

Coping with Poverty: The Impact of Fiscal Austerity on the Local Budgetary Process in Norway

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This article examines the impact of public sector austerity on the budgetary process in local government. We initially propose that resource squeeze influences the criteria of resource allocation. More specifically, we suggest that austerity tends to generate a greater emphasis on performance-based criteria such as cost-benefit assessments, while arguments relating to production costs, previous commitments and relative standards of service supply tend to carry less weight. A regression model is developed to test these hypotheses. Response variables, drawn from a survey conducted among Norwegian local government officials, measure the success of a menu of arguments which justify increased appropriations, and we examine whether austerity affects the perceived success of these arguments. Consistent with previous studies, we find no impact of stress on decision-making behavior in local government. We do not believe that this result can be dismissed as merely a by-product of our research design. This conclusion leaves us with at least two possible interpretations. One suggests that austerity affects the criteria of resource allocation if, and only if, decision-makers perceive the squeeze to exert a persistent and inescapable pressure which requires a fundamental redefinition of managerial style. This has hardly been the case in Norwegian local government. The other interpretation suggests that the criteria for resource allocation in fact remain unchanged, even in situations when austerity is believed to be persistent. Inertia can be caused by (a) the disproportional disutility attributed to budgetary cut-backs compared to the benefits of appropriation increases, (b) the propensity to attribute austerity to "external" rather than "internal" causes, and (c), problems related to aggregating individual preferences and criteria into a coherent organizational policy of resource allocation.

All organizations must somehow adapt to resource constraints. Both governmental agencies and private enterprises must cope with fluctuations in revenues and changes in the demands for goods and services. Since the mid-1970s, the public sectors of most Western countries have experienced some degree of economic retrenchment, and lower public sector growth. Some scholars have described the situation as an instance of "organizational decline" (Levine 1978), or as a "resource squeeze" (Newton 1980), others as a "scissors crisis" of public finance (Tarschys 1983).

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All organizations must somehow adapt to resource constraints. Both governmental agencies and private enterprises must cope with fluctuations in revenues and changes in the demands for goods and services. Since the mid-1970s, the public sectors of most Western countries have experienced some degree of economic retrenchment, and lower public sector growth. Some scholars have described the situation as an instance of "organizational decline" (Levine 1978), or as a "resource squeeze" (Newton 1980), others as a "scissors crisis" of public finance (Tarschys 1983).

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refer to the simple alternatives of increasing revenues and/or cutting expenditures and/or improving productivity. *Managerial* strategies are the methods used to implement economic strategies, such as “equal across the board” cuts or expenditure ceilings. *Institutional* strategies aim at changing the arrangements of budget-making, commonly to improve the bargaining position of the “guardians” relative to that of the “advocates”.

Studies in this area mainly examine (a) how organizations respond to fiscal squeeze, whether it is externally imposed or self-inflicted, and (b) the impact of specific strategies compared to the expected results. This article focuses on the relationship between resource scarcity and *the behavioral responses of decision-makers* to such a situation. Does a situation of resource squeeze influence the *criteria* applied for allocating resources? Does resource scarcity affect the process of budget-making, and the effectiveness of different arguments used in the budgetary process?

The next section reviews some previous theoretical work as well as empirical studies. We then present the main theoretical propositions underlying this study, and outline our research design. Finally, we report and interpret the empirical results.

Theories of Budgetary Adaptation

Organizational theory presents two contrasting perspectives on organizational adaptation to the environment. According to *contingency theory*, organizations adjust rapidly to changes in the environment. For example, Thompson (1967) suggests that the degree of stability and homogeneity are important determinants of the degree of organizational centralization. Mintzberg (1983, 136) points to several contingency factors, of which environmental hostility is particularly relevant. For example, Mintzberg argues that “extreme hostility in its environment drives any organization to centralize its structure temporarily” (Mintzberg 1983, 141). A situation characterized by austerity may be considered one of environmental hostility. A sudden loss of resources requires that the organization act fast and in a coordinated manner, and this calls for a centralization of decision-making authority.¹

The other perspective is that of *organizational ecology*. Hannan & Freeman (1977, 1984) suggest that organizations are extremely inert. Organizations tend to preserve established policies and modes of behavior, and adjust only slowly and marginally, if at all. Therefore, it is mainly at the macro-level that we can observe changes, i.e. in the form of organizational birth and death. A process of natural selection produces adaptation at the aggregate level (“survival of the fittest”), but the individual organization does not change much during its lifetime. This line of reasoning

Table 1. Budgetary Contexts.

		PROBLEMS	
		Predictable	Unpredictable
RESOURCES	Growing	1. Incremental budgeting	2. Supplementary budgeting
	Declining	3. Efficiency budgeting	4. Flexibility budgeting

corresponds well with Crozier's (1964) description of the rigidity-cycle of bureaucratic organizations. In his view, organizations tend to develop a pathological mechanism for self-protection.

The basic proposition of classical budgetary theory – namely that governmental budgetary processes are characterized by low flexibility – is consistent with the latter interpretation of organizational behavior. Wildavsky suggested in *The Politics of the Budgetary Process* (1964) that the “. . . beginning wisdom about an agency budget is that it is almost never reviewed as a whole each year. . . Instead it is based on last year's budget with special attention to a narrow range of increases and decreases” (Wildavsky 1964, 15). The budgetary process is an expression of institutional inertia. However, a subsequent cross-national study led to a revision of the initial proposition. Wildavsky now (1975) claimed that the context of budget-making was critical to the character of the decision process. The degree of affluence and the predictability of future revenues shaped the style of public budget-making. This reasoning follows the arguments of contingency theory.

Table 1 shows a slightly modified version of Wildavsky's model, presented in Metcalfe & Richards (1990). According to this model, incremental budgeting (1) is most likely in a situation characterized by affluence and a predictable task environment. Under these circumstances, problems can be handled by increasing the appropriations in relation to moderate variations of demand. Hence, decision-making is a bottom-up process of marginal adjustment, and there is little reason to set aside a contingency reserve. Decision-making is a stable process in the sense that the superior levels make only minor adjustments in the proposals of the lower administrative levels, and the budget is very much a function of last years appropriations. When problems are unpredictable (2) under conditions of affluence, however, the administrative center must keep a contingency reserve to cope with unexpected events. Here, the budgetary process will be characterized by supplemental allocations to meet unexpected needs. In an environment of austerity and predictability (3), the public agency should be expected to employ efficiency budgeting. The objective in this

situation is to increase output relative to the resources available, that is, to improve efficiency. Finally (4), the combination of declining resources and unpredictable problems calls for what is termed “flexibility budgeting”. A rapidly changing task environment requires a decentralized organization (cf. Thompson 1967), while centralization is necessary to manage scarcity of resources. The situation requires flexibility at all levels of the organization.

As indicated above, contingency theory and the strategies outlined in Table 1 must be considered a prescriptive theory, in the sense that it prescribes what rational decision-makers should do under different circumstances. Different situations *require* particular moves and strategies, and managers *should* implement these to maintain a “balanced” relationship with the environment and organizational stakeholders. The literature has little to say about the conditions under which organizations will *in fact* respond according to these prescriptions. We shall return to the latter question in what follows.

Propositions Regarding Budgetary Behavior

On the basis of previous research we can now formulate two sets of testable propositions. For convenience we may refer to one as the *theory of inertia* and to the other as *contingency theory*.

The basic assumptions of the theory of inertia may be formulated as follows: The amount of political “energy” needed to change established policies or modes of operation is significantly higher than that needed to maintain these policies or procedures. Faced with non-dramatic changes in their task environments, governments tend to *minimize* the amount of change to be made in established priorities and modes of behavior. To the extent that adjustments are made in response to new circumstances, they are likely to be concentrated to the “periphery” rather than the “core” of established policies and procedures.

This line of argument suggests at least two hypotheses concerning the impact of fiscal stress on budgetary behavior:

- H₁: Small or moderate changes in fiscal conditions will, at least in the short run, have no significant impact on the criteria used for allocating resources.²
- H₂: To the extent that increasing fiscal stress leads local governments to change their criteria for budgetary allocations, it will lead them to become more sensitive to current demands and pressure from internal as well as external sources (i.e. adopt a “fire-fighting approach”).

Contingency theory, in turn, builds upon the assumption that *governments are rational problem-solvers*, capable of making flexible adjustments. (Significant) changes in their task environments will spur governments to rethink and, whenever useful, also adjust their priorities and/or operating procedures, including the basic criteria used for allocating resources. Mouritzen (1991a) suggests that changes in demand explain variations in local spending in periods of austerity, whereas supply-side interpretations apply in periods of affluence. The main demand factor is residential preferences, and the supply-side determinants are incremental procedures, bureaucratic pressures and the activity of professional groups. The analysis of Danish data suggests that residential demands explain variations of aggregate spending in governments experiencing “stress”, but not in those enjoying “slack” resources. It also indicates that incremental budget-making occurs more often when resources are sufficient, and less so in times of austerity. This indicates that austerity impacts on the underlying decision-making criteria, and that greater levels of stress induce a greater emphasis on performance and residential demands. These findings can be reformulated in terms of decision-making criteria as follows:

H₃: Increasing fiscal stress – particularly stress believed to be persistent – leads to a shift of emphasis (a) from criteria unrelated to performance and productivity towards cost-efficiency considerations, and (b) from “internal” criteria towards those referring to external demands or standards.

Above a certain level, fiscal stress can cause overload in the decision-making system, and lead local authorities to concentrate on cutbacks *per se*. For example, Schick (1988) argues that fiscal stress induces governments to cut more and evaluate less. One reason is that evaluation “. . . stirs up conflict at a time that government officials need support for the tough choices they face” (Schick 1988, 528). Most countries have met the requirements of austerity simply by reducing expenditures, and not by a critical evaluation of costs and benefits (Kettl 1989). Following this line of reasoning, we propose H₄:

H₄: Fiscal austerity tends to reduce organizational “slack”, leaving less scope for anything but the “bare essentials”. In other words, “politics” must yield to functional “needs”. This should imply that arguments referring to internal or external pressure will be less effective under conditions of fiscal stress.

These two sets of hypotheses are clearly elements of alternative theories, in the sense that they cannot both be generally true. Yet the possibility

Table 2. Possible Scopes of Validity for Alternative Hypotheses.

Change believed to be	Amount/rate of change in fiscal stress	
	Small	Large
Persistent	H ₁ , (H ₃)	H ₃ , (H ₄)
Temporary	H ₁	H ₂

remains that each of these propositions may be valid under certain circumstances and only under those particular circumstances. In fact, in formulating our hypotheses we have referred to two dimensions which may help us define more precisely the circumstances under which each of these hypotheses would seem to be the more plausible. One of these dimensions is the amount or rate of change in fiscal stress, the other is the perceived persistence of this state of affairs or trend. For example, the case for H₁ seems to be most convincing when decision-makers are faced with small changes believed to be temporary. More generally, one might argue that the scope of validity for each proposition is limited, as indicated in Table 2.

In this article we are not able to pursue the implications of the meta-hypotheses indicated in Table 2. One main reason is simply that although one might suspect that the relationship between fiscal stress and the weight given by decision-makers to different criteria for allocation is curvilinear, we have as yet no firm theoretical basis for determining more precisely *where* the curve "should" bend. And some vague notion of curvilinearity is not very helpful when it comes to designing empirical tests. Moreover, we do not have data enabling us to determine actor *perceptions* of the future at the time of decision-making. For these reasons we shall have to leave the further exploration of the more complex relationships indicated above to a later occasion. We do think, however, that the kind of analysis reported here is nonetheless an important and necessary step towards understanding how local governments respond to fiscal stress.

Research Design

The effects of fiscal stress on the adoption of budgetary strategies are not easily detectable. The overall impression from quantitative research so far is that fiscal stress has little impact on the budgetary process. Thus, studies conducted by the FAUI project³ conclude that the choice of budgetary strategy is *not* much influenced by the resource situation (cf. Mouritzen 1991a, ch. 12). The book *Urban Innovation and Autonomy*, edited by Susan E. Clarke (1989), contains two contributions that are of particular relevance to this analysis. First, Appleton & Clark (1989) present an

analysis of fiscal austerity and budgetary strategies in American cities. The chief administrative managers of American cities answered a questionnaire about the importance of 33 fiscal strategies. The strategies served as the basis for constructing three additive indexes, one measuring strategies that increase revenues, one measuring strategies that decrease revenues and one measuring strategies that increase productivity. The authors regress the three strategies on a number of alternative fiscal measures. They find no effect of budgetary contexts on the modes of government budget-making.

In another contribution, Baldersheim et al. (1989) estimate a similar model on the basis of Norwegian data. They regress a revenue index, an expenditure index and a productivity/management index on a number of variables. They measure fiscal stress as the percentage change in gross municipal revenues over the period 1980–83, and local wealth by average per capita taxable income in 1983. Neither of these variables has any significant impact on the choice of financial strategies. On the other hand, mayoral spending preferences (an expansivity index) are found to increase the propensity to use revenue-raising strategies, and administrative modernity appears to influence the reliance on productivity/management strategies. In general, the Norwegian results correspond well to the American findings.⁴

The research design applied in this paper corresponds to that of the FAUI project in that it links measures of austerity to the responses of the organization. We also employ an extensive, quantitative approach. However, our design differs with regard to the theoretical and operational definitions of variables as well as with regard to the formulation of the regression model.

Assessment of Decision-making Criteria

The purpose of the FAUI project was to explain budgetary *strategies* of local government. Two groups of respondents – majors and chief administrators – evaluated the importance of alternative strategies. They indicated the extent to which expenditure restraint, revenue increase and managerial innovation were important methods for coping with financial stress. We, by comparison, attempt to study the *behavioral pattern* of budget-makers, particularly the impact that different arguments have on the budgetary process. Budgetary argumentation can be interpreted as a factor which precedes and influences the adoption of budgetary strategies. If the impact of arguments is causally linked to the choice of strategies, we would expect the two variables to tap similar phenomena. However, the questionnaire employed here measures additional aspects of budget-making. The menu of arguments characterizes quite specific criteria for resource allocation.

For example, the arguments say something about the relationship between agencies and political authorities, and describe the impact of citizen demands on allocations. Moreover, the respondents face a complex task when we ask them to evaluate the effectiveness of different arguments. Such assessments may clearly suffer from substantial measurement errors. In order to increase reliability, it is therefore useful to ask several respondents in each municipal government. If the “mean” evaluation of the arguments differs between local governments, we can test whether or not the variance is related to differences in relative fiscal austerity.

The response variables – the success of budgetary arguments – are taken from an extensive questionnaire conducted among elected representatives and top administrators at the local government level in Norway. The survey covered 81 municipalities (district level) and 19 counties (regional level). Some 2,800 decision-makers returned the questionnaire, yielding a response rate of 71 percent. The analysis employs municipal data only. The data were collected in the period December 1990 through February 1991.⁵

We asked politicians, chief administrators and agency heads to assess the impact of nine criteria or arguments for allocating resources. The respondents indicated whether each argument had a major impact (4), a substantial impact (3), a modest impact (2) or no impact at all (1) on appropriations. This yields nine indicators (P_k , $k = 1,2..9$), each with four possible scores (plus a “don’t know” option).

Arguments Regarding Criteria for Resource Allocation

- P_1 : By increasing appropriations, local government can achieve a major welfare advancement at a modest cost.
- P_2 : Local government should expand the agency’s output to reduce the number of persons waiting to get service supply.
- P_3 : Unless the agency offers a better supply of service, local government should expect protest actions and newspaper critique.
- P_4 : To meet the requirements of the central government, local authorities must improve the agency’s service supply.
- P_5 : The standard of service supply is inferior compared to other municipalities, and it should be improved.
- P_6 : The agency has lagged behind in appropriations for several years. A higher rate of budgetary increase would be fair.
- P_7 : The cost of providing agency services has increased more rapidly relative to other local departments. Additional appropriations are necessary to maintain the present level of supply.

P₈: The agency has been shorthanded, and it remains under significant pressure. Unless extra personnel are hired, it risks losing vital members of its staff.

P₉: The local politicians have committed themselves to expanding the agency's service supply. It is expected that the elected authorities comply with these plans and promises.

Of course, a situation of fiscal stress may not have any impact on the choice of arguments. Still, stress can influence the way in which decision-makers assess different budgetary alternatives. In particular, a rational response to fiscal austerity would be a more conscious and thorough cost-benefit evaluation; the government would need to be more careful about spending money. Therefore, we include an additional dependent variable which measures the use of cost-benefit evaluations. Politicians and department heads answered the following question:

P₁₀: Please consider the budgetary process in the area you know best. To what extent is the utility of municipal services evaluated relative to the cost of supply? Response options: We assess the benefits relative to costs on a regular basis (3). We assess the benefits relative to costs when special circumstances arise (2). We never evaluate the benefits relative to costs (1).

The response options to this item correspond to the scores on a tenth variable, P₁₀. Table 3 displays mean scores and CV-factors (coefficient of

Table 3. The Perceived Effectiveness of Budgetary Arguments. Mean-Values and CV-Factors for Chief Administrators, Department Heads, and Elected Representatives.

	Chief administrators		Department heads		Elected representatives	
	Mean	CV	Mean	CV	Mean	CV
Argument (1)	2.726	0.230	2.355	0.177	2.567	0.075
Argument (2)	2.556	0.254	2.176	0.193	2.477	0.080
Argument (3)	2.164	0.327	2.134	0.120	2.119	0.096
Argument (4)	2.577	0.251	2.255	0.152	2.526	0.067
Argument (5)	2.155	0.300	2.218	0.156	2.343	0.075
Argument (6)	2.222	0.322	2.010	0.162	2.343	0.098
Argument (7)	2.563	0.270	2.156	0.184	2.414	0.066
Argument (8)	2.443	0.257	2.133	0.205	2.490	0.082
Argument (9)	2.786	0.258	2.297	0.178	2.618	0.068
Cost-benefit evaluation	2.125	0.291	2.272	0.154	2.334	0.077

Arguments (1)–(9): 4: Major impact; 3: Substantial impact; 2: Modest impact; 1: No impact at all.

Cost-benefit evaluation: 3: At regular intervals; 2: When special circumstances arise; 1: Never

variation) of the ten variables, calculated separately for chief administrators, department heads, and elected representatives respectively. The statistics refer to the means and the CVs for the *municipalities* included in the sample.

A first observation is that the three groups of respondents *rank* the arguments quite similarly. We estimated Spearman correlation coefficients between the mean values presented in Table 3. The rank correlations are 0.40 (chief administrators against politicians), 0.72 (chief administrators against department heads) and 0.79 (department heads against politicians).

Furthermore, in Table 3 a considerable degree of inter-municipal variation is displayed. The CV statistic reveals scores from 6 to 10 percent for the politicians, from 12 to 20 percent for the department heads, and from 25 to 33 percent for the chief administrators. The relatively lower variation among politicians may be due to the greater number of elected respondents in each municipality. Politicians may also be less willing to or capable of discriminating between the arguments. If we compare the mean evaluations of alternative budgetary arguments across different groups of actors, however, the differences are considerably smaller. It seems that the cost-benefit assessment (P_1), and invoking previous obligations (P_9) are considered by all groups to be relatively effective arguments, whereas references to local protests (P_3) and comparisons with other local governments (P_5) are less persuasive arguments.

Austerity Indicators

Following Wolman & Davis (1980, 1) and Mouritzen & Ylönen (1991, 144), we may define fiscal austerity as local revenues relative to expenditure requirements. We have a situation in which

. . . a local government, faced with the necessity of achieving a balance between revenues and expenditures, must in time choose either to (1) increase taxes through changes in the tax rate or structure in order to maintain existing real expenditures and service levels, (2) reduce real expenditures from the level of the previous year, or (3) engage in some combination of these activities (Wolman & Davis 1980, 1).

This definition can be applied to the Norwegian setting. We must note, however, that Norwegian local authorities have almost no discretion over local revenues. Grants from the central government and income taxes are the main sources of revenue. The income tax rate is set by the national government, and thus the revenues generated from the local tax base are exogenously determined.⁶ Property taxes and charges amount to less than 10 percent of total revenues, and these rates are also restricted by national law. Thus, revenue raising strategies have less relevance in the present setting than in other systems of local government.

It should also be emphasized that the concept of fiscal stress is not synonymous with permanent poverty. Fiscal stress is a dynamic phenomenon (see, for example, Mouritzen & Ylönen 1991, 32–36). Fiscal stress implies that the expenditure requirements are growing at a faster rate than revenue levels. Accordingly, rich as well as poor governments can be exposed to fiscal stress. This implies that stress should be defined as the growth rate of expenditures or expenditure demands *relative to* the growth rate of revenues.

Consider, in this light, the operational definition of fiscal stress used by Baldersheim et al. (1989). They measure fiscal stress as the percentage growth of gross municipal tax revenues for the period from 1980 to 1983. We have three objections to the use of this variable as an indicator of financial stress. First, we do not understand why the authors focus on tax revenues only. A significant proportion of local revenues derives from central government transfers. About 80 percent of the grants are unconditional; i.e. revenues which local authorities can allocate without restrictions. If a low growth of tax revenues is compensated by a substantial increase of grants, the level of fiscal stress should remain constant.

Second, it follows directly from the definition of fiscal stress that the growth rate of taxes plus grants is an insufficient indicator of stress. Revenue growth should be measured relative to changes in actual spending levels or relative to variations in expenditure requirements. For example, if expenditure requirements decrease in proportion to revenues, the level of financial stress will remain the same. In accordance with this line of reasoning, we choose to apply two indicators of stress: financial stress and demographic stress.

Our third objection is that the time period analyzed by Baldersheim et al. (1980–83) was, in general, characterized by revenue *growth* rather than decline. Accordingly, the data used in their analysis do not seem appropriate for the purpose of examining the impact of increasing financial stress.⁷ In fact, the authors themselves suggest that the absence of “substantial and long-term fiscal stress” may be the reason why they can find no significant impact of this variable upon the choice of budgetary strategies (Baldersheim et al. 1989, 91).

In this study we measure changes in municipal finances over a longer period, 1983–89. During these years, particularly in the period 1986–89, the revenues of Norwegian municipalities were stagnating, at least in relative terms.⁸ This was in part due to declining growth rates in the overall economy, in part due to a more restrictive central government policy. As demonstrated in Table 4, we have a considerable variation in the level of stress during this period. If a condition of austerity influences the criteria used in government budget-making at all, our data should therefore be capable of detecting the impact. If we find no impact over the period covered

Table 4. Descriptive Statistics for Stress Indicators. Mean-, Minimum- and Maximum Values and Coefficients of Variation (CV, N = 79).

	Financial stress (FS _t)			Demographic stress (DS _t)		
	84–87	85–88	86–89	84–87	85–88	86–89
Mean	1.342	1.586	1.059	0.888	1.028	0.720
Minimum	1.113	1.181	0.716	0.679	0.767	0.461
Maximum	1.960	2.443	1.439	1.193	1.450	0.946
CV	0.110	0.152	0.127	0.125	0.142	0.115

in this study, the explanation cannot be a complete lack of (variation in) fiscal stress.

Financial stress depends on the development of expenditures relative to revenues. If current expenditures increase more rapidly than total revenue, a situation of financial imbalance is likely to arise. Hence, we define *financial stress* (FS) as the ratio of current expenditure growth relative to revenue growth measured in a three-year period. Both are related to the base year of $t-3$, which implies that financial stress in year t , FS_t , is measured by:

$$FS_t = \frac{\frac{\text{Current spending}_{t+3}}{\text{Current spending}_t}}{\frac{\text{Taxes}_{t+3} + \text{Grants}_{t+3}}{\text{Taxes}_t + \text{Grants}_t}}$$

Note that neither revenues nor expenditures have been deflated. The level of inflation is equal for all municipalities, so deflation would not affect the regression results obtained. Furthermore, the degree of financial stress can be influenced by local government since spending is under local control.

The age composition of the population is a major determinant of service demands. Thus, the relative size of the “dependent” population provides an alternative indicator of expenditure needs. The main tasks of local governments in Norway are to provide day-care centers (0–6 years), basic education (7–15 years) and primary health care (for the elderly segments of the population). The proportion of the population aged 80 years and above is a major determinant for local health expenditures. For our purposes, therefore, the dependent population is defined as the number of residents aged 0–15 years and above 80 years. *Demographic stress* (DS) is measured as the ratio of dependent population growth to revenue growth over a three year period:

$$DS_t = \frac{\frac{\text{Dep. pop.}_{t+3}}{\text{Dep. pop.}_t}}{\frac{\text{Taxes}_{t+3} + \text{Grants}_{t+3}}{\text{Taxes}_t + \text{Grants}_t}}$$

Notice that the degree of demographic stress (as opposed to financial stress) cannot be influenced by local authorities, at least not in the short run. Both revenues and expenditure demands generated by demographic factors are outside local government control.

It can be seen from Table 4 that the average level of financial stress (FS) exceeds one, which implies that current expenditures have increased more than revenues for each of the periods examined. The average degree of fiscal stress (FS) increased from 1987 to 1988, and declined from 1988 to 1989. The average level of demographic stress (DS), however, approximates one, or is below one, which implies that the growth rate of the dependent population has been less than the growth rate of revenues. The time pattern of demographic stress is, though, similar to that of financial stress.

Both indicators of stress vary considerably between municipalities, both as measured by the CV-statistic and by the minimum and maximum values. A significant number of authorities experience stress in the sense that spending increases and/or dependent population growth outstrip the growth of revenue. This suggests that we are in a position to investigate the impact of fiscal- and demographic stress.⁹

A final remark relates to Baldersheim et al.'s use of local wealth as a control variable. They measure wealth as the average taxable income in 1983 *per capita*. The local income tax is roughly proportional to residential revenues. We suggest that tax revenues plus central government grants per capita are better measures of wealth. In Norway, however, grants are distributed according to indicators of expenditure demands, particularly population size and the age-composition of the population. In allocating transfers, furthermore, the central government also considers patterns of settlement; other things being equal, sparsely populated municipalities receive larger grants than more densely populated areas. Consider, therefore, the following regression model:

$$\log\left(\frac{\text{Tax revenues}_i + \text{Central grants}_i}{\text{Population}_i}\right) = \gamma_0 + \gamma_1 \log(\text{Population}_i) + \\ \gamma_2 \log(\text{Proportion 7-15 years}_i) + \\ \gamma_3 \log(\text{Proportion 80+ years}_i) + \\ \gamma_4 \log(\text{Travelling distance}_i) + \\ \epsilon_i$$

In this model, if the residual from the regression is positive, i.e. $\epsilon_i > 0$, the municipality i has revenues exceeding the average revenue level of *demographically comparable* authorities. Conversely, if $\epsilon_i < 0$, the revenue level is lower than that of similar authorities. The regression model was run for $t = 1984, 1985, \text{ and } 1986$, and the estimated residuals were used to define $R_{t,i}$, that is, $R_{t,i} = 1$ if $\epsilon_{t,i} > 0$, and $R_{t,i} = 0$ if $\epsilon_{t,i} \leq 0$.

Model Formulation

In principle, the task is to correlate our response variables (P_1 – P_{10}) with the two indicators of stress. We must, however, consider the possibility of time-lags, possible interaction effects, and control variables.

First, financial stress in a prior period $t-x$ can affect budgetary processes in the successive period t . It is difficult to make a priori assumptions about the length of the lag x . Baldersheim et al. assume a lag of one year only ($x=1$). This formulation may underestimate the time it takes for governments to adjust, and this may be one reason why they found no impact of fiscal austerity. We suggest that it may be prudent to explore the impact with alternative time-lags. This is particularly interesting since previous research does not pay much attention to the question of time-lags at all. More specifically, we measure our two stress indicators (FS and DS) for three successive periods; 1984–87, 1985–88 and 1986–89. The subsequent responses (P_1 – P_{10}) are measured in 1990.

Second, the model includes one interaction term. Baldersheim et al. develop a conventional, additive model which includes wealth and financial stress. We suggest that the potential impact of stress is *conditional*, depending on municipal wealth. A relatively rich municipality controls economic reserves and holds budgetary “fat”. It can, at least in the short run, cope with a situation of stress by exploiting slack resources. In the poorer municipality, the decision-makers face more painful adjustments. We hypothesize that stress tends to have a stronger impact in the less wealthy municipalities. Thus, the model contains an interaction term between stress (FS and DS) and the local revenue level R as defined above.

To test our propositions, we use the perceived effectiveness or success of the nine arguments (P_1 – P_9), and the application of cost-benefit evaluations (P_{10}) as response variables in an ordinary regression analysis. The P_k -indicators ($k = 1, 2, \dots, 10$) are calculated as the mean of the responses (in each authority) given by the elected politicians. The model comprises four independent variables and two interaction terms, one each between the two stress indicators (FS and DS) and municipal wealth (R). This yields the following equation (subscripts for the individual municipalities i have been suppressed):

Regression model:

$$P_k = \alpha_{0k} + \alpha_{1k} \cdot R_t \cdot FS_t + \alpha_{2k} \cdot R_t \cdot DS_t + \alpha_{3k} \cdot (1 - R_t) \cdot FS_t + \alpha_{4k} \cdot (1 - R_t) \cdot DS_t + \varepsilon_k$$

k = 1, 2, ..., 10,
t = 1984, 1985, 1986

Empirical Results

Table 5 provides the parameter estimates for the three periods. These are based on the stress indicators for the periods 1984–87, 1985–88 and 1986–89 respectively.

Table 5. The Impact of Financial and Demographic Stress on the Perceived Efficiency of Budgetary Arguments. Regression Analysis (OLS, N = 79).

			EFFICIENCY OF ARGUMENTS:				
Period	Dependent variables		P ₁	P ₂	P ₃	P ₄	P ₅
1984–87	R=1	FS	0.120	-0.426	0.353	0.104	0.002
		DS	-0.046	0.189	-0.885**	-0.133	-0.436
	R=0	FS	0.034	0.115	-0.337*	0.118	0.355*
		DS	0.065	-0.633	0.298	-0.052	-0.041
1985–88	R=1	FS	-0.157	-0.108	0.427*	0.073	-0.111
		DS	0.363	-0.025	-0.581	0.209	0.299
	R=0	FS	0.118	-0.150	0.050	-0.127	-0.171
		DS	-0.054	-0.005	-0.102	0.549**	0.487**
1986–89	R=1	FS	0.261	-0.417	0.245	0.345	0.012
		DS	-0.478	0.843*	-0.188	0.224	-0.063
	R=0	FS	0.107	-0.075	0.332	-0.024	-0.187
		DS	-0.220	0.299	-0.342	0.762*	0.376
			P ₆	P ₇	P ₈	P ₉	P ₁₀ a)
1984–87	R=1	FS	0.248	0.474**	-0.226	-0.132	-0.175
		DS	0.424	-0.444	0.089	0.073	0.044
	R=0	FS	0.287	-0.015	-0.144	-0.066	0.479**
		DS	0.392	0.399	-0.067	0.062	-0.857**
1985–88	R=1	FS	0.015	-0.015	-0.608**	-0.426	-0.509**
		DS	0.563	0.179	0.750*	0.717*	0.900**
	R=0	FS	0.226	-0.053	-0.294*	0.160	0.198
		DS	0.258	0.291	0.307	-0.149	-0.184
1986–89	R=1	FS	0.006	0.257	0.073	-0.123	-0.422
		DS	-0.487	-0.419	0.081	0.329	0.655
	R=0	FS	0.629*	0.063	-0.366	0.405	-0.102
		DS	-1.200**	-0.070	0.717	-0.453	0.234

* Significant at the 10 percent level,

** Significant at the 5 percent level,

a) Refers to the usage of cost-benefit evaluations.

To repeat, our *inertia* propositions suggest that we should expect no significant impact of fiscal austerity on budgetary behavior. According to these hypotheses, the regression parameters are likely to approximate zero. This applies for all response variables, at least when the stress indicators enter the regressions with a short-term lag (H_1). To the extent that indicators of fiscal stress do affect budgetary behavior, they will serve to increase the impact of the three arguments referring to external or internal pressure (H_2 ; P_3 , P_4 , P_8). In terms of the regression model above, we thus expect:

$$\begin{aligned} & \text{INERTIA THEORY (H}_1, \text{H}_2\text{):} \\ & k = 3,4,8: \quad \alpha_1, \alpha_2 \approx 0; \alpha_3, \alpha_4 \geq 0 \\ & k \neq 3,4,8: \quad \alpha_1, \alpha_2 \approx 0; \alpha_3, \alpha_4 \approx 0 \end{aligned}$$

By contrast, the *contingency* propositions suggest that fiscal austerity induces a greater emphasis on cost-benefit assessments (H_3). In such circumstances, local authorities are more inclined to conduct cost-benefit evaluations (P_{10}), and accept the conclusions of such an analysis (P_1). Conversely, we expect the other arguments to have less impact in times of fiscal stress. In particular, arguments referring to internal or external pressure (P_3 , P_4 , P_8) will be less effective (H_4). If fiscal and/or demographic stress influence the criteria for budgeting, they are most likely to do so in the relatively poorer municipalities. These expectations may be summarized as follows:

$$\begin{aligned} & \text{CONTINGENCY THEORY (H}_3, \text{H}_4\text{):} \\ & k = 1,10: \quad \alpha_1, \alpha_2 \approx 0; \alpha_3, \alpha_4 > 0 \\ & k = 3,4,8: \quad \alpha_1, \alpha_2 \approx 0; \alpha_3, \alpha_4 < 0 \\ & k = 2,5,6,7,9: \quad \alpha_1, \alpha_2 \approx 0; \alpha_3, \alpha_4 \leq 0 \end{aligned}$$

The most striking pattern of Table 5 is the almost total lack of significant parameters. The table comprises 40 coefficients for each of the three periods, altogether 120 coefficients. According to the contingency propositions, we expected fiscal austerity to have greater impact if the municipality was less wealthy ($R_t = 0$). If we focus on the 60 coefficients remaining under this condition, five are significant at the 10 percent level and five at the 5 percent level. The pattern of coefficients does not appear to be systematically different in wealthy municipalities compared to those that are less well off. Neither do we observe any configuration of coefficients which suggests that one time-lag is more important than the others. The signs of the parameters seem to be completely random, and the table provides no evidence in favor of the initial contingency propositions. To test the robustness of these results, we employed responses for the chief managers and the department heads as response variables in similar regressions. Again, the results did not change substantially.

The overall conclusion, then, is that changes in municipal austerity, at

least as measured here, do not seem to have *any* systematic and significant impact on the criteria used by local governments for allocating resources. The support for H_1 is quite remarkable, and so is the lack of support for any of the propositions derived from what we have called contingency theory. Table 5 strongly indicates that at least the “core” of established public policies and modes of management tends to be quite resistant towards change in at least some important aspects of their task environment.

At first sight, this conclusion appears to contradict the findings reported by Mouritzen (1991a, ch. 11, 12). The Danish analysis suggests that supply mechanisms account for changes in aggregate spending in times of affluence, while demand factors impact more strongly under conditions of austerity. However, Mouritzen finds little support for the contingent hypothesis in his analysis of *sectoral* allocations. The criteria used to determine appropriations for the various programs are not affected by changing levels of fiscal stress. The criteria examined here relate to the relative priorities among sectors, and less to aggregate spending. Thus, both the Danish and the Norwegian studies suggest that stress impacts marginally on the decision-making criteria for sectoral allocations.

One reason why no consistent pattern emerges from our analysis may be that the level of stress actually experienced by Norwegian local government is not sufficient to leave a significant impact on the criteria for budgetary allocation. The statements presented to decision-makers may also represent stable criteria of budget-making. If so, it is conceivable that fiscal stress impacts on actual budgetary strategies, but that this impact shows up only in *other* respects, such as in the choice between revenue raising and cost cutting approaches.

To explore this possibility, we asked local politicians to describe their preferred response to a 5 percent reduction of tax incomes and central grants. We offered five possible strategies to re-establish budgetary balance. Table 6 shows the means and standard deviations of the responses.¹⁰

Table 6. Choice of Strategies to Cope with a 5 percent Loss of Local Revenue. Means and Standard Deviation (N = 81).

Adjustment strategy	Mean (%)	Standard deviation
Increase the estimate for tax-revenues	0.8	0.4
Increase the rates for fees	1.2	0.4
Reduce local government financial contribution to investments	1.3	0.4
Reduce general level of current spending	2.1	0.4
Reduce current spending for specific purposes	2.3	0.3

It seems that local politicians are indeed prepared to make hard choices. The aggregate (mean) adjustment is 7.7 percent, compared to the 5 percent which was the required minimum. Only 2 percentage points of this gap would be closed by (real or assumed) revenue raising, whereas 1.3 points would be achieved by decreasing the government's contribution to investments (i.e. by incurring greater debt), and 4.4 percentage points by expenditure cutbacks. In this hypothetical austerity situation, politicians are prepared to make *pro-rata* cutbacks as well as reducing the supply of *particular* services, and the two approaches appear to be about equally salient.

Discussion and Interpretation

Of course, this hypothetical decision situation differs from that of actual decision-making. The actual implementation of cutbacks is certainly more painful than merely proposing cutbacks when responding to a survey questionnaire. Nevertheless, Table 6 strongly indicates that politicians respond to increasing stress by making differential cuts. And if decision-makers do respond by making differential cuts, establishing some *adjusted* order of priorities among budgetary items, why can we not find any consistent pattern in terms of the effectiveness attributed to different arguments for appropriations?

Let us first of all consider the possibility that the conspicuous absence of significant coefficients can be an artifact caused by shortcomings of our research design. More specifically, at least two methodological explanations merit attention.

First, it might be argued that our menu of arguments fails to include the criteria that decision-makers actually adopt, or that decision-makers tend to fall back on specific *ad hoc* judgements that are hard to relate to general criteria and decision rules. Moreover, respondents may have found it hard to relate the kind of general arguments that we have formulated to specific sectors or budgetary items. Only further empirical research using other instruments can provide a firm basis for evaluating such objections.

Another possibility is that the level of stress actually experienced in the particular setting studied here has not been sufficiently high to induce changes in the criteria for resource allocation. Clearly, the level of stress has been less than dramatic for most Norwegian municipalities. The fact that local revenues stagnated in the late 1980s, and the observation that both stress indicators varied substantially between municipalities do, however, suggest that if more stress is required before criteria are adjusted, the threshold is indeed quite high and that the sensitivity of criteria for allocation to financial and demographic stress is very low over at least a rather wide range of circumstances.

We therefore strongly suspect that at least *part* of the explanation must be substantial rather than methodological, i.e. that fiscal stress indeed does *not* affect the criteria for budgetary allocation of local decision-makers (in any consistent manner). This interpretation supports the inertia hypotheses formulated above, and rejects the propositions derived from contingency theory. Let us therefore explore somewhat further which mechanisms may cause and maintain organizational inertia.

The first interpretation takes as its point of departure a basic proposition from *experimental psychology*. Experimental research suggests that *reductions* from any given base level tend to cause a loss in subjective utility that is significantly greater than the utility gain attributed to a similar increase of benefits (Kahneman & Tversky 1974). When resources become more scarce, managers must respond to changes in demand patterns by reducing some service levels to protect or expand others. If political pressure were proportional to utility gains and losses, we would expect the sectors subject to cutbacks to mobilize more pressure than the sectors requesting more resources. The existence of asymmetrical utility functions reinforces the *status quo*. According to this interpretation, then, austerity strengthens neither the position of performance related criteria nor the role of cost-benefit criteria because of intensive opposition to any reallocation.

This interpretation is corroborated by studies of budgetary re-allocations. The estimation of a partial adjustment model for Norwegian local government (Borge et al. 1992) suggests that the speed of adaptation to resource change is considerably higher when revenues are *increasing*. We find that pressure group activity tends to slow down the speed of adjustment downwards. These results are consistent with the interpretation suggested above, especially in a system where local government has little control over its own revenues.

Another possible explanation relies on *attribution theory*. Following previous research on resource scarcity (Levine et al. 1981; Jick & Murray 1982; Nottenburg & Fedor 1983), we would expect that the way organizations interpret the causes of austerity determines the strategies adopted. If austerity is attributed to *internal* causes, the "blame" is attributed to characteristics of or relationships within the organization itself. Conversely, an *external* attribution implies that factors outside organizational control are seen as the critical determinants of success and failure. When failures are attributed to internal causes, decision-makers tend to go for an offensive scrutiny of organizational performance, while the attribution of problems to external causes tend to generate defensive actions or passive adaptation. Research on conflict behavior seems to suggest that one's own "good" behavior and achievements are easily attributed to internal factors, while the "good" behavior of opponents and own failures tend to be attributed to "external" factors (cf. Heradstveit 1979).

Suppose that fiscal stress is interpreted as a consequence of factors outside organizational control, and that the squeeze is perceived to result from “political” strategies rather than “rational” policies or “market” influences. Such a diagnosis does not call for a critical review of organizational performance. If causes are believed to be “external”, decision-makers are not likely to respond by examining the efficiency of service provision, or to reconsider established principles of resource allocation. In fact, some researchers have observed that such circumstances can cause negative reactions such as loss of loyalty, declining morale, increased turnover and problems of communication; austerity will not promote proactive strategies designed to adapt or to improve efficiency (Jick & Murray 1982). Organizations will make *pro rata* cutbacks, or they will wait for “better times”.

We suspect that Norwegian local governments tend to attribute fiscal stress to external rather than internal factors. Remember that local revenues are essentially determined by central government. Local authorities can correctly claim that demographic factors and revenues are the reason for austerity, and that central authorities must bear the main responsibility for cutbacks. This is corroborated by a comparative analysis of Baldersheim (1991, 89): Chief administrators in Norway, France and the USA were asked to assess the importance of a number of problems for the city’s finances. The three major problems seen by Norwegian managers were mandated costs from central government, loss of tax revenues and reductions of central government grants and subsidies. Internal problems related to unwillingness on the part of politicians to set clear priorities, and administrative resistance to change were regarded as less important. In fact, both French and Norwegian managers perceive two out of the three major problems to be a consequence of policies pursued by the central government, while only one of three problems in the US sample was attributed to federal or state government. Undoubtedly, this reflects the institutional setup of the three systems of local government. The Norwegian and French institutions are integrated governance systems, while US local governments hold a more autonomous position vis-à-vis state and federal authorities. Thus, we can restate our second interpretation as follows: local decision-makers in Norway do not change the criteria of resource allocation because the solution to the austerity problems is seen to rest with central rather than local authorities.

A third interpretation focuses on the *aggregation* of criteria and preferences in the budgetary process. There is a distinct possibility that individual decision-makers do, in fact, respond by making some adjustments in the relative weight given to different criteria, but that their adjustments go in *different* directions, so that no consistent *pattern* emerges at the aggregate level. To see whether this line of reasoning has some merit, we

asked local politicians to indicate the services which they preferred to cut or expand, and then calculated the proportion of representatives who preferred reductions for each of the main sectors. The least popular services were administration (14 percent), culture (16 percent), and construction (16 percent). Few politicians wanted to cut education (5 percent), health care (3 percent), and day-care centers (2 percent). However, no local council was able to establish a majority in favor of reducing the supply of *any one* of the six major services. It seems indeed to be difficult to aggregate individual cutback preferences into a consistent policy of retrenchment.

Conclusion

The *combination* of three of the findings reported above constitutes a real puzzle. We have found that some arguments for allocating resources are seen as more effective than others. We have also found that many decision-makers say that they are indeed prepared to respond to fiscal squeeze by cutting back some services more than others. Yet, variation in the level of financial and demographic stress seems to have no consistent and significant impact on the criteria used for allocating resources, at least as measured in this particular study.

Further research – particularly studies defining the dependent variable(s) in more specific terms – is called for to determine whether the conspicuous absence of any consistent *pattern* of impact is an artifact that can be attributed to shortcomings of the research design employed here. We do suspect, though, that at least part of the explanation for this finding must be substantial rather than methodological, and the fact that our conclusion seems to be consistent with conclusions reported in other studies suggests that further research into the mechanisms of inertia is called for. More specifically, we have suggested that at least three such mechanisms merit further attention. One is the tendency to view a certain *loss* of resources from an established baseline as a greater change in subjective utilities than a similar increase in resources. Another is the tendency to attribute resource squeeze to *external* rather than internal factors. A third is the problems involved in *aggregating* individual preferences into a consistent organizational policy. These three mechanisms may interact in subtle ways; for example, cutback aversions may reinforce aggregation problems, and internal conflict over differential cut-backs may lead actors to search for external help rather than consider internal re-allocation or restructuring. If these suggestions have some merit, we may say that local government seems to “suffer” from an “inertia syndrome” of disproportional subjective pain from cut-backs, attribution of problems to external factors, and aggregation deadlocks.

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2. Note that we are not arguing that increasing fiscal stress will have no impact on budgetary behavior whatsoever. What H_1 proposes is that small or moderate increases in fiscal stress will not lead governments to change the *basic criteria* by which allocations are made. We do not want to imply, however, that the operational figures found in the budget will not be adjusted in response to increasing scarcity of resources.
3. The Fiscal Austerity and Urban Innovation (FAUI) project is a cross-national project on local government responses to fiscal austerity. It was initiated by Terry N. Clarke, of the University of Chicago.
4. A subsequent study by Baldersheim (1991) further corroborates these results. He finds that fiscal stress does not affect leadership patterns significantly unless levels of fiscal stress are severe. This appears to be the case for some US cities.
5. The questions refer to the situation before 1991.
6. Local authorities may stimulate industrial development by providing proper areas and infrastructure, subsidizing investments, and other instruments. Such measures may expand the local tax base in the long run, but not in the short term.
7. If one assumes that the impact of fiscal stress is strictly linear, so that the impact of "negative" or declining stress is simply the inverse of that of "positive" or increasing stress, one may argue that this bias should not matter as long as the range of variables is sufficiently large. This assumption would, however, stretch the argument beyond what seems to be its intended scope of validity. Baldersheim et al. seem to be concerned with the impact of "positive" stress; in fact, in their concluding section they suggest that there may be some unspecified threshold above the zero level as well ("substantial and long-term").
8. The Central Bureau of Statistics of Norway calculates the local government supply in volume terms (constant prices). These figures measure the growth rates of local government activity relative to the preceding year: 1984: 2.2 percent; 1985: 2.9 percent; 1986: 4.4 percent; 1987: 4.4 percent; 1988: 2.4 percent; 1989: -0.3 percent; 1990: -0.3 percent.
9. As is to be expected, FS_t and DS_t are positively correlated: $r = 0.73$ (1984–87); $r = 0.76$ (1985–88); $r = 0.71$ (1986–89). Although correlations are high, multicollinearity is not a problem in the regression results.
10. The question was: "Suppose next year's revenues became 5 per cent lower than previously estimated. How would you prefer to change the budget to reestablish the balance between revenues and expenditures?" The politicians could choose among five strategies (outlined in Table 6), and they indicated the usage of each strategy on a scale from 0 to 5 percentage points. The overall impact was supposed to restore the budgetary balance, i.e. totalling up to 5 percentage points.

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5. The questions refer to the situation before 1991.
6. Local authorities may stimulate industrial development by providing proper areas and infrastructure, subsidizing investments, and other instruments. Such measures may expand the local tax base in the long run, but not in the short term.
7. If one assumes that the impact of fiscal stress is strictly linear, so that the impact of "negative" or declining stress is simply the inverse of that of "positive" or increasing stress, one may argue that this bias should not matter as long as the range of variables is sufficiently large. This assumption would, however, stretch the argument beyond what seems to be its intended scope of validity. Baldersheim et al. seem to be concerned with the impact of "positive" stress; in fact, in their concluding section they suggest that there may be some unspecified threshold above the zero level as well ("substantial and long-term").
8. The Central Bureau of Statistics of Norway calculates the local government supply in volume terms (constant prices). These figures measure the growth rates of local government activity relative to the preceding year: 1984: 2.2 percent; 1985: 2.9 percent; 1986: 4.4 percent; 1987: 4.4 percent; 1988: 2.4 percent; 1989: -0.3 percent; 1990: -0.3 percent.
9. As is to be expected, FS_t and DS_t are positively correlated: $r = 0.73$ (1984–87); $r = 0.76$ (1985–88); $r = 0.71$ (1986–89). Although correlations are high, multicollinearity is not a problem in the regression results.
10. The question was: "Suppose next year's revenues became 5 per cent lower than previously estimated. How would you prefer to change the budget to reestablish the balance between revenues and expenditures?" The politicians could choose among five strategies (outlined in Table 6), and they indicated the usage of each strategy on a scale from 0 to 5 percentage points. The overall impact was supposed to restore the budgetary balance, i.e. totalling up to 5 percentage points.

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