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## Swiss demonstrated budgetary flexibility: A cantonal level analysis of budgetary priority setting

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SWISS DEMONSTRATED BUDGETARY FLEXIBILITY:  
A CANTONAL LEVEL ANALYSIS OF  
BUDGETARY PRIORITY SETTING

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A Thesis

Presented to

The Faculty of the Department of Government  
The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree of  
Master of Arts

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by

Giovanna M. Cinelli

1982

APPROVAL SHEET

This thesis is submitted in partial fulfillment of  
the requirements for the degree of

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## DEDICATION

This thesis is dedicated to my parents, Leonard and Nina Cinelli, for all their efforts in my behalf.

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## ABSTRACT

This study outlines the changes which occur in Swiss cantonal budgets between 1967 and 1977. These changes are computed as an index of demonstrated budgetary flexibility, DBF, representing this investigation's dependent variable. Five explanatory variables, drawn from previous studies of Japanese prefectures and West German municipalities, are tested against the dependent variable. The explanatory variables are environmental complexity, fiscal autonomy, environmental dynamism, interparty competition and local resource availability. A sixth variable, direct democracy, was also tested because three of twenty-five cantons are governed by direct democracy.

This analysis found that population size as a measure of environmental complexity, represents the most powerful explanatory variable defining variations in demonstrated budgetary flexibility. Fiscal autonomy and interparty competition are the second and third most relevant explanatory variables.

The behavior of Swiss cantons more closely approximates Japanese prefectures than West German municipalities. Both Switzerland and Japan have concepts of "consensus" which affect the decisionmaking process. The Japanese call their "consensus" baransu, and the Swiss label theirs, consociationality. Since it appears that baransu influenced decisionmakers in Japan, this Swiss analysis focuses on the definition and relevance of consociationalism to interparty competition. Further, the three cantons with direct democracy were tested against DBF and found to be statistically reliable.

This study concludes that incrementalist assumptions are more applicable to some Swiss cantons' behavior than others. Budgetary stability is determined by a combination of environmental complexity, fiscal autonomy and politics.

CHAPTER I  
INTRODUCTION TO QUESTIONS AND HYPOTHESES  
ON POLITICAL ECONOMY

Budgets are a reflection of a government's response to the questions of political economy: who gets what, from whom and for what purposes. In answering these questions economic theory requires governments to set budget priorities rationally. Democratic economic theory further requires that the priorities reflect citizens' needs. However, incremental theory suggests that budgetary priorities are rather inflexible over time. This inflexibility appears as an unchanging budget or produces inflexible budgetary priorities. Three explanations exist for such stability.

First, the budget could mirror the fact that a government is totally responsive to citizens' changing needs which remain largely unchanged from year to year. Second, the government could be unresponsive to citizens' changing needs, therefore making stability in the budget a reflection of a government's disregard for these needs. Third, it might be that the government's budgetary responses are restricted to reallocation within departments. Resource scarcity limits both the allocation and reallocation of funds.

If either of the last two conclusions is applicable, then the transfer of funds in response to changing social needs is impeded. Unwanted or unnecessary programs will continue while new or urgently

needed programs go uninitiated. The budget stability represented in these situations is counterproductive. It could signify the economically inefficient and politically undemocratic use of scarce resources. Therefore, the controversy over whether budget priorities are set incrementally or not is a relevant question to anyone affected by budget allocations.

Most political scientists accept the view that incrementalism generally characterizes a government's formulation of its policies.<sup>1</sup> Recently, however, two studies conducted on West German municipalities and Japanese prefectures have questioned this concept. My study of Switzerland and its budget is patterned after these two analyses.

Two issues, first addressed in the study of West German municipalities<sup>2</sup> arise when discussing budgetary flexibility and its implications. First, how much do budget shares vary over time? Second, what factors affect the amount of budgetary variation? Both of these queries, answered in long and short-run analysis, represent the crux of the thesis.

In essence, this thesis has two purposes: to define DBF and the variables which determine its variation and to analyze under what settings the variables affect DBF. The second goal is achieved by presenting four regression models, each composed of three or four of the five explanatory variables identified in the West German and Japanese studies. The conclusion includes a broad comparison between the demonstrated budgetary flexibility of the three studies.

Five factors were found to influence DBF and will be used as

explanatory variables for the Swiss study: environmental complexity, fiscal autonomy, local resource availability, interparty competition/direct democracy and environmental dynamism. Each is thoroughly explained in Chapter III, Research Methods.

Four hypotheses are presented for testing: 1) as environmental complexity increases, demonstrated budgetary flexibility decreases; 2) as fiscal autonomy increases, DBF decreases; 3) as interparty competition increases, DBF decreases; and 4) as direct democracy exists, demonstrated budgetary flexibility increases. The four regression models in Chapter IV explain the conclusions of the hypotheses.

In conjunction with the questions on DBF and the factors influencing its variation, the issue of Swiss politics is raised. Switzerland is a confederation with both direct democracy and representative democracy. The question to be answered is does the type of democracy affect demonstrated budgetary flexibility? If so, how much and why? The regression models in Chapter IV address these issues.

The continuing debate over whether Switzerland is a consociational democracy or not is the final characteristic discussed in this thesis. Because the concept of baransu or "evenhandedness" influenced the results of the Japanese study, I felt the question of consociationality might have the same effect.<sup>3</sup> A review of the literature on consociationality is found in Chapter II and sets up a framework for answering the question of whether the type of democracy

affects DBF. It is interesting to note that the literature indicates that the question of whether Switzerland is a consociational democracy or not is unresolved. To me, the fascination of consociationalism springs from whether, within representative democracy, cantons' consociationalism makes a difference. The analysis in Chapter IV dealing with the interparty competition variable answers this question.

This analysis is organized into four chapters. Chapter II is a review of the literature concerning incrementalism and consociationality. It also includes a summary of the results of the Japanese prefectural study. Chapter III outlines and explains my research methodology and problems encountered with the data. Chapter IV presents the explanation and analysis of my four regression models. Chapter V contains the study's conclusions and directions for future research.

## CHAPTER II

### REVIEW AND IMPLICATIONS OF INCREMENTAL THEORY, JAPANESE DEMONSTRATED BUDGETARY FLEXIBILITY AND CONSOCIATIONAL DEMOCRACY

This chapter is divided into three sections, each reviewing relevant aspects of the literature on incrementalism, Japanese prefectural budgeting, and consociationalism. This review places Swiss budgetary flexibility within a proper framework. A more detailed comparison of Japanese and Swiss DBF appears in Chapter IV.

#### I

Incremental decisionmaking holds that major budgetary decisions are made within the executive branch, because the legislature does not have the time to make them. These decisionmakers are not elected and therefore are not as sensitive to public pressures as elected legislators. Regardless of legislators' beholdenness to the public, however, they rarely change an executive recommendation, partly because of the complexity of the budget and partly because of the balanced budget requirement for subnational governments. As one line item increases, another must decrease. This balancing act requires time and expertise.

Legislators do not have the time to make substantial recommendations for budgetary changes. They lack financial expertise and

have inadequate staff support, placing them in the awkward position of having to accept the executive's budget or research alternatives on their own time and at their own expense. The task of legislators then is confined to checking for outright mistakes or explaining why funding is unavailable. Consequently, the executive's budget is often left unchanged.

Since the executive branch is assigned the task of preparing the budget, several sets of "simple allocation rules" facilitate the process. For example, an executive administrator looks to historical precedent in determining feasible expenditures for the upcoming budget. Charles Lindblom states:

An administrator would rely heavily on the record of past experiences with small policy steps to predict the consequences of similar steps extended into the future.<sup>4</sup>

John Crecine, in his book, Governmental Problem Solving: A Computer Simulation of Municipal Budgeting, further supports the contention that executive branch administrators must rely on past histories and fragmented methods of analysis.<sup>5</sup> Most budget requests or problems are too complex to be dealt with on a holistic level. Therefore, they are treated like lines in a telephone directory; each is examined one at a time. Defining subareas of budget requests facilitates information gathering and priority-setting.

Unlike the legislators, the executive administrators have knowledge, albeit limited, and staff expertise at their disposal. They make policy choices rationally by applying marginal adjustments

to past successful policies to formulate current budgetary policies. Choices based on these criteria (marginal adjustments) yield apparently stable budgets because the most reliance is placed on the preceding year's agreed upon budget. In some respects, by eliminating policy choices, incremental budgeting alleviates pressure and focuses attention on an increase for all. Thus, if increases are made on a fixed-percentage, across-the-board basis, each unit from year to year maintains its share of the budget pie.

An incremental model is simply defined as follows. The hth government's chief finance officer takes as his initial expenditure estimate for the ith administrative unit, for the total budget resources, j, in year, k, the amount authorized for expenditure in year, k-1. This is,  $EXP_{hijk-1} \longrightarrow EXP_{hijk}$ .

Then each item is increased on a fixed-percentage, across-the-board basis. This is a special kind of incremental model, one in which shares remain absolutely stable. The procedure "satisfies" the administrative unit's spending demand by providing each with a "fair share" of the revenue increment ( $REV_{hjk} - REV_{hjk-1}$ ). An allocation of this type insures that each unit maintains its relative share of the budgetary pie.

To determine the budget in year, k, it is logical to examine expenditures in year, k-1. A budget was agreed upon in year, k-1, and therefore forms the best model for year, k's, budget. An across-the-board increase alleviates political pressures, especially those worked out and reflected in year, k-1's, budget. Incremental theory



suggests that this reliance on "fair shares" and historical precedent leads to the conclusion that budget shares do not change at all or not much from year to year. Aaron Wildavsky best sums up this idea:

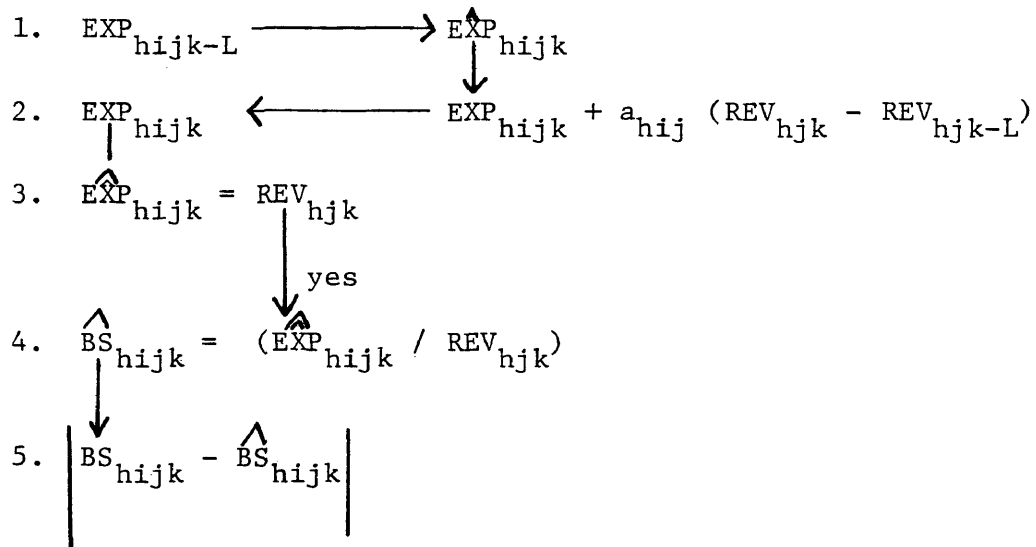
Budgeting is incremental . . . . A budget is almost never actively reviewed as a whole a year after . . . . Instead it is based on last year's budget with special attention given to a narrow range of increases and decreases . . . . Thus . . . . those who make the budget are concerned with relatively small increments to an existing base.<sup>6</sup>

This model of budgeting as incremental is widely believed as valid and supported by John Crecine and Aaron Wildavsky.<sup>7</sup> Accepting this notion requires acceptance of public policy as also organized incrementally, especially as the budget is a plan for public policy. William L. Morrow points out that this idea is a logical continuation of the preceding statement in light of the fact that the bureaucracy which produces the public policy has "sunk so much into existing programs that to start from scratch is too disruptive, wasteful and impractical."<sup>8</sup> Thus the executive branch and the bureaucracy contribute to incrementalism being used as the appropriate budgetary decisionmaking procedure. By using incrementalism, budget stability is maintained.

Several criticisms have been levied against budgetary incrementalism. Wildavsky states that incrementalism produces clear-cut conclusions about budgetary priorities,<sup>9</sup> but P. B. Natchez and Irving Bupp question this point. Both find budgeting to be an incremental process, however the unit of application is at fault. That is, most budget analysts concentrate their efforts on departments as administrative units of analysis. This focus obscures the

TABLE 1

SIMPLE, STABLE-SHARE, RESOURCE ALLOCATION MODEL  
 MEASURING DEMONSTRATED BUDGETARY FLEXIBILITY



The source for this model was extracted from Robert Rickards' doctoral dissertation, p. 83.

process itself which has produced the public policy--i.e., the budget. According to Natchez and Bupp, there must be a shift in emphasis from departments to programs.<sup>10</sup> Efforts would be directed then toward weighing policy alternatives. Incrementalism's effectiveness as a tool used to explain how conflicts are avoided would be hampered by this change.

My study of Switzerland focuses on the departments within cantons and is subject, therefore, to the Natchez and Bupp criticism. However, I do not think that this weakness has adversely affected my investigation. My examination covers allocation across and within cantons focusing on money given to and generated by cantons. But priority-setting goes on at departmental level when the comptroller considers the entire budget. Therefore, the same analysis conducted in smaller political units is conducted here too. The emphasis on programs rather than departments is unnecessary since both are included in the departmental analysis.

In conclusion, incremental explanations have been used to account for budgetary behavior observed by budgetary analysts. The incremental models are simple to use and popular in a number of studies concerning budgeting in international organizations,<sup>11</sup> U.S. cities,<sup>12</sup> and local school systems.<sup>13</sup> They are further used to evaluate government programs such as revenue sharing. The models rely on two tools: historical precedent and fragmentation.<sup>14</sup> The questions raised in this study include whether or not these tools are used in Swiss cantonal budgeting procedures. My research concentrates

on whether adjustments in budget shares<sup>15</sup> occur on a fixed-across-the-board basis or not.

## II

A number of time-series studies have discovered unstable expenditure patterns for certain programs within certain agencies.<sup>16</sup> The instability of the expenditures forces a questioning of the blanket application of incrementalism as characterizing budgetary patterns. Two studies conducted within the past ten years further erode the assumption that incremental theory is universally applicable.<sup>17</sup>

A 1980 investigation of West German budget priorities defined the differing extent to which incremental models are applicable even at the departmental level of analysis. The units of analysis were West German municipalities and the study concluded that "considerable flexibility in setting spending priorities for departments exists within single governments over time and across governments at a point in time."<sup>18</sup> The above-mentioned variables are used to explain when or under what conditions the greatest deviations from an existing budget are likely to occur. Given these findings, then, it is important to test and retest the variables and note if they constitute an adequate explanation for budgetary behavior in other national, governmental, temporal contexts.

In 1982, a study of Japanese prefectural budgeting, patterned after the West German analysis, provided similar, though not as conclusive results. The Japanese study revealed that budgetary

flexibility is more likely to occur under the same circumstances, drawing this same conclusion as the West German study. As one of my hypotheses, I suggest that Swiss cantonal and Japanese prefectural behavior will be comparable. Therefore, a detailed recapitulation of the Japanese analysis follows in order to clarify the connection between the two.

Japanese budgeting is characterized by the concept, baransu, or "balance." Baransu is closely akin to the American notion of "fair-share" budgeting as Aaron Wildavsky defines it: "A convergence of expectations on roughly how much an administrative unit is to receive in comparison to others."<sup>19</sup> "Fair-share" budgeting is the ideal type of decisionmaking strategy because, as noted in section one of this chapter, the "fair-share" revenue increment allocated each department is just sufficient for the unit to maintain its slice of the budget pie. Therefore, baransu when defined as comparable to "fair-share" budgeting, should also be the ideal decisionmaking strategy for Japanese budgeting. Strict adherence to the baransu concept should produce "budgetary priorities that are absolutely inflexible over time."<sup>20</sup> This does approximate real world behavior, even though the Japanese seem predisposed to reach decisions on the basis of consensus.

The Japanese analysis revealed that budgets change, but not much over time and between prefectures. Three factors were found to affect budget stability: local resource availability, environmental complexity and interparty competition.<sup>21</sup> Baransu is understood

as a concept covered under how to deal with the complexity of the prefecture. Chie Nakane speaks of "democracy" in Japan to mean that:

Any decision should be made on the basis of a consensus which includes those located lower in the hierarchy . . . it should leave no one frustrated or dissatisfied.<sup>22</sup>

This conceptual framework is related to consociationality, which has been noted in Switzerland.<sup>23</sup> Upon this similarity--consensus--I will build a comparison between Japanese and Swiss budget-share priorities. Baransu and Nakane's definition of "democracy" approximate a consociational situation with regard to making policies. For example, major parties in both Japan and Switzerland are represented at the national level. Albeit, the Japanese have one dominant party, the Swiss have five major parties and all are represented. But the Liberal Democratic Party (LDP) in Japan has many factions, while the major Swiss parties comprise a power-sharing bloc. The bloc acts like one large party with factions, i.e., like the LDP.

In Japan, the Ministry of Finance (MOF) dominates the budgetary process. It has the expertise, manpower and time necessary to produce public policy. The Liberal Democratic Party penetrates the budgetary process through the Ministry of Finance; therefore, the MOF takes the LDP's role in fiscal decisionmaking seriously. The party, alone, however, is insufficiently equipped to evaluate competing spending proposals. The budgetary process, then, is more or less controlled by the executive branch. And as with incremental theory, the Japanese MOF "satisfies" all units by granting each

administrative unit funding equal to its base year appropriation plus an increase in spending authority approximating the overall budget's growth rate.<sup>24</sup> This method of fund distribution minimizes conflicts among factions of the LDP and produces a budget which is more readily acceptable to most units.

The conclusion then is that Japanese budget-setting priorities are incremental. The incremental model generally explains priority-setting at the departmental level quite well. However, there still is interprefectural variation in the model's utility. And in comparative analysis, West German municipalities exercised greater demonstrated budgetary flexibility than Japanese prefectures. One explanation of this behavior was the absence of the baransu concept in West Germany.

However, budget shares in Japanese prefectures were not always stable. And in those prefectures which indicated greater flexibility, certain qualities were present. Three variables accounted for DBF in both West Germany and Japan and each is explained below.

Local resource availability, indicated by taxes, was the most powerful explanatory variable. It accounted for DBF both in Japan and West Germany. For those prefectures which have few uncommitted resources, there is less inclination to alter the budget because there are no funds with which to undertake new programs. Therefore, the budget priorities remain unchanged.<sup>25</sup> Those prefectures with greater revenue generating capabilities are better able to cover

existing expenditures, and meet new demands, which are more likely to involve reallocation than is merely continuing present programs. Prefectures with higher levels of local resource availability demonstrate a higher amount of budgetary flexibility.

The second most potent explanatory variable was environmental complexity, defined as the number of problems with which budgetary officials are faced. Population size was the indicator in the Japanese study. The more populous the prefecture, the more clients to be served. The more clients, the greater the variety of demands for goods and services. More demands required more agencies, departments, and programs to fulfill the citizens' needs. To meet the demands, each unit must compete for local or natural resources. Therefore, the more demands officials have to deal with, the greater complexity of the environment and thus the heavier the reliance on stable-share allocation procedures. There are more competitors for the same funds in large governments, but the time constraint is identical for both small and large governments. Environmental complexity was negatively correlated with demonstrated budgetary flexibility. As population size increased, DBF decreased. "Apparently officials in more complex environments are less inclined to alter existing interdepartmental expenditure priorities."<sup>26</sup>

Interparty competition was the third variable affecting demonstrated budgetary flexibility. The relationship between the two was weak but significant. As interparty competition increased, budgetary flexibility decreased. This finding was consistent with



the results of the West German data. The closer to a one-party, noncompetitive environment, the more flexible the budget. Apparently, political parties in both countries are reluctant to enter into formal coalitions.<sup>27</sup> In Japan, the prefectures with less interparty competition tend to demonstrate a greater DBF. The more the LDP dominates, the more flexible the budget. The low interparty competition in West Germany is due perhaps in part to the fact that in a noncompetitive environment, one party can muster the majority needed in order to pass its desired legislation. Thus it is more amenable to change.

Several conclusions drawn from the Japanese study should appear in my Swiss study. First, both nations have budget processes affected in some form by the idea of consensus (baransu, consociationalism). Second, the same three variables--local resources availability, environmental complexity, interparty competition--should influence DBF. Third, Swiss budgets should reflect a stability of the same nature as the Japanese pattern. I suspect Swiss cantons are more comparable to Japanese prefectures because the units of analysis are homologous. Before analyzing the empirical data, however, it is important to examine some Swiss characteristics in more detail, especially the concept of consociationalism.

### III

The third review in this chapter concerns consociationalism. My purpose is to explain generally the concept and its possible application to Swiss federalism.

Switzerland is a confederation of twenty-five cantons, twenty-two having representative democracy and three having direct democracy. The federal level of government has a Federal Council which is elected and seated by proportional representation. The behavior of elites at the federal level has been studied more frequently than at the cantonal level.<sup>28</sup> But general conclusions drawn about behavior at the federal level probably can be applied to the cantons. One such conclusion is the existence of consociationalism.

Switzerland is considered to be the best model of politics of accommodation.<sup>29</sup> There are potential disruptive divisions everywhere in the nation: French-speaking vs. German-speaking peoples; ethnic Italians vs. ethnic Swiss Germans; Catholics vs. Protestants; urban vs. rural. Yet Switzerland functions amazingly well, avoiding the political upheaval, which usually characterize societies with strong cultural cleavages. The question is why is it so stable? Several answers present themselves.

First, the multitude of tensions actually makes for stability. There are so many cross-cutting tensions that cantonal alliances shift. The tendency is for the tensions or rifts to cancel each other out. The character of the Swiss people, themselves, plays a role in cancelling out these tensions. There appears to exist a traditional spirit of accommodation and compromise which has characterized Swiss politics for centuries. At the federal level, all Swiss parties from Communists to Christian Democrats are seated. At the cantonal

level, parties can be elected from any part of the spectrum. As a matter of fact, the sheer number and range of parties accepted at both levels could indicate the high tolerance for diversity the Swiss have. Perhaps the Swiss system has succeeded so far because the people have come to accept variety. The constant exposure to diverse elements has tempered the Swiss spirit and focused the citizens' attention on compromise. This explanation is no more operationalizable than the elements of consociationalism, but it is useful in depicting the character of the people the Swiss government serves. Perhaps, Arend Lijphart's conclusion that Switzerland is consociational could be partially supported by this idea.

Second, the Swiss tend to render government as impersonal as possible. This impersonal attitude lessens tensions produced by emotions. Therefore, elite politics reflects less conflict than mass politics. Incrementalism is one way to dampen conflicts among elites.<sup>30</sup> As the budgetary process relies more heavily on incremental assumptions, conflict and tension is reduced. Perhaps the Swiss system reflects these incremental assumptions.

Debate over the topic has led to several definitions of consociationalism, cleavages, subcultural segmentation and majority rule.<sup>31</sup> The major problem lies in the fact that these definitions are difficult to operationalize. For example, Arend Lijphart argues that Switzerland is a consociational democracy based on several evident societal cleavages: a) Swiss linguistic diversity; b) ethnic diversity; c) religious segmentation; and d) class

cleavages.<sup>32</sup> Brian Barry, Jürg Steiner, Robert H. Dorff and D. E. Bohn respond that these cleavages do not really define Switzerland as a consociational democracy, because they are cross-cut; that is, cleavages are not definitively and statistically defined. Shifting segmentations place Swiss citizens in several groups at once, thereby diluting the rigidity of dividing lines. Because the rigidity does not exist, the desire for compromise or consensus is overrated.<sup>33</sup>

Third, the decisionmaking pattern of Swiss elites helps explain Switzerland's stability. The pattern is determined by and affects the level of tension among the groups. Jürg Steiner and Robert H. Dorff note two types of decisionmaking processes: the competitive pattern of conflict management, represented by majority rule; and the noncompetitive, cartelized pluralist pattern, which functions under the device of amicabilis compositio or amicable agreement.<sup>34</sup> It is this second decisionmaking process which seems to apply to Swiss federal and cantonal governments. The emphasis on consensus of the group(s) is the same as Japanese baransu, Nakane's concept of "democracy" and seems to be related to the "impersonal" character of Swiss government.

Consociationalism has been identified at the federal level, in both the Federal Council and Council of States.<sup>35</sup> For consociationalism to succeed, however, there are four prerequisites which must be present. Primarily, the elites must have the ability to accommodate the divergent interests and demands of the subcultures

(societal diversions). Second, the elites, therefore, must have the ability to transcend the cleavages and to join in a common effort with the elites of rival subcultures. This ability depends on the elites' commitment to the maintenance of the system. Third, the elites must strive to improve the cohesion and stability of the system. This requires low tension levels. This could be accommodated if resource reallocation within the budget had no political implications, for example. Fourth, the underlying assumption accepted by all the elites is that they understand the dangers and consequences of political fragmentation. If all four of these conditions are fulfilled, then a consociational decisionmaking process exists. The important question is, if it exists in Switzerland, then one can expect results similar to the Japanese study. The prerequisites for consociationalism in Switzerland appear, supporting the contention that Swiss DBF and Japanese DBF are influenced by the notion of consensus. The results in Chapter IV explain the empirical evidence confirming these conclusions.

In closing, consociationalism in Switzerland could be related to the fact that Switzerland is a confederation. The importance and relevance of federalism to my study is that the existence of federalism is usually reflected in finance. J. Murray Luck best sums it up:

The test of the reality of a federation is usually in finance. In this respect, Swiss federalism is quite real. . . . The cantons . . . have substantial financial resources of their own. . . . (They) resort to income tax, wealth tax, fees, loans, etc. There is no federal ceiling on the amounts or sources of cantonal income.<sup>36</sup>

In light of this cantonal autonomy, the fact that the confederation of Switzerland functions smoothly lends credence to the argument that consensus and common will<sup>37</sup> govern the Swiss political system.

CHAPTER III  
RESEARCH METHODOLOGY

The most difficult part of the thesis involved the organization of the data. The research design presents the questions outlined in the introduction: how much do budget shares vary over time, across cantons and what factors affect demonstrated budgetary flexibility? In answering these questions, four hypotheses were formulated.<sup>38</sup> The hypotheses were tested with data drawn from the Statistisches Jahrbuch der Schweiz for years 1967 to 1977.

Information on cantonal population size, cantonal taxes and tax rates, interparty competition and general wealth was recorded and explanatory variables were singled out for use in regression models.

The years 1967 to 1977 were chosen because of consistency in departmental categories. Some departments were deleted or added to others, but manipulation of the data successfully reduced the number of budget divisions to a common basis of fourteen categories. Discussion of this weakness follows later in this chapter.

A second reason for choosing these years and Swiss cantons as units of analysis is the diversity reflected in the budget over this period of time. Tables 2 and 3 represent the budget categories for all cantons. The figures approximately equal the total general budget expenditure.<sup>39</sup> As is seen in the charts, there is much

TABLE 2  
 DIVERSITY IN SWISS BUDGET SHARES ACROSS  
 CANTONS FOR YEARS, 1967-1977

Category	Maximum	Minimum	Mean	S.D.
General Administration	8.58	3.02	5.49	1.48
Justice/Law	8.58	2.64	6.12	1.64
Military Affairs/ Defense	5.66	1.25	3.12	1.45
Education	33.29	6.91	20.28	7.66
Religion	1.73	0	.40	.57
Public Health	26.71	1.05	12.28	7.34
Land Management	1.22	.001	.223	.57
Roads and Construction	71.12	6.15	23.08	14.51
Social Planning	11.47	1.91	7.15	3.45
Traffic/Energy	3.98	.006	1.02	1.15
Social Affairs	25.09	.29	8.50	6.19
Environmental and Social Welfare	6.38	1.31	3.37	1.80
Financial Expense	18.32	.76	3.24	3.58
Budget Interest	6.335	1.90	4.08	1.41

-25 cases in the long-run analysis: 25 cantons.

-Represents total budget.



TABLE 3  
 DIVERSITY IN SWISS BUDGET SHARES ACROSS  
 CANTONS FOR YEARS, 1967-1977

Category	Maximum	Minimum	Mean	S.D.
General Administration	9.9	2.0	5.28	1.48
Justice/Law	11.7	.6	6.13	1.64
Military Affairs/ Defense	12.1	.8	3.12	1.45
Education	37.0	4.3	20.28	7.66
Religion	2.2	0	.40	.57
Public Health	36.8	.3	12.22	7.34
Land Management	8.0	0	.22	.57
Roads and Construction	76.0	3.5	23.07	14.5
Social Planning	18.1	.19	7.15	4.37
Traffic/Energy	5.6	0	1.02	1.15
Social Affairs	35.5	.1	8.50	6.19
Environmental and Social Welfare	13.9	0	3.37	2.47
Financial Expense	22.2	.38	3.25	3.58
Budget Interest	8.4	1.3	4.08	1.41

-275 observations for short-run analysis: 25 cantons over 11 years = 25 x 11 = 275.

-Represents total budget.

diversity in both the short- and long-run analysis.

Switzerland as a case study was chosen because of a personal interest in the country, its laws, politics and behavior. Further, similarities and differences from the two preceding studies of West Germany and Japan make their comparison interesting. Switzerland is a small, natural resource poor, but extremely affluent, heterogeneous country. There are three ethnic groups,<sup>40</sup> four linguistic divisions,<sup>41</sup> and several political parties.<sup>42</sup> Four official languages exist, although German is by far the most widely spoken.

The political system is fragmented in that there are a myriad of political parties, each entitled to representation. Elections are held either every four, five, or six years, and officials are seated by proportional representation.

Heterogeneity, geography and politics differentiate Switzerland from Japan and West Germany. The concept of baransu in Japan resembles the idea of consociationality in Switzerland. In both, consensus is the key to the government's smooth functioning.

Second, both cantons and prefectures are comparable units of analysis in size and administrative organization. Switzerland is a "loose" federal grouping of cantons--i.e., a confederation. Japan is more tightly centralized and is not a federal system. However, the method of decisionmaking, similar in both units, compensates for the difference in national governments. The West German system is federal, but the municipalities reflect more DBF than either Japanese prefectures or Swiss cantons. Further, the size and

organization of municipal governments are different in Germany. It is more decentralized than the other two.

Japan has one large party, the Liberal Democratic Party, which controls both the national and prefectural levels of government, making minority party representation and impact difficult. The Swiss political system does not have one large party, but rather parties acting in consensus as a "bloc" and operating as a large party. The "bloc" is a manifestation of consociationality at work in Switzerland. Because the bloc operates as one large party with factions, budget-setting priorities should be determined as they are in Japan. That is, the LDP in Japan has great impact on the budgetary process by working through the government, which operates under baransu. Therefore, each department is granted an increment over last year's budget, thereby "satisficing" each unit. The factions within the LDP are tempered by the fact that all areas seem to receive "equal" treatment in budget allocation. Swiss behavior should approximate Japanese results.

The closer the bloc is in consensus, the more it resembles movement toward a one party system. The closer to a one party system, the more flexible the budget. Thus Japanese and Swiss budget behavior should be similar. If the results are the same, then consociationalism, like baransu, has an effect on DBF.

Interest in Switzerland led me to pose some of the above-listed questions. Before defining the explanatory variables used to answer these questions, an explanation of demonstrated budgetary flexibility is required.

Demonstrated budgetary flexibility is a concept describing deviations from routine budgetary decisionmaking. This indicator determines budget fluctuations from year to year and between cantons. In order to calculate DBF, the budget is divided into categories which are consistent over a period of time. These categories reflect administrative structure of cantonal governments.<sup>43</sup> In several instances the categories equal combinations of smaller categories reduced to one division. The problems and effects this had will be discussed later in this chapter.

The steps to determine DBF are:

1. divide each share of the budget within each category by the total budget which equals the percentage of the total budget this share is;
2. subtract the base year category from previous year's category;
3. take the absolute value of the figure in step 2 in order to prevent double counting increases and decreases;
4. sum the absolute value differences (from step 3) = DBF.

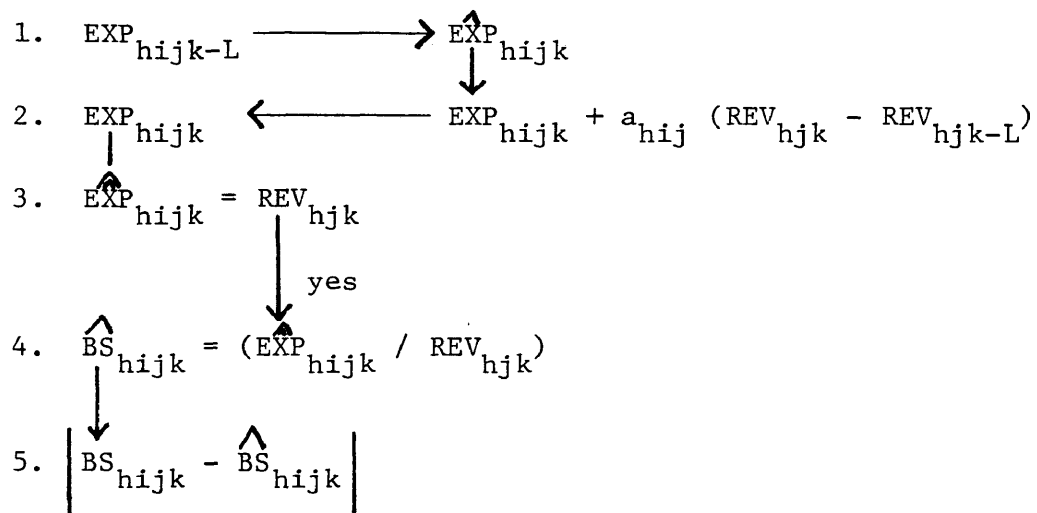
Table 4 illustrates this procedure.

In the Swiss case, there are a total of 275 observations of budget shares, but 250 observations for budget differences because no differences are computed for beginning year, 1967. The DBF, then, is calculated to define the budget-setting priorities over time and at a point in time.

Regressions and correlation analyses were performed for comparative purposes, keeping in mind the impact of a slightly less

TABLE 4

SIMPLE, STABLE-SHARE, RESOURCE ALLOCATION MODEL  
 MEASURING DEMONSTRATED BUDGETARY FLEXIBILITY



The source for this model was extracted from Robert Rickards' doctoral dissertation, p. 83.

than sufficient,  $n$ , in the long-run analysis. The impact of this inherent weakness is dealt with later in this chapter.

An indicator is available now to answer the questions of political economy. The next step is to determine what factors affect the flexibility of the budget as represented by DBF. In past studies,<sup>44</sup> five factors were found to explain budgetary stability: fiscal autonomy, environmental complexity, environmental dynamism, interparty competition, and local resource availability. These variables are used in my study to confirm and expand previous findings.

Each investigation of DBF has measured explanatory variables a bit differently. The Swiss variables were drawn from the Statistisches Jahrbuch der Schweiz and are defined below.

Fiscal autonomy represents the independence a canton exercises from federal funds. Theoretically, the more autonomous a canton--i.e., the more independent of federal funds--the easier it is to shift budget priorities. Less funds are allocated to predetermined programs or departments. The cantons which generate the most local resources usually exercise the greatest autonomy because they rely less on federal monies for total budget operations.

In Switzerland, the federal government awards sums of money to each canton. The figure varies from .6 percent to 64 percent of the total receipts. The amount of money the canton receives, whether it is rich or poor, determines how funds are reallocated, whether

new programs are feasible or whether the budget remains unchanged. This variable was computed two different ways because the level of federal contributions was only available for two of my eleven years. Therefore, the variables calculating autonomy equalled the actual federal contribution and the ratio of federal to cantonal contribution. The ratio of contributions was chosen as the indicator of fiscal autonomy. This measure was picked both for its consistency and its lack of multi-collinearity problem. In all four regression models presented in Chapter IV, fiscal autonomy remained statistically significant and a useful explanatory of variation in demonstrated budgetary flexibility.

Environmental complexity is defined as the number of problems which a budgetary official must face. One possible measure is population size. Or, as in the Japanese study, the number of civil servants and budget size were used as the indicators. In Switzerland as in West Germany, the natural log of population represented the environmental complexity. When DBF was plotted against population a curvilinear relationship was found. In order to describe this relationship a natural log transformation of these data has been carried out.

Environmental dynamism is the third variable presented as a possible explanation of DBF variation. For Switzerland, a growth rate was computed by subtracting from the population in base year the previous year's population. This number was then divided by the base year population. The natural log of this figure was taken

to make it comparable to the environmental complexity variable.<sup>45</sup>

Interparty competition is determined by a series of equations developed in the West German and Japanese studies. Party "blocs" were outlined in Switzerland by reading literature on the topic.<sup>46</sup> The blocs were summed, divided by the total number of representatives for each canton, and subtracted from 50 percent. The absolute value of this subtraction equals the interparty competition variable.

Five blocs were tested: a) the Christian Democrats, the Radicals, the Liberals, the Socialists; b) the Swiss People's Party, the Christian Democrats, the Radicals and the Socialists; c) the Christian Democrats, the Radicals, the Liberals, the Swiss People's Party and the Socialists; d) the Christian Democrats, the Radicals and the Socialists; and e) the Socialists. Each party was represented somewhere in Switzerland, but the problem of direct democracy in three cantons meant that only twenty-two calculations for interparty competition could be made. Therefore, testing hypotheses related to direct democracy required the use of dummy variables. This use avoided confusion over the impact of direct democracy on the interparty competition variable. The dummy calculation yielded 275 observations in the short-run as opposed to 220 cases for the interparty competition short-run.

The final variable used to explain demonstrated budgetary flexibility is local resource availability or wealth. Each cantonal government in Switzerland taxes various items or services within the canton--i.e., income, wealth, automobiles, inheritance. The data



used as a measure of wealth was the deflated per capita tax on income and inheritance. This indicator covered as much of the economic value of the cantons as possible. If one measures a locality's stock of wealth and its income stream, its entire economic value has been assessed.

There were several problems with the data which led to consequences for the study or produced weaknesses. Throughout the period, 1967 to 1977, the most pressing problem was inconsistency with budget categories. As pointed out earlier, the divisions went from eighteen in 1967 to fourteen in 1977, with some fluctuations in between. The categories were grouped together under new or old titles or else completely deleted, leaving no clue as to how the budget category funds were accounted for in subsequent budgets. Manipulations with the data included subtracting out two categories,<sup>47</sup> and creating a new total. Nevertheless, some budget categories remained unchanged and those created by manipulation were meaningful and reflective of Swiss governmental structure.

In conjunction with the budget category inconsistency, the scope of the study was limited further by the fact that all data were drawn from one source, the Statistisches Jahrbuch der Schweiz. Any errors in recording, typing or data gathering could not be checked by me because I only used this source. However, there were no missing data and no glaring inconsistency from year to year noted in any of the information used. A certain amount of random error is expected and accounted for in this study.

The explanatory variables themselves created some difficulties. Those variables which most influenced demonstrated budgetary flexibility in post studies--wealth, environmental complexity, and interparty competition--were calculated differently. Different measures were drawn, identifying the same concepts as in the past. These measures could affect BS and beta weights. For example, fiscal autonomy was calculated on the basis of data available for only two years, 1976 and 1977, then modified to fit all 275 observations. The preferred method of calculating fiscal autonomy would be to subtract the federal contributions to cantons from total cantonal receipts to determine how much cantonal income is locally generated. However, the variable fiscal autonomy was highly correlated with the limited variable of federal contributions indicating that both were explaining the same thing more or less.

The question of consociationality presented problems because the concept has never been measured quantitatively. Several studies<sup>48</sup> battle over the criteria for determining consociationality, but no decision is reached on the concept's applicability to Switzerland. The common point of agreement is that some consensus does exist at the federal government levels of decisionmaking; but no mention of cantonal behavior is ever made. The limited available literature caused some confusion in analysis because of a lack of a definitive response to consociationality. This framework was used in analyzing the regression and correlation models of demonstrated budgetary flexibility, interparty competition and direct democracy.

The existence of direct democracy in the cantons of Obwalden, Appenzell-aher, and Appenzell-auder necessitated the formulation of a dummy variable. These cantons conduct their affairs through a town meeting type of decision process. The small size of the cantons, according to Mr. Alain Jacot of the Swiss Embassy, is the main reason for this type of decisionmaking. Again, very little literature exists on the topic and most is reported with investigations of party-based oppositions.<sup>49</sup> Perhaps the scope of my interpretation of direct democracy's impact is limited by this lack of information, but not seriously so.

The final weakness exists in the insufficient number of observations in the long-run analysis. In order to apply large group statistics, a minimum n of thirty is required. The models using the interparty competition variable have twenty-two observations and the models with direct democracy have twenty-five. This weakness has affected the statistical significance of the interparty competition variable in one of the models.<sup>50</sup> While twenty-five out of thirty is not seriously short of the n = 30 criteria, twenty-two out of thirty might be seen as troublesome.

Despite these weaknesses, the study presents statistically reliable models to explain variation in DBF. Chapter IV identifies and explains these models.

## CHAPTER IV

### EXPLANATORY VARIABLES ACCOUNTING FOR CANTONAL DEMONSTRATED BUDGETARY FLEXIBILITY

The Swiss study revealed three variables as useful in explaining intercantonal differences in DBF. These variables are: environmental complexity, fiscal autonomy and interparty competition/direct democracy. Tables 5 and 6 present statistics indicative of the great diversity apparent in the explanatory variables.

Regressions models employing these variables are found in Tables 9, 10, 11 and 12. These models account for much of the intercantonal demonstrated budgetary flexibility and therefore are useful in defining budget-setting environments in which incremental assumptions may not hold.

Of the three variables, environmental complexity offers the strongest explanation of DBF. As noted in Chapter III, the more complex the environment, the more decisions must be made on altering or setting budget priorities. Therefore, in order to cut down or simplify the environment, decisionmakers rely on several incremental assumptions: 1) allocation rules; 2) "satisficing"; and 3) historical precedent. If this reasoning is correct, then environmental complexity should be negatively correlated with DBF. Table 7 supports this idea. Environmental complexity is negatively correlated (-.4875)

TABLE 5

STATISTICS DESCRIBING THE SHORT-RUN EXPLANATORY  
VARIABLES' VALUES FOR SWISS CANTONS

VARIABLE	N	MAXIMUM	MINIMUM	MEAN	STANDARD DEVIATION
Env. Comp. (Nat. Log of Pop.)	275	9.51	4.86	7.28	1.13
Fiscal Autonomy (Ratio of Fed. contributions to cantonal contributions) (%)	275	6.49	.06	.56	.90
Inter-Party Competition (150%--% Bloc of 5 major pties)	242	50.00	13.33	38.28	10.04
Direct Democracy	275	1.00	0	.12	.32

TABLE 6

STATISTICS DESCRIBING THE LONG-RUN EXPLANATORY  
 VARIABLES' VALUES FOR SWISS CANTONS

VARIABLE	N	MAXIMUM	MINIMUM	MEAN	STANDARD DEVIATION
Env. Complexity (Nat. Log of Pop.)	25	9.33	4.90	7.28	1.15
Fiscal Autonomy (Ratio of Fed. contributions to cantonal contributions) (%)	25	2.80	.07	.56	.63
Inter-Party Competition (  50% - Bloc % )	22	50.00	15.65	38.28	9.75
Direct Democracy	25	1.00	0	.12	.33

TABLE 7  
 ZERO-ORDER CORRELATION OF VARIABLES  
 N = 275

VARIABLES

DBF	1.000				
Env.	-.4875				
Comp.	.0001	1.000			
Fiscal	-.0693	-.3741			
Autonomy	.2746	.0001	1.000		
Interparty	-.0746	-.1732	.3205		
Competition	.2705	.0069	.0001	1.000	
Direct	.4313	-.5701	.0684	0.000	
Democracy	.0001	.0001	.2583	1.000	1.000
	DBF	Env. Comp.	Fiscal Autonomy	Interparty Competition	Direct Democracy

$\alpha = .05$

with DBF. Further, Table 7 reveals that no multicollinearity problem exists with any of the variables which might affect conclusions drawn from the data.

The second explanatory variable is fiscal autonomy. Represented as the ratio between the level of federal contributions to the level of cantonal contributions, this variable addresses the influence of cantonal independence in determining budget priorities. The less money a canton receives from the federal government, the more autonomous it is. The canton is able to allocate or reallocate funds more easily because less monies are precommitted. Given this logic and the method of calculating the variable, there should exist a negative relationship between DBF and fiscal autonomy. As the ratio of federal funds to cantonal funds increases, DBF should decrease. Table 7 supports this contention. The more autonomous a canton, the more flexible the budget-setting priorities (-.0693).

The most flexible canton over the 275 observations was Appenzell-ahr. This discovery should not be surprising because of the strength of the two explanatory variables defined so far. Appenzell-ahr is a small canton with a population of 13,000. All of its citizens are Catholic and Christian Democrats, making the area homogeneous. The canton roughly generates 31.74 percent<sup>51</sup> of its monies and has a maximum DBF of 19.00. The flexibility is due in part to its small size, verifying the hypothesis that the less complex an environment is, the more flexible its budget. Secondly, the level of fiscal autonomy indicates that it is not overly dependent



on the federal government for funds. Therefore, it has the capability of exercising its options to shift priorities because fewer funds are precommitted.

The third variable accounting for variation in DBF is interparty competition. In the short-run analysis of interparty competition, the voting "bloc" is composed of Social Democrats, Christian Democrats, Radicals, Liberals and the Swiss People's Party. Table 7 shows that an inverse relationship exists between DBF and competition. Some conclusions can be drawn from this. In highly competitive situations, political parties are more sensitive to marginal citizens' needs.<sup>52</sup> Studies assume that in order to win votes, the parties will opt for budget changes in favor of voters' preferences. By definition then, governments that change spending priorities demonstrate more DBF than do those that merely maintain existing ones. By looking at the correlations between DBF and interparty competition, one sees that governments with a politically competitive environment do not change budget priorities. Although the correlation is weak (-.0746), the relationship still exists. Apparently, the closer one moves to a one-party bloc, the more flexible the budget-setting priorities. The same results were found in the Japan and West German studies.

In the Japanese analysis, the more competitive situation, yielded parties with a less stable majority. Therefore, DBF tended to be less because the lack of a stable majority prevented the formation of consensus within the legislature to alter the budget. In

less competitive situations, one party holds a majority and thus is capable of mustering the necessary votes to change resource allocations.

The Swiss study supports this contention. Chapter III explains that the bloc acts as one large party with many factions, mirroring the image of the LDP in Japan. As the LDP dominated Japanese politics, especially through the MOF, demonstrated budgetary flexibility increased. The same holds true for Switzerland. The bloc never maintains less than a 13 percent majority in cantonal governments. It always has a margin of control, allowing it the liberty of altering budget priorities. In those cantons with a high interparty competition figure, DBF is high. The higher the interparty competition variable, the closer to a one-party system.

Certain American studies<sup>53</sup> by V. O. Key, Jr., Thomas Dye, and Glen T. Broach support the reasoning that in more highly competitive situations, political parties tend to be more responsive to voters' needs. These studies assume that parties attain votes by promising to alter present expenditure patterns in the voters' favor. Governments that change spending priorities demonstrate more budgetary flexibility than those which maintain existing ones.

The three variables run in the short-run regression are shown in Table 9. This model is the only one with four variables in it because of the need to have a statistically reliable explanation for DBF's variation. The fourth variable is local resource availability, whose format measure was taken from the studies of

West Germany and Japan. In both of these, local resource availability was the major explanation for DBF. In the Swiss study, it does not enter the explanation except for this model. Local resource availability was not used because of the multicollinearity problems it has with interparty competition.<sup>54</sup> The higher the correlation, the more difficult it is to distinguish which variable is responsible for what effect. Therefore, it was not used. Further, this model explained 23.40 percent of the variation, the lowest of all models.

Table 9 confirms the explanatory capacity of each variable and verifies that environmental complexity is the most powerful explanation of DBF. Complexity accounts for 41 percent of the 23.40 percent of the variation in DBF. While this variable is the most important for my study, the results are similar to those found in West Germany and Japan. Basically, the size of the unit of government and the complexity of the environment determine a good portion of budget-setting priority policy.

A fourth political variable is analyzed in Switzerland: direct democracy. Chapters II and III define the concept and where it exists in Switzerland. Table 10 indicates the regression results and Tables 7 and 8 present the correlation outcomes between DBF and direct democracy. In theory, direct democracy is citizen input through the institutions of the initiative and the referendum. Any minority group can gain recognition or input into public policy by instituting one of these tools. If it is true that governments respond to citizen needs, which citizens determine and convey through the direct

TABLE 8  
 ZERO-ORDER CORRELATION OF VARIABLES  
 N = 25

VARIABLES

DBF	1.000				
Env.	-.8000				
Comp.	(.0001)	1.000			
Fiscal	.0986	-.5484			
Autonomy	(.6390)	(.0045)	1.000		
Interparty	-.0291	-.1803	.4617		
Competition	(.8977)	(.4219)	(.0305)	1.000	
Direct	.7109	-.5703	.0998	0.000	
Democracy	(.0001)	(.0029)	(.6350)	(1.000)	1.000
	DBF	Env. Comp.	Fiscal Autonomy	Interparty Competition	Direct Democracy

$\alpha = .05$

TABLE 9

SHORT-RUN REGRESSION ANALYSIS OF THE DEPENDENT VARIABLE,  
DBF, AND THE EXPLANATORY VARIABLES, ENVIRONMENTAL  
COMPLEXITY, FISCAL AUTONOMY, LOCAL RESOURCE  
AVAILABILITY AND INTERPARTY COMPETITION

N = 275

F Value = 16.416

RSQR = .2340

VARIABLES	B	BETA	STD. ERROR	PROB. T
Environmental Complexity	-1.33	-.46	.19	.0001
Fiscal Autonomy	-0.90	-.31	.19	.0001
Local Resource Availability	-0.01	-.19	.01	.0102
Interparty Competition*	-0.04	-.16	.02	.0306

\*Only 242 OBS.

α = .05

TABLE 10

SHORT-RUN REGRESSION ANALYSIS OF THE DEPENDENT VARIABLE,  
DBF, AND THE EXPLANATORY VARIABLES, ENVIRONMENTAL  
COMPLEXITY, FISCAL AUTONOMY AND  
DIRECT DEMOCRACY

N = 275

F Value = 40.937

RSQR = .3330

VARIABLES	B	BETA	STD. ERROR	PROB. T
Environmental Complexity	-1.39	-.49	.19	.0001
Fiscal Autonomy	-0.92	-.27	.19	.0001
Direct Democracy	1.64	.16	.63	.0103

 $\alpha = .05$

democracy instruments, then one expects a positive relationship between direct democracy and DBF. As citizens change their minds, the government changes its policies, producing more flexible budgets.

Three cantons in Switzerland are run totally by direct democracy: Appenzell-ahr, Appenzell-ahr and Obwalden. They range in size from 13,000 to 240,000 inhabitants and each is politically homogeneous. Appenzell-ahr, as pointed out earlier, is the most flexible canton with a maximum DBF of 19.00. Appenzell-ahr has a maximum DBF of 14.91 and Obwalden of 14.54. Of the three cantons, Appenzell-ahr is the smallest (least complex) and, thus, the most flexible; Obwalden is the largest and the least flexible of the three. But the idea that direct democracy affects DBF positively is supported in Tables 7 and 10. There are no multicollinearity problems with the variable direct democracy and a correlation of .4314 (.0001) indicates a strong relationship with DBF. Apparently, if the type of government is direct democracy, the demonstrated budgetary flexibility increases. Or, where direct democracy exists, DBF will be high. Perhaps this indicates that voters do not feel as tied to resource allocation rules or historical precedents as do voter representatives. Rather, they determine budget priorities based on fluctuating social needs.

The regressions in Table 10 verify direct democracy's impact on DBF. The short-run direct democracy model explains more of the variation in DBF (RSQR = .3330) than does the interparty competition

model (RSQR = .2340) in Table 9. A conclusion can be made that the type of government influences the budget-setting priorities of a canton. In this instance, those cantons with representative democracies have larger populations (more complex environment) and greater dependence on the federal government for funds. Therefore, the logical expectation is that they would rely more heavily on incremental assumptions than the direct democracies. Incremental assumptions as a basis for budget-setting priorities are reflected in DBF. If the DBF is low, one expects incremental decisionmaking. The Swiss study's regression models can bear out this conclusion.

Tables 9 and 10 show that high levels of DBF are associated with low levels of environmental complexity or interparty competition or fiscal autonomy or high levels of direct democracy. In comparison, it can be seen that Table 10 variables constitute a much more potent explanation for variations in DBF than do Table 9 variables (RSQR = .3330 vs. .2340, respectively). If these relationships are accurate, then the long-run analysis should reinforce my conclusions.

Tables 11 and 12 represent the two long-run studies of Swiss DBF. Long-run analyses are carried out to eliminate the effects of unspecified variables. The regression equations, as done, eliminate the need to perform partial correlations; therefore the effects noted in Tables 11 and 12 are accurate representations of those variables' impact on intercantonal DBF.

The long-run studies reinforce the theoretical relationships of the explanatories to DBF. Environmental complexity or difficulty



TABLE 11

LONG-RUN REGRESSION ANALYSIS OF THE DEPENDENT VARIABLE,  
DBF, AND THE EXPLANATORY VARIABLES, ENVIRONMENTAL  
COMPLEXITY, FISCAL AUTONOMY AND INTERPARTY  
COMPETITION

N = 22

F Value = 12.699

RSQR = .6791

VARIABLES	B	BETA	STD. ERROR	PROB. T
Environmental Complexity	-1.50	-1.03	.24	.0001
Fiscal Autonomy	-1.39	-0.63	.41	.0033
Interparty Competition	0.011	0.07	.02	.6241

$\alpha = .05$

TABLE 12

LONG-RUN REGRESSION ANALYSIS OF THE DEPENDENT VARIABLE,  
DBF, AND THE EXPLANATORY VARIABLES, ENVIRONMENTAL  
COMPLEXITY, FISCAL AUTONOMY AND DIRECT  
COMPETITION

N = 25

F Value = 37.583

RSQR = .8430

VARIABLES	B	BETA	STD. ERROR	PROB. T
Environmental Complexity	-1.15	-.88	.22	.0001
Fiscal Autonomy	-1.28	-.42	.34	.0011
Direct Democracy	1.47	.24	.65	.0363

$\alpha = .05$

of decision-making process, is expected to remain the most useful explanatory variable of budget-setting priorities. Fiscal autonomy is also expected to remain significant and politics should be weakly related to DBF. The one problem--small number of cases--will exacerbate the multicollinearity difficulties, but should not harm the verification of the short-run results.

Neither model uses local resource availability because of the multicollinearity problem between interparty competition and the resource variable (-.63589). It is difficult to discern whether it's autonomy or wealth that is having an effect on DBF. Some wealthy cantons receive higher levels federal assistance than some poorer ones. Therefore resource availability was not used in the models.<sup>55</sup>

Table 11 represents a repeat of the short-run analysis of the interparty competition model. Although there are only twenty-two cases for this model, it is useful in showing that the two most powerful explanatory variables remain powerful. The multicollinearity problem and insufficient number of cases explain the lack of statistical significance of interparty competition.

Table 12 portrays the relationship of environmental complexity, fiscal autonomy and direct democracy to DBF. It is the most useful model, explaining 84 percent (RSQR = .8430) of the variation in DBF. Again, the number of cases is under the n required for large group statistics, but the significance of the model is not affected.

For environmental complexity, assume that the complexity of

the environment is determined by the number of demands which determine the programs, departments and agencies' services to the public. The more programs needed, the more resources were to be allocated or reallocated. In Switzerland, this study was unable to observe directly the complexity of the environment by counting the number of civil servants or federal employees. Because two previous studies used population (in some form) as an indicator of complexity, I assume that decisionmakers will behave as those did in West Germany and Japan and therefore used population as the measure of complexity. I expect Swiss decisionmakers to rely on standard operating procedures, i.e., incremental rules.

The long-run analysis indicates that environmental complexity accounts for 60 percent of the variation in DBF. Fiscal autonomy explains 32 percent and direct democracy provides the justification for the remaining variation. The entire model explains 84 percent of the total variation in DBF. Important to note is that fiscal autonomy alone has a weak relationship with DBF (see Table 8: .09864), but when controlled for effects of other variables in the regression model, it is consistently the second most important explanation.

Table 14 is the final comparison between Japanese prefectures and Swiss cantons. The average DBF for Swiss cantons is 5.80, accounting for 14 categories and the total budget. Average Japanese DBF for 6 categories and the Ordinary Account budget equals 2.79. Table 14 is the adjusted DBF of Switzerland compared to Japan.<sup>56</sup>

TABLE 13

LONG- AND SHORT-RUN STATISTICS DESCRIBING  
 SWISS CANTONS' AVERAGE DEMONSTRATED  
 BUDGETARY FLEXIBILITY

N = 25

	MEAN	MAXIMUM	MINIMUM
Avg. DBF	5.80	10.85	3.54
Adjusted Avg. DBF (DBF x 6/14)	2.55	4.77	1.55

N = 275

	MEAN	MAXIMUM	MINIMUM
Avg. DBF	5.80	19.00	1.08
Adjusted Avg. DBF (DBF x 6/14)	2.55	8.36	.475

TABLE 14  
COMPARISON OF AVG. DBF OF SWITZERLAND,  
JAPAN AND WEST GERMANY

	<u>Avg. DBF</u>
Switzerland (N = 25 or 275) (Adjusted)	2.55
Japan (N = 46 or 460)	2.79
West Germany (N = 105)	5.67

The figures in this table indicate that perhaps the Swiss cantons are not as flexible as thought to be. Both Japanese prefectures and Swiss cantons appear to be extraordinarily stable when compared to West German municipalities. West German cities do not labor under some form of consensus-seeking decisionmaking procedure; this may explain partially the flexibility of West Germany and the inflexibility of Switzerland and Japan. Switzerland's consociationality mirrors Japan's baransu. The desire to avoid conflict and budget stability seem to go hand in hand.

CHAPTER V  
CONCLUSIONS

This study defines the demonstrated budgetary flexibility of Swiss cantons. The cantons are relatively stable, with an average DBF of 5.80. Several characteristics exist to explain this situation. Environmental complexity, fiscal autonomy, interparty competition and direct democracy are the explanatory variables describing variation in DBF. Both short- and long-run regressions and correlations support the contention that incremental assumptions are more applicable in some cantons than in others.

The analysis of Swiss DBF confirms the results of earlier studies, plus addresses the questions of consociationalism, direct and representative democracy. Through empirical evidence, this analysis proved that Swiss budget priorities remain stable over time and across units of government. In comparison to the Japanese and West German studies, Swiss cantons tend to be more stable than either of these. One explanation for this stability may be the consociational environment. The Japanese concept of baransu is similar to the Swiss concept of consociationalism. Switzerland's political environment functions under a consensus-oriented atmosphere. Therefore, consociationalism may be a contributing factor to DBF.

The desire to achieve consensus makes it logical for cantonal



governments to rely on incremental assumptions: "satisficing," simple allocation rules, and historical precedent. Those cantons with representative democracy may depend on these incremental assumptions in order to pass a budget each year. The stability of the budget could be due to these incremental assumptions.

Several factors are capable of explaining the variation in DBF. Of the four variables tested, environmental complexity remained the strongest predictor of demonstrated budgetary flexibility in both the short- and long-run analyses. The tables presented in Chapter IV support this argument that cantons with higher levels of environmental complexity tend to demonstrate lower levels of DBF than do cantons with low levels of environmental complexity.

Of the three remaining variables, fiscal autonomy was the second most reliable predictor of DBF. The less dependent a canton was on the federal government for monies, the more flexible the budget-shares. Interparty competition, as presented in Chapters III and IV, showed that political influence on budget-setting priorities was present, but minimal. Because of the consociational atmosphere, political competition remains low. Parties, as Harold Glass points out,<sup>57</sup> all have an opportunity to enter the political arena. Therefore an overwhelming majority for any party is unlikely. Further, the fact that a "bloc" of parties exists, acting as one large party, makes it probable that interparty competition will be practically nonexistent. The empirical data supports this statement.

The models in Chapter IV indicate that competition accounts for only about 6 percent of the variation in demonstrated budgetary flexibility.<sup>58</sup> Given this percentage, interparty competition is not a powerful explanation of DBF; the studies in West Germany did not indicate an overwhelming effect by competition.<sup>59</sup> The consociational political situation in Switzerland most probably accounts for this result.

The fourth variable--direct democracy--was the third possible explanation for DBF variation. This variable was the second political variable tested and it produced significant results. In the long-run, direct democracy explained 12 percent of the variation in DBF. The three cantons with direct democracy demonstrated greater budget flexibility than the representative democracies. This could signify that as the decisionmaking process is more decentralized, priorities are fixed by nonincremental assumptions. That is, citizens in direct democracies decide budget priorities through program evaluation, rather than reliance on historical precedent or "satisficing." In Switzerland, perhaps, direct democracy removes the need for incremental decisionmaking procedures.

In sum, certain settings make it highly likely that incremental tools will be used in cantonal budget-setting. High levels of environmental complexity or dependence on federal funds or political competition yield low levels of DBF--i.e., situations where incremental assumptions would be used in determining the budget. Zurich, Berne, Lucerne, Geneva, and Uri are all cantons which fulfill one or more

of the above criteria and thus have fairly stable budgets. Uri, for example, had the most inflexible budget-setting priorities of all the cantons. It had an average DBF of 3.32.<sup>60</sup>

The comparative analysis between Japan, West Germany, and Switzerland yields some interesting results. Swiss cantons are less flexible (2.55) than Japanese prefectures (2.79). But because of aggregation, some departments were lumped together. The smaller number of Japanese departments means less flexibility and when the Swiss budget categories are adjusted for comparison to the Japanese, they are also less flexible. In other words, the seven departments with close to 50 percent of the budget, retain their 50 percent share. This is the fundamental assumption upon which incremental theory is based--that departments will maintain their absolute share of the budget pie. This absolute inflexibility was not found in any of the three studies.

Table 15 represents a comparative analysis of the three studies' explanatory variables. The power of each variable can be seen clearly. Environmental complexity in the Swiss investigation overwhelmingly explains the majority of the variation in DBF, whereas local resource availability is the most powerful explanatory in West Germany and Japan.

The questioning of incremental procedures opens the door to further research. Decisionmaking in Switzerland has been identified as consensus-oriented. Examination of the budget and further testing of the theories expounded in Rickards' West German study could aid in

TABLE 15

COMPARATIVE ANALYSIS OF WEST GERMAN MUNICIPALITIES, JAPANESE PREFECTURES  
AND SWISS CANTONS' POWER OF EXPLANATORY VARIABLES

Variable	Swiss Cantons		Japanese Prefectures		West German Municipalities			
	Beta	Correlation Coefficient	Variable	Beta	Correlation Coefficient	Variable	Beta	Correlation Coefficient
Environmental Complexity	-.89309	-.80007	Local Resource Availability	.97319	.5511	Local Resource Availability	.51236	.4477
			Environmental Complexity	-.64818	-.3925	Environmental Complexity	-.46943	-.3206
Fiscal Autonomy	-.41998	.09864	Environmental Complexity	.24928	.2807	IPC	.19466	.2668
Interparty Competition	.022106	-.02911	IPC					
Democracy	.25225	.71096						

N = 25

N = 46

N = 105

quantifying the concept of consociationality. Most research and literature on consociationalism has not been quantitatively supported. Through empirical evidence of consensus in budget-making, proof could be found for consociationalism's existence in Switzerland.

The most useful research would be a thirty-plus year study of Swiss DBF. The present analysis is sufficient for testing the hypotheses presented in the West German and Japanese analyses, but the results could be verified (statistically) better if the time period were longer.

Finally, three policy recommendations for budgeting come to mind when trying to avoid falling into an incremental "rut." First, the simplification of the decision-making environment would reduce budgetmakers' reliance on incremental tools. In essence, the process could be decentralized to the point where each unit must evaluate programs and priorities as opposed to reallocating each programs' previous budget. The unit of government itself, should handle the analysis on a much more local level. Perhaps giving the legislature more time, money and staff to adequately analyze the budget would provide a stepping stone toward a non-incremental direction.

Second, the evaluation of government programs should be done every two to three years. As long as programs exist for extended periods of time without checks, the tendency toward waste and undemocratic allocation of finite resources exists. To avoid this inefficiency, priorities should be determined in a more non-incremental way. There should be less reliance on "satisficing"

and more on program merit.

Third, the political environment should be modified to include a sufficient amount of competition. Competition could be encouraged by making more officeholders beholden to the public. This competition could insure some checks and balances on the budget-makers since the legislature must ultimately approve the budget. If the legislators were more responsive to citizens' desires, perhaps the executives would rely less on incremental processes than they presently do.

In closing, the top explanatory variables defining variation in DBF equal: environmental complexity, fiscal autonomy, interparty competition/direct democracy. Although local resource availability was a powerful explanatory variable in the other two studies, it was not applicable here. As noted in Chapter IV, there was insufficient variation in the local resource availability variable to make it usable in more than one model. And even in that one model, it was not a potent explanation.

The settings where incremental assumptions are most likely to occur are: when interparty competition is high or when fiscal autonomy is high or when environmental complexity is high. These conclusions support the results of the West German and Japanese analyses indicating that further case studies testing and retesting of these assertions would prove helpful in justifying incremental theory. By applying his model to another culture and nation, my findings have substantiated the empirical validity of the Rickards' assumptions.

END NOTES

<sup>1</sup>Aaron Wildavsky, Politics of the Budgetary Process (Boston: Little Brown & Co., 1964); M. A. H. Dempster and Aaron Wildavsky, "On Change: Or There Is No Magic Size for an Increment," Political Studies 10 (April 1978): 361-72.

<sup>2</sup>Robert C. Rickards, "Non-Routine Decisionmaking: A Study of Demonstrated Budgetary Flexibility in West German Municipalities' Budgetary Priority-Setting" (Diss: University of Michigan, 1980).

<sup>3</sup>The idea of baransu was drawn from a thesis presented by Michael Gresalfi on Japanese budgetary flexibility.

<sup>4</sup>Charles E. Lindblom, "The Science of Muddling Through," in Public Administration: Concepts and Cases (Boston: Houghton Mifflin Co., 1969), p. 151.

<sup>5</sup>John P. Crecine, Governmental Problem Solving: A Computer Simulation of Municipal Budgeting (Chicago: Rand McNally & Co., 1969), Introduction.

<sup>6</sup>Wildavsky, Politics, p. 372.

<sup>7</sup>Wildavsky, Politics, passim and Crecine, passim.

<sup>8</sup>William L. Morrow, Public Administration: Politics, Policy and the Political System (New York: Random House, 1980), p. 350.

<sup>9</sup>Wildavsky, Politics, introduction.

<sup>10</sup>P. B. Natchez and Irving C. Bupp, "Policy and Priority in the Budgetary Process," American Political Science Review (September 1973): 951.

<sup>11</sup>Francis Hoole, Brian Job and Harvey Tucker, "Incremental Budgeting and International Organizations," in the American Journal of Political Science (May 1976): 273-301.

<sup>12</sup>Thomas Anton, Budgeting in Three Illinois Cities (Urbana, Illinois: Institute of Governmental Public Affairs, 1964).

<sup>13</sup>Donald A. Gerwin, Budgeting Public Funds: The Decision Process in an Urban School District (Madison: University of Wisconsin, 1969).

<sup>14</sup> Fragmentation is defined as the breakdown of complex budget questions into sub-areas or sub-programs for more manageability.

<sup>15</sup> Budget shares are defined as the proportional distribution of a canton's budget to its departmental category.

<sup>16</sup> Natchez and Bupp, APSR; see also John R. Gist, "Mandatory Expenditures and the Defense Sector: A Theory of Budgetary Incrementalism," Sage Professional Papers in American Politics, Series 04-049 (Beverly Hills: Sage Publications, 1974); John Wanat, "The Basis of Budgetary Incrementalism," American Political Science Review (September, 1974): 1221-1228.

<sup>17</sup> Rickards.

<sup>18</sup> Robert C. Rickards, "Fair-Share Budgeting in Japanese Prefectures: A Re-examination of the Baransu Concept." Paper presented at the Southeast Conference of the Association for Asian Studies, University of North Carolina, Chapel Hill, NC, January 22, 1982, p. 3.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Michael Gresalfi, "Japan's Prefectural Budgetary Process: An Incremental Analysis" (M.A. thesis: College of William and Mary, 1981), Chapter 4.

<sup>22</sup> Chie Nakane, Japanese Society (Berkeley & Los Angeles: University of California Press, 1970), p. 35.

<sup>23</sup> See Chapter II, Section III of this thesis.

<sup>24</sup> Gresalfi, Chapter II.

<sup>25</sup> Ibid., Chapter IV.

<sup>26</sup> Rickards, Japanese baransu, p. 26.

<sup>27</sup> Ibid., p. 27.

<sup>28</sup> Jürg Steiner and Robert H. Dorff, A Theory of Political Decision Modes: Intraparty Decision-Making in Switzerland (Chapel Hill, NC: The University of North Carolina Press, 1980).

<sup>29</sup> J. Murray Luck, Modern Switzerland (California: The Society for the Promotion of Science and Scholarship, 1978), p. 333.



<sup>30</sup> Ibid., p. 335.

<sup>31</sup> See articles: Brian Barry, "Political Accommodation and Consociational Democracy," British Journal of Politics 3 (1975): 477-505; Arend Lijphart, Democracy in Plural Societies: A Comparative Exploration (New Haven: Yale University Press, 1977); and Jürg Steiner, Amicable Agreement vs. Majority Rule (Chapel Hill, NC: The University of North Carolina Press, 1974).

<sup>32</sup> Lijphart, Plural Societies, Chapter One.

<sup>33</sup> Brian Barry, "Political Accommodation and Consociational Democracy," British Journal of Politics 3 (1975): 477-505.

<sup>34</sup> Steiner and Dorff, Decision Modes, p. 3-4.

<sup>35</sup> Ibid., p. 5-6.

<sup>36</sup> Luck, Modern Switzerland, p. 332.

<sup>37</sup> Steiner and Dorff, p. 6-8.

<sup>38</sup> See Chapter One of this thesis.

<sup>39</sup> This includes day-to-day operating expenses, too. Two categories, PUBLIC HOUSING CONSTRUCTION AID and SALES ACCRUING FROM FINANCIAL WEALTH were subtracted from the total budget drawn from the yearbooks because I was unable to incorporate them into any of the fourteen categories. They represented such minute amounts that I do not feel they damaged the data by being deleted.

<sup>40</sup> Swiss German, Italian and French are the ethnic groups.

<sup>41</sup> The languages spoken are Italian, French, German and Romansch.

<sup>42</sup> The political parties are: Christian Democrats, Swiss People's Party, the Radicals, the Liberals, the Free Democratic Party, the Social Democratic Party, the Independents and the Communist Party.

<sup>43</sup> The budget categories are: General Administration, Justice/Law, Military Affairs/Defense, Education, Religion, Public Health, Environmental and Social Welfare, Social Planning, Land Management, Roads and Construction, Traffic/Energy, Social Affairs, Budget Interest and Financial Expenses.

<sup>44</sup> Rickards and Gresalfi, *passim*.

<sup>45</sup>The variable, environmental dynamism, was not used in this study.

<sup>46</sup>See Harold E. Glass, "Consensus and Opposition in Switzerland: A Neglected Consideration," Comparative Politics 10 (April 1978): 361-72.

<sup>47</sup>Construction Aid for Public Housing and Sales Accruing from Financial Wealth were deleted.

<sup>48</sup>Steiner and Dorff, *passim*, and Lijphart, *passim*.

<sup>49</sup>Glass, p. 363.

<sup>50</sup>See Chapter IV of this thesis. The long-run model of DBF = environmental complexity, fiscal autonomy and interparty competition.

<sup>51</sup>This figure equals the mean value of the local resource availability variable.

<sup>52</sup>This presumes that the legislative branch makes or sets budget priorities. If the executive branch is responsible for budget-setting, and the legislative branch merely approves, then voter influence is felt minimally. In Japan, the MOF with input by the LDP, determines budget priorities. In Switzerland, each canton is responsible at the local level for setting priorities.

<sup>53</sup>See V. O. Key, Jr., Southern Politics (New York: Vintage Books, 1949); Thomas R. Dye, Politics, Economics and the Public (Chicago: Rand McNally & Co., 1969); and Glen T. Broach, "Interparty Competition, State Welfare Policies and Non-Linear Regression," Journal of Politics (August 1973): 739-743.

<sup>54</sup>The correlation between the two variables equals -.63589. This study used .6 as the highest acceptable level of multicollinearity.

<sup>55</sup>The models were tried with local resource availability as the fourth variable, but both proved to be statistically insignificant. The model with interparty competition already suffers from an inadequate  $n = 22$ , making it difficult to apply large group statistics as pointed out in Chapter III. I expected multicollinearity problems and got them. The final reason for not using local resource availability is that the two most powerful variables-- environmental complexity and fiscal autonomy--hold. They explain such a large proportion of the variation in DBF that they weaken the explanatory capacity of interparty competition and local resource availability.

<sup>56</sup>To reach the adjusted comparable figures Swiss DBF is multiplied by 6/14, which represents the ratio of Japanese to Swiss budget categories. The new Swiss DBF equals 2.552.

<sup>57</sup>Glass, introduction.

<sup>58</sup>The short-run model has the variables environmental complexity, fiscal autonomy, local resource availability and interparty competition.

<sup>59</sup>See R. C. Rickards' dissertation: "Non-Routine Decision-making: A Study of Demonstrated Budgetary Flexibility in West German Municipalities' Budgetary Priority-Setting."

<sup>60</sup>DBF of 3.32 equals 1.42 when adjusted for comparison with Japan by the procedure outlined in footnote 56.

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