tests whether the voting power of bureaucrats employed by the cities (including public enterprises) has any special effect going beyond the influence of the median voter for municipalities with referenda. Where there is no referendum, bureaucrats, like all other voters, have no chance to exert their influence via the demand side except at elections.<sup>15</sup> The sign of the  $\xi$ -coefficient is correct ( $+0.26$ ), but it is not significantly different from zero ( $t = 0.39$ ). This suggests that bureaucrats as voters do not have any special influence on aggregate public expenditures *in*

Swiss cities. This contradicts Hypothesis A.

Tables 2 and 3 present the corresponding estimates for public expenditure disaggregated into outlays on salaries and outlays on goods and services (current and capital, including interest payments).<sup>16</sup> This disaggregation may be of interest because, following Hypothesis A, it may be expected that bureaucrats' voting power would be most vigorously used to increase salaries.

TABLE 2

Influence of Bureaucracy in Representative Democracy With and Without Referenda:  
Per Capita Expenditure on Salaries (Swiss Cities, 1970)<sup>a</sup>

Institutional Characteristics	Constant	Demand Elasticities With Respect to			Inverse of Time to Election ( $\eta$ )	Voting Power of Bureaucrats ( $\xi$ )	Test Statistics	
		Median Income ( $\alpha$ )	Median Tax Share ( $\beta$ )	Residential Population ( $\gamma$ )			$\bar{R}^2$	Residual Variances
5a	-8.80	0.72 (1.14)	-0.55** (-3.68)	-0.35 (-2.01)	—	—	0.42	0.11
5b Democracies With Referenda	-9.18	0.75 (1.17)	-0.57** (-3.65)	-0.36* (-2.04)	-0.35 (-0.50)	—	0.40	0.11
5c	-9.51	0.79 (1.24)	-0.54** (-3.60)	-0.35* (-2.05)	—	0.82 (1.07)	0.42	0.11
6a Democracies Without Referenda	-4.43	0.36 (0.56)	-0.61* (-2.75)	-0.72* (-2.32)	—	—	0.17	0.32
6b	-5.47	0.43 (0.91)	-0.33 (-1.92)	-0.49 (-0.72)	-6.62** (-4.59)	—	0.55	0.17

<sup>a</sup> For notes see Table 1.

A comparison of equations (5a) and (6a) in Table 2 shows that the pure median voter model performs much better in the case of cities *with* referenda: The *F*-test applied on the residual variance indicates with a degree of confidence of 99 % that equation (5a) performs better than equation (6a). *Hypothesis B* is again supported by the evidence.

As for aggregate expenditure, the variable "time before election" is not at all significant in democracies with the referendum but is highly significant (the *t*-value is -4.59) in democracies in which the voters have no referenda and thus no continuous control over government. The inclusion of *TBE* rather lowers the  $\bar{R}^2$  in the

first case, but raises it dramatically from 17 % to 55 % in democracies without the referendum (compare equation (5b) with (5a), and (6b) with (6a)). This suggests that governments not constrained by referenda deviate quite strongly from voters' wishes during the election term, but make a very strong effort to adjust to them when elections come nearer. The rate at which salaries are increasing tends to pick up greatly between elections, but this acceleration slows down before forthcoming elections. This evidence supports *Hypothesis C*.

Equation (5c) explicitly tests the voting power influence of bureaucrats. We again find that the effect is positive ( $\xi = 0.82$ ), but that it is not statistically significantly different from zero ( $t = 1.1$ ). *Hypothesis A* is again rejected.

Table 3 presents the estimates for the subcategory of expenditure on goods and services.

TABLE 3

Influence of Bureaucracy in Representative Democracy With and Without Referenda:  
Per Capita Expenditure on Goods and Services (Current and Capital, Including Interest Payments;  
Swiss Cities, 1970)<sup>a</sup>

Institutional Characteristics	Constant	Demand Elasticities With Respect to			Inverse of Time to Election ( $\eta$ )	Voting Power of Bureaucrats ( $\xi$ )	Test Statistics	
		Median Income ( $\alpha$ )	Median Tax Share ( $\beta$ )	Residential Population ( $\gamma$ )			$\bar{R}^2$	Residual Variances
7a	-10.58	1.00 (1.62)	-0.44** (-3.02)	-0.33 (-1.93)	—	—	0.24	0.10
7b Democracies With Referenda	-10.21	0.97 (1.54)	-0.43** (-2.77)	-0.31 (-1.79)	-0.35 (-0.51)	—	0.22	0.10
7c	-10.58	1.00 (1.58)	-0.44** (-2.96)	-0.33 (-1.89)	—	-0.005 (-0.01)	0.21	0.11
8a Democracies Without Referenda	-5.63	0.67 (1.07)	-0.40** (-2.89)	-0.53* (-2.43)	—	—	0.16	0.15
8b	-6.74	0.67 (1.29)	-0.36* (-2.65)	-0.44 (-1.98)	-1.85 (-1.50)	—	0.21	0.14

<sup>a</sup> For notes see Table 1.

In general, the results are similar to those shown in the previous tables. The only major difference is that the median voter estimate is not improved by inclusion of the "time before election" variable for *both* types of democracies. Government unconstrained by referenda thus does not seem to conform to *direct* bureaucratic

pressures between elections in the case of expenditures for goods and services. It is, however, also possible that bureaucracy is not particularly interested in the expansion of goods and services (but very much interested in increases in employment and/or salaries). *Hypothesis C* is not confirmed by the evidence and should be restricted to expenditure on salaries.

#### IV. CONCLUDING REMARKS

The empirical evidence for the three hypotheses proposed is mixed.

- (a) Individual bureaucrats *as voters* do not seem to have any special influence on the demand side of the political process.
- (b) Voters have a continuous and strong influence on policy outcome in democracies *with* the referendum, and government's discretionary range is accordingly small.
- (c) In democracies *without* the referendum, government tends to yield to the monopolistic pressure of bureaucracy between elections by increasing expenditure on salaries. Government has to reverse this policy before elections in order to increase its chances for re-election. This sequence does not apply to expenditure on goods and services.

The analysis undertaken is incomplete. In particular, the direct monopolistic influence of bureaucracy on public expenditure has been only indirectly tested.<sup>17</sup> Other types of models are needed which *explicitly* model bureaucracy's interaction with government, parliament, voters, and possibly private interest groups.

It is needless to stress that the results obtained only apply to Swiss cities for the period considered. The results may not simply be taken as generalizations. It may well be that similar tests for other governmental levels (state, federal) and other countries would yield quite different conclusions.

#### NOTES

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<sup>1</sup> Besides economic there are also sociological and political science approaches (for a survey, see Bendix [2] and more recently Downs [13] that make important contributions by stressing different aspects.

<sup>2</sup> The same hypothesis has been elaborated by Alchian and Kessel [1].

<sup>3</sup> In the Canton of Basle City, Switzerland, this relationship is even fixed by law in some areas: E.g., the larger the staff of a university institute, the higher the director's salary. In this context it is worth noting that an increase in efficiency may have a different effect on managerial income in the private than in the public sector. Managers of private firms usually share in the

profits gained by increases in efficiency, while the income of managers in the public sector may have no relationship to them; and there have even been cases in which efficiency increases have negatively affected their income (Warren [36]).

<sup>4</sup> For a survey of the results of various empirical studies, see Orzechowski [29].

<sup>5</sup> Besides the contributions mentioned by Orzechowski [29], see Weatherby [37], and Blankart [5].

<sup>6</sup> The first economist to describe this approach was Tullock [35] in his review of Niskanen's book. It has been further expanded by Bush and Denzau [10], and by Borcharding, Bush and Spann [7].

<sup>7</sup> Some of these arguments are discussed in Frey [16].

<sup>8</sup> The conditions required are discussed and the proposition is formally proved in Rae and Taylor [32]. It has been used in a number of empirical voting studies such as Bergstrom and Goodman [3], Borcharding and Deacon [6], and Pommerehne and Frey [31].

<sup>9</sup> For a more complete development of this behavioral hypothesis see Lau and Frey [19]. It has been empirically tested for various countries and periods. See, e.g., Frey and Schneider [16].

<sup>10</sup> The tendency of interest groups to press for too high expenditures through log-rolling is cogently argued in Buchanan and Tullock [9, Ch. 11].

<sup>11</sup> Per capita expenditures are used in order to avoid problems of heteroscedasticity.

<sup>12</sup> Data on public expenditures have been taken from the statistics of the League of Swiss Cities (*Statistik der Schweizer Städte 1970*, [Zurich, Schweizerischer Städteverband, 1970]), and consist of the average cash value of current and investment expenditures. The city of Basle has been excluded because the municipal and cantonal governments are one and the same. The median incomes have been computed from the federal income tax statistics (*Eidgenössische Wehrsteuer, 16. Periode: Natürliche Personen* [Berne, Eidgenössische Steuerverwaltung, 1976]) and from census figures (*Eidgenössische Volkszählung 1970: Gemeinden* [Berne, Eidgenössisches Statistisches Amt, 1972]) using a method developed by Noth [28, p. 50ff.]. The corresponding median tax shares (tax prices) have been derived from official statistics (*Steuerbelastung in der Schweiz 1970*, and *Finanzen und Steuern 1970* [both Berne, Eidgenössisches Statistisches Amt, 1971 and 1972 respectively]) and from unpublished data of the Federal Bureau of Taxation. The authors collected nearly all of the raw data on the political system of Swiss cities used in this paper through questionnaires.

<sup>13</sup> This index is discussed in Borcharding, Bush and Spann [7, p. 271ff.].

<sup>14</sup> This assumption seems restrictive as the voting participation rate of bureaucrats may vary among municipalities according to the size of the electorate, income level, and income distribution. Because of the lack of data for Swiss municipalities, it has been introduced as an upper limit. Moreover, the question of the voting participation by employment group has rarely been analyzed in the literature. However, empirical evidence for a similar voting participation rate for local bureaucrats is presented in Tingsten [33, Ch. 3] for selected Swiss cities and cantons; and, for other countries (United States, France, the United Kingdom), in Lipset [21, Ch. 6] and other studies mentioned in Bush and Denzau [10, p. 97ff.] and Lane [18, p. 331ff.].

<sup>15</sup> The voting power of bureaucrats is, however, relatively weak in general elections because the overall participation rate is much higher.

<sup>16</sup> More detailed disaggregation of public expenditure does not change the outcome and is therefore not reproduced here.

<sup>17</sup> To our knowledge, there have been no theoretically and statistically satisfactory empirical analyses done on this so far.

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**Summary:** *Bureaucratic Behavior in a Democracy: A Case Study.* — This paper analyses bureaucratic behavior in a democracy. It is based on hypotheses derived from two very distinct economic lines of approach concerning the influence of bureaucracy on public expenditures: one approach looks at bureaucracy as a monopolistic supplier of public services, the other approach assumes that individual bureaucrats in their role as consumer/voters influence the demand for public services. Both approaches prove to be too limited as they do not sufficiently take into account that bureaucracy interacts with various groups of decision makers and that its influence on public expenditures is curbed through the institutional framework. The model developed in this paper explicitly accounts for this interaction between bureaucracy and other decision makers. The theoretical and empirical analysis of spending behaviour in 62 Swiss cities with representative democracy leads to the conclusion that individual bureaucrats in their role as voters can hardly influence public expenditures. The results rather show that bureaucracy has a direct influence on the supply side and, moreover, that its policy strongly depends not only on the institutional framework (i.e., the possibilities of referendum), but also on the aim of the government to secure its re-election.

**Résumé:** *Comportement des bureaucraties en démocratie: Etude de cas.* — Cet article analyse le comportement des bureaucraties en démocratie. Il se fonde sur des hypothèses tirées de deux approches économiques assez différentes et relatives à l'influence de la bureaucratie sur les

dépenses publiques. La première considère la bureaucratie comme un *fournisseur* de services publics en position de monopole. L'autre approche suppose que les bureaucrates pris individuellement influencent la *demand* de services publics en remplissant leur rôle de consommateur et de votant. Les deux approches se révèlent être trop étroites en ce qu'elles ne tiennent pas suffisamment compte du fait que la bureaucratie interfère avec divers groupes de décideurs et que la portée de son influence sur les dépenses publiques est limitée par le cadre institutionnel. Le modèle exposé dans cet article tient explicitement compte de cette interaction entre la bureaucratie et les autres décideurs. L'analyse théorique et empirique du comportement de dépense dans 62 villes suisses en régime de démocratie représentative conclut que les bureaucrates pris individuellement dans leur rôle de votant n'ont que peu d'influence sur les dépenses publiques. La démocratie a, par contre, une influence directe en matière d'offre et, en outre, sa politique dépend non seulement étroitement du cadre institutionnel (c'est-à-dire des possibilités de referendum) mais également du désir du gouvernement d'assurer sa réélection.

*Zusammenfassung: Verhalten der Bürokratie in der Demokratie: Eine Fallstudie.* — In diesem Beitrag wird das Verhalten der öffentlichen Bürokratie in der Demokratie analysiert. Ausgangspunkt bilden die Hypothesen aus zwei sehr unterschiedlichen ökonomischen Erklärungsansätzen über den Einfluß der Bürokratie auf die öffentlichen Ausgaben: Dem einen Ansatz zufolge wird die Bürokratie als monopolistischer *Anbieter* von staatlichen Dienstleistungen angesehen. Der andere Ansatz geht davon aus, daß die Angehörigen der Bürokratie in ihrer Eigenschaft als Konsument/Stimmbürger auf die *Nachfrage* nach öffentlichen Dienstleistungen Einfluß nehmen. Beide Erklärungsansätze erweisen sich als sehr eng, denn es wird in ihnen zu wenig berücksichtigt, daß die Bürokratie mit verschiedenen Gruppen von Entscheidungsträgern interagiert und daß ihr Einfluß auf die öffentlichen Ausgaben durch institutionelle Rahmenbedingungen eingeschränkt wird. Dieser Interaktion zwischen Bürokratie und anderen Entscheidungsträgern wird im hier entwickelten Modell besondere Beachtung geschenkt. Die theoretische und empirische Analyse des Ausgabenverhaltens in 62 Schweizer Städten mit repräsentativer Demokratie legt den Schluß nahe, daß die Angehörigen der öffentlichen Bürokratie in ihrer Rolle als Stimmbürger kaum Einfluß auf die öffentlichen Ausgaben haben. Die Ergebnisse sprechen vielmehr dafür, daß die Bürokratie einen direkten Einfluß auf die Angebotsseite ausübt, ferner, daß ihr Handeln in starkem Maß von den institutionellen Rahmenbedingungen (hier: den Referendumsmöglichkeiten) abhängt, aber auch vom Ziel der Regierung, ihre Wiederwahl zu sichern.