On Comparative Policy Analysis: Methodological Problems, Theoretical Considerations, and Empirical Applications*

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1. Introduction

In the 1960s a new orientation towards practically relevant application-oriented research gained more and more ground in political science. In contrast with both the old Lasswellian policy science and the Lindblomian planning for welfare, the new orientation – empirical policy analysis – is less deductive, less normative, and more concerned with an inferential empirical analysis of the determination of the output of political processes.[1]

It has been obvious from the beginning that this new research orientation is an attempt to bridge the gap between the Eastonian analysis of the total political process in society and the more traditional political science research in which the more mundane matters of planning, budgeting, and efficiency in day-to-day administration are the important issues. To achieve this goal, something on both frontiers must be given up. On the one hand, empirical policy analysis cannot focus totally on the counterfactual best possible outcomes of political decisions but must also take into consideration the 'actual' outcomes and the analysis of their determinants. On the other hand, it cannot concern itself solely with such abstract concepts as Eastonian demands and supports but must also introduce more concrete concepts related to the ideas of social welfare and citizens' quality of life.

A compromising synthesis in research tends in the beginning to promise more than it can deliver. This has also been the case with empirical policy analysis. Empirical research has proliferated, but scarcely any cumulation of either empirical knowledge or theoretical analysis has occurred. Similarly, comparative cross-national research and international cooperation in projects have been slow to emanate.[2]

* Presented for discussion at the Helsinki Seminar on Macro-Contexts and Micro-Variations in Cross-National Research, September 17–21, 1973.

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One could, of course, look for the reason for such slow development in the problems involved in the establishment of a value basis and the basic application of premises for the approach.[3] In this paper, however, we will take a more pragmatic stand and examine the problems of empirical policy analysis more from the point of view of actual research practice.

In all new areas of social science research three kinds of problems develop unavoidably: (1) the unsystematic and unstandardized use of concepts; (2) the delineation of the units studied into an appropriate order of systems and subsystems; and (3) the choice of appropriate models to explicate and unify the findings of empirical research.[4]

We will make some observations on all three groups of problems. The explications and potential suggestions for research strategy are based less on methodological a priori analysis then on the authors' experiences in actual empirical research done from an analytical policy perspective.[5] Consequently, no attempt is made to elaborate the observations into logically coherent form, but rather to illustrate by analysis two empirical studies.

2. On the Systematization of the Basic Concepts of Policy Analysis

Although one could find a whole host of articles explicating the basic concepts of empirical policy analysis via complex typologies and intriguing classifications, they are still used very unsystematically in actual research, and there is little consensus among researchers of their meaning and appropriate application.[6] Needless to say, this state of affairs makes the comparison of research results extremely difficult.

Whatever the disagreements, most policy analysts are unanimous on one point: the focus of their research is at the output end of the total political process. The questions asked are always the same: what does/do a given political system/part thereof/decision-makers/planning system produce; what effects has this product on the lives of individuals/groups; what results do different sets of political decisions/actions (policies) pertaining to the same objectives but using different means/strategies produce; and what determines the choice of these decisions/activities/means/strategies?

These questions indicate that researchers, while focusing on 'output', do not refer to any concrete and given product but to a certain part of the total societal political process. This part is implicitly contrasted with the 'input' part of the political process – where the needs and demands of individuals and groups are brought to the attention of the politically relevant groups (opinion leaders, gate keepers) and the decision-makers themselves. Still more distinctly, output analyses are contrasted with the 'master' and 'routine' processes of the political system, i.e. those of socialization, constitutional change, voting, selection of the leaders, and legitimization of the regimes.[7] It is obvious that the long-term research objectives of policy analysis are to connect their findings with these more 'basic'

areas of political science; but in their short-term perspective they will still focus on the output part and try to conceptualize it for systematic empirical research.

We can thus define 'empirical policy analysis' as an approach that focuses on the output part of the total societal political process. The concept 'policy' must be considered here as a catch-all for political decisions, activities, and their results. For research purposes, the basic elements of this catch-all concept must be analyzed so that the research design of any given study can be seen from a wider perspective and the comparability of different studies achieved.

The most common categorization of 'policy' is already implied in the questions posed above by the researchers. The elements of policy usually distinguished from one another in most analyses are 'policy content', 'policy strategy', 'policy output', and 'policy outcome'.[8] Without trying to define these concepts formally we can sketch their meaning as follows:

A. Policy content = the societal sector the political decisions and activities focus on, and the sectorial objectives they aim or can be interpreted to aim for[8] (e.g. health care policy, the equality in availability of health services).

B. Policy strategy = the means adopted in a whole series of decisions and activities (e.g. direct allocation of more resources for health care, the legislative regulation of the private services in health care).

C. Policy output = the concrete decisions and acts by political decision-makers to provide the means for policy realization (legislative acts, resource allocations).

D. Policy outcome = the effects/impacts produced by the policy outputs.

It is easy to see that these concepts are in the goals/means/activities/results scheme. It is also easy to see that this categorization is by no means unambiguous. The first problem is that the categories have very little meaning if the network of systems – and its subsystems – where the decisions are taken and the activities carried on are not specified. We will return to this problem in the next section. On the other hand, it is also clear that the stages in the goals/means/activities/results chain are not yet refined sufficiently in the above classifications. We still have potential 'undistributed middles', i.e. concepts that any one or different researchers can use with different meaning and thus destroy the logic of interpretation and comparability of research results.

To avoid these problems, we can refine the categorization – at least categories C and D – even further:

C_1 = decisional policy output = the decisions and action by the political decision-makers that produce the means for policy realization, e.g. legislative acts, resource allocation.

C_2 = realized policy output = the institutionalized and routinized form into which the decisional outputs are transformed, i.e. the mode in which the legislative acts are executed, the resources used to create service facilities, etc.

D_1 = first-order policy outcome = the observed effects of the realized policy output in the main sectorial field the policy focuses on.

D_2 = second- and higher-order policy outcomes = the observed effects the realized policy output produces either indirectly (via other sectors in interaction with non-political factors) in the main sectorial field, or directly or indirectly on the other policy sectors.

These four categories (C_1, C_2, D_1, D_2) are usually called 'output categories'. The main confusion in empirical policy analysis has probably been caused by the fact that the term 'output' has been indiscriminately used in different studies to refer varyingly to any of them.

At this point it is important to note that the above refinement alone does not guarantee unambiguity in the use of output concepts. The meaning attached to output categories will necessarily vary according to the value premises the researchers have adopted. This definitional ambiguity is embedded especially in the term 'first-order outcome'.[9] It depends entirely on the evaluative point of the researcher – what he defines as the 'first-order outcome' among all detectable outcomes. At least the following criteria can be used:

- the outcome that was originally declared by the decision-makers as their objective in the sector the policy focuses on
- the changes on individual and group levels in the 'quality of life' of the individuals and groups in the sector the policy focuses on
- the positive redistributive (i.e. equality increasing) effects in the sector focused on or in other sectors on the individual or group levels

If we do not follow our 'goals/means/activities/results' chain to its end, we can study the decisional outputs and realized outputs from the same evaluative points of view, although we can only but infer in the case of the second and third criteria the further effects on individual and group levels. One must note, of course, that decision-makers very often declare policy objectives with no, or at most very vague, implications for individual or group levels. Similarly one must note that the researcher need not necessarily stick to manifestly declared policy objectives; he can either infer them as latent in the decisions and activities, or assume them to be those generally evaluated in the society, as is the case in the latter two criteria mentioned above.

The above observations do not present an exhaustive analysis; they merely indicate the basic complexities in the categorization of the catch-all phrase 'policy' and in explicating its basic elements. We can, however, briefly sum-

marize the teaching of the above discussions. When, in empirical policy analysis, we have as our dependent variable an output variable, we must explicitly express two things. We must first indicate what kind of output variable we are focusing on (e.g. decisional output, realized output, first-order outcome, second- or higher-order outcome). Secondly we must explicitly express what kinds of effect we are looking for (e.g. the divergence from manifest or latent policy objectives, the changes in quality of life on the individual level, the positive or negative re-distributive effects on the individual or group levels).

3. On the Delineation of Systems and Subsystems in Policy Analysis

The need for explicit system delineation appears in policy analysis in connection with at least two problem areas: (a) multilevel decision-making; and (b) the refinement (disaggregation) of the dependent output variable. We can briefly indicate what system delineation means in both areas and what problems may be caused by neglecting conscious and systematic delineation.

We have already referred vaguely to 'political system' and 'decision-makers' as an undefined whole without paying attention, except implicitly (in the distinction between decisional and realized output), to the fact that societal decision-making consists of chains of decision-making units on different functional and hierarchical levels. Up to now, most studies on empirical policy analysis have focused on such limited problems that they have not faced the problem of multi-level decision-making. Research has focused either on the central government output or on the output of some local decision-making body. Only a few have dealt with cases where the output was viewed, e.g., as the interactive effect of both central and local decision-making.[10] Similarly, the focus has been on a given (usually decisional) output variable and the transformation from one output variable to another (e.g. from decisional to realized output and further to outcome), and the political decision-making systems that might intervene have not been given any attention. If the researcher is right in assuming that only one decision-making unit as a closed system produces the outcome, he cannot of course be accused of anything except, perhaps, of studying narrow and uninteresting phenomena. The main danger naturally is that, if the researcher does not outline a total system of societal decision-making and the role and function of the unit (subsystem) he is studying in this whole, he can very easily neglect the impacts on his system from other units (subsystems). Consequently, he can easily attribute these impacts to some other factors external to the political decision-making system and thus go wrong in his interpretations. As an example, one could take a case where a student of local government found out that small rural municipalities use proportionally fewer resources to provide cultural services than other municipalities. He can on a correlational basis interpret this as due to the lower educational level of the municipal decision-makers. The real reason, however, could be that central government legislation requires the municipalities to

provide in some other area extensive public services such that small rural municipalities are burdened more heavily than other municipalities and left with few resources for cultural services. We have here a typical case where the decisional output of one subsystem (central government) determines the realized output of another (local government).

The demand for delineating the decision-making units studied as a subsystem of the total societal decision-making system can easily open a Pandora's box: what should be included in the total decision-making system, what are the subsystems that may via their output influence the output of the units studied, and how far should one go in subsystem division? It is easier to set up the question in another form. Empirical policy analysis has usually taken structural political variables (socialist vote, party competition, size of the decision-making body, number of administrative personnel, ideological distances between groups of decision-makers, etc.) to explain the output of the decision-making unit. These structural variables can in principle be disaggregated in most cases into sets of decisional output variables of the organized groups within the decision-making unit (output of the parties, administrative personnel, ideological groups). Although these separate decisional output variables could be used instead of structural variables to explain the output of the decision-making unit studied, it is seldom feasible. First, it is often difficult to obtain output variables for subsystems. Secondly, some structural variables can be used to summarize more efficiently the separate and interactive effects of these output variables than any research design operating solely with them could do. Still it is obviously important in cases where it is difficult to interpret the effects of the structural variable to try to explicate what subsystem output variables might be operative in producing the effects. Thus, e.g., the percent of socialist decision-makers may correlate with the amount allocated to social welfare, but this may be caused either by the socialists' ideological commitment or by their non-socialist opponents' 'liberalistic' attempts to outdo their opponents. The validity of the set interpretations can be checked only by examining the respective decisional outputs of the two groups.

The above discussions on the system and subsystem delineation in the case of multi-level decision-making provide two rather loose guidelines: (1) paying sufficient attention to the interrelatedness of the outputs of the total decision-making unit and its subsystems; and (2) delineating subsystems and studying their ouput whenever the effects of structural factors are difficult to interpret. The latter procedure is of course also important in comparative research when one tries to establish the conceptual equivalence of structural political indicators.

Our second problem of system/subsystem delineation for the refinement/disaggregation of the output of given decision-making units also concerns the comparability of the indicators used to operationalize the output. Let us assume that we have to compare several decision-making units with regard to their capacity to provide social welfare services to the sector of the population their decisions concern. Our indicators are often of an aggregate nature, e.g. the number of legislative acts within a given time period, or the amount of money allocated for

social welfare in the budget. Our problem here is whether we can use these aggregate indicators for comparing the capacity of the decision-making units to provide social welfare measures. The components of the aggregate indicators may vary crucially from unit to unit to the extent that the major component in the case of some units could be of aid to the aged and in other units of aid to the low-income workers. Can we still use the aggregate indicators as if they could measure the same phenomenon? In a certain sense this would seem to be justified, because one can assume that decision-makers consider the decisional category 'social welfare' as a whole, meaning public assistance to the underdog population. On the other hand, defining of the 'underdog population' may vary so much that one would be reluctant to resort to this justification.

This dilemma can be solved in two ways. One possibility is to try to disaggregate the aggregate indicator into its components, relate the components to the needs of the population of each decision-making unit (e.g. the aid to the aged to the proportion of the aged in the population), and compare the units with respect to several of these 'refined' indicators. The other possibility leads us to the problem of system delineation. Instead of trying to refine the dependent output variables, we can try to homogenize the decision-making units to be compared by grouping. We can then carry out separate analyses of the output determination in each subgroup. If the delineation of the subgroups is correct, we may assume that social welfare and underdog population mean the same for all the decision-making units in the group. The factors that determine the aggregate indicator within each group will also give an indication of what this meaning is in each group and how the intergroup comparisons can be made.

Because we do not always have information available for the components of the aggregate output indicators, and in any case because it allows a more holistic approach to the problem, the latter alternative is often to be preferred to the first one. The crucial decision here is of course what criteria to use in delineating the subsystems of the units to be studied. One can – at least in cases of the type our example above suggests – use at least the following grouping criteria:

- demographic criteria indicating need of the population
- criteria of economic development indicating the resources of the units and ability of the population to demand and use services
- the location of the units on the center-periphery dimension indicating the ability of the decision-makers and the population to communicate with the outside world and receive new ideas

It is impossible to give any universal instructions concerning what criteria to use in a given output study. It is important that delineation creates a situation where the decision-makers in each delineated group will face the same or similar decision-making situations. One could intuitively assume that, e.g., in the case of welfare services, the first two criteria would be the more appropriate, while, for in-

stance, in the case of cultural services, the third criterion would be the more appropriate. These suggestions can at best only be intelligent guesses, and the criteria must obviously be chosen *in casu* and by experimentation.

Our second delineation problem suggests that we must not take aggregate output indicators at their face value but question their validity and comparability. Refinement of the indicators can be done either by dividing them into their component parts or via homogenization of the units to be compared by grouping them according to some appropriate criterion.

4. On the Choice of Model for Explanation and Theoretical Unification in Policy Analysis

Empirical policy analysis works to a large extent on an inferential basis and neglects the systematic explorations of the potential theories and models that could be used to explicate the findings and unify the disparate research results.

The neglect of theories and models is no doubt partly due to the application orientation that gives priority to the social problem aspects of the research. It is, however, obviously also due to the false idea that the conceptual scheme of policy analysis could also function as a kind of 'theory' for actual research. As indicated above, the concepts of policy analysis no doubt have some theoretical implications, and they can easily be connected with the Eastonian type of frame of reference. Still they basically only commit the researcher to a certain type of application-oriented research and, as such, give little or no indication of how to interpret the observed relationships. In Nagelian terms, the concepts alone do not help; one also needs a model for interpreting the results.[11] Our next question is: What kinds of model would be the more appropriate for empirical policy analysis?

First, it must be emphasized that the following suggestions concern only the models for assumed causal relationships. We are not interested in normative models for planning the best policy outputs of outcomes or developing theories of social welfare. Secondly, as we have indicated above, our observations of the appropriate types of model are based on our research experiences and are by no means exhaustive or conclusive. Furthermore, the experiences stem from a limited area, i.e. study of the production of public services. Even so, the following three categories at least indicate the variety of models applicable in empirical policy analysis:

- societal communication models based on center-periphery distinction (e.g. in explaining the adoption of new forms of social welfare services)
- aspiration level, comparison group theories (e.g. in explaining the adoption of certain public services, development programs)
- organizational theories, theories of the business firm (e.g. explaining the

willingness of the decision-makers to bear certain costs, the effects of obligatory duties on the functioning of the lower-level decision-making units)

One could combine in one and the same study models from all these different types and get a more complex system of interpretation. It is, of course, the type of research problem and the nature of the data that determine the type of appropriate model. Thus, for example, organizational models are best applied to the analysis of the policies of complex multi-level decision-making systems, while communication and comparison group models are more applicable in the situation of equal, interactive decision-making units.

The importance of the choice of the right model and the better understanding obtained through its correct application can be proved only in actual research. It is to be hoped that the two studies presented below to illustrate the point made in this paper will also give some support to our demand for concrete models over and above a sheer policy analytical frame of reference.

5. An Illustration: Two Empirical Studies on the Functioning of the Finnish System of Local Self-Government

The two empirical studies that we will briefly present and analyze here pertain to the same problem area, viz. the functioning of the system of local government. We try to point out that, even in two empirical policy analyses done in one country within the same problem area concerning the very same decision-making units, one cannot apply one and the same mechanistic mode of research. The research design must first be viewed from the general conceptual perspective outlined above, with special attention being paid to the type of dependent output variable and the interconnectedness of the different levels of decision-making. These in turn determine the kind of model or models one can use to explain the findings.

To begin, we give a short account of the two studies. The first focused on the effects of the central government decision-making on hospital costs that the municipalities participating in municipal hospital federations had to pay.[12] The decisional output of the central government (the legal obligation of the municipalities to provide a certain number of hospital beds for a prescribed population base) aimed at equalization of health care services in the whole of Finland. Obviously the equalization took place at the level of decisional and realized output of the municipalities. The research, however, focused on the cost variable interpreted as a second-order outcome at the municipal level. The analysis of 17 municipal hospital federations indicated that negative redistribution prevailed at this outcome level: the wealthier federation in the center (the developed areas of Finland) paid less for their hospital beds (Appendix I, contextual variables). The

only potential equalizing symptom was that the federations with high morbidity paid less, although this was probably due to the fact that their hospitals worked with full or over-capacity, thus lowering the costs.

The effect of the mode of realization of the central government decisional output was also studied (Appendix I, organizational variables). As could be expected, the costs were higher in new and smaller hospitals because of the higher initial costs and fewer possibilities for rationalization, respectively. The lesser complexity (fewer participating municipalities) based on the greater resources of the fewer participants also lowered the costs. Again uniform central government legislation forced the municipalities to bear the costs without any compensation for higher initial costs and costs due to 'small-scale production'. It is obvious that these additional organizational costs tend to coincide with the negative redistribution apparent in the analysis of contextual variables.

The second study focused on the determination of a decisional output variable, i.e. the level of social welfare expenditures of Finnish municipalities.[13] The effects of political and administrative factors compared with the needs and resources of the municipalities were investigated in particular. To homogenize the decision-making situation, the municipalities were divided into four groups: Center of Center (cities and towns of developed southern Finland); Periphery of Center (rural municipalities of southern Finland); Center of Periphery (cities and towns of less developed regions of Finland); and Periphery of Periphery (rural municipalities of less developed regions of Finland). Separate analyses were carried out in each group of municipalities to determine the relative effects of political and administrative variables when compared with needs and resource variables. Because the socialist parties were assumed to support most strongly increases in social welfare services, the support for the two socialist parties (SDP – Social Democrats, SKDL – Communists) was chosen as a measure of the advocacy by political decision-makers of higher social welfare expenditures (one can further assume that an increase in the socialist vote will also make the representatives of the other parties support increased social welfare, thus making the correlation between socialist support and social welfare expenditures even stronger). The strength of the administrative machinery in decision-making was simply measured by taking the expenditure for the general municipal administration. The need and resource variables are given selected demographic and economic indicators (Appendix II).

It was hypothesized that the effects of political factors would be strongest in the Periphery of Center and in the Periphery of Periphery, because in the former, spreading effects will make it easy for the political deicision-makers to advocate increased social welfare over and above the need, and also because in the latter 'ineffective demand' by the passive population at large leaves the advocation of social welfare dependent on the actions of political decision-makers. It was assumed that in Center of Center and Center of Periphery the effective demand and the social welfare offered were in balance and the communication processes were stabilized so that, in the main, needs and resources determined the level of

social welfare expenditures. It was furthermore hypothesized that in the Center of Center and Center of Periphery the administrative machinery was strongest and reduced the social welfare expenditures, partly by opposing the 'excesses' of political decision-makers and partly by using potential social welfare resources for its own purposes.

As we can see in Appendix II, the hypotheses were for the most verified. The general administrative expenditures did not affect the social welfare expenditures in the Center of Periphery, but did so (in an expected negative manner) in the Periphery of Periphery. This was obviously due to a complementary relationship obtaining between the two types of expenditures in a situation of scarce resources.

Although both studies are only pilots for a more extensive research project on the regional distribution of public services in Finland, they can be analyzed in terms of the problem areas discussed in this paper. The paradigm in Table I

Table I. A Paradigm Comparing the Two Empirical Studies in Policy Analysis

Problem area	Study 1	Study 2
Policy system levels	Central government, local government units, municipal federations	Local government units, regional types of local government units
Type of dependent output variable	Second order outcome on local government level: hospital costs	Decisional output: social welfare expenditures per capita at the local government level
Mode of refinement of output variable	Use of single non-aggregate cost item	Homogenization of the units studied via subgroup delineation
Type of policy impact looked for	Redistribution effects	Increase in social welfare costs – inferred to mean the level of social welfare services
Political/administrative independent variable	Central government decisional output: legislative requirements for local government units	Party support (leftist vote), general administrative expenditures
Variables exogenous to political system	Contextual need and resource variables, organizational structural variables	Regional need and resource variables
Types of model used	Analogies from organizational research	Center-periphery analysis

shows the studies within the problem areas. It indicates the point made above, i.e. how studies focusing on the same substantive problems and using the same units of analysis can differ markedly according to data and research design.

A further implication of the above observation is that in policy analysis one can scarcely design a general 'master project' that would definitively map out

the outcomes of political decision-making, even within a given sector of society and during a certain space of time. The research must be structured to comprise several separate but interconnected projects that utilize different designs and focus on different determinants of the policy outputs and outcomes.

6. Conclusions

It is obvious that the problems presented in this paper need lengthier and more thorough treatment. The problems of comparative empirical policy analysis in particular should be connected with more basic problems, such as the value premises of policy analysis and the relationship of policy analysis to the theories of social welfare and to the development of systems of indicators. We have consciously abstained from 'deep' philosophical and methodological issues and moved on the level of empirical research experiences. We feel that in some cases the basic issues are even discussed too much, and that sometimes it would be more useful to stop to collect and systematize what we have learned in empirical research. We also feel that the issues presented in this paper can best be resolved when further empirical evidence and experiments with different theoretical models have been carried out. The points above have been made particularly to illustrate the problems and possibilities of comparative research in empirical policy analysis. But it must also be said that only comparative analyses, especially on a crossnational level, will shed new light on and give new insights into these issues.

Appendix I. The Effects of the Organizational and Contextual Variables on the Hospital Costs of Finnish Municipal Federations: Regression Analyses

Variable	Standardized Regression Coefficient	T-values	Loss in R^2 if variable deleted
Organizational variables			
1. Age	− 0.45	− 1.77	0.18
2. Administrative complexity	+ 0.19	+ 0.57	0.02
3. Size	− 0.33	− 0.96	0.05
			$R^2 = 0.32$
Contextual variables			
4. Wealth	− 0.24	− 0.50	0.02
5. Morbidity	− 0.37	− 1.02	0.07
6. Center position	− 0.32	− 0.73	0.04
			$R^2 = 0.16$

Organizational variables:
x_1 = age of the hospital (years in operation)
x_2 = administrative complexity (number of member communes)
x_3 = size (number of hospital beds).

Contextual (environmental) variables:
x_4 = average wealth of the member communes (wealth having been measured by a ten-point scale based on per capita net expenditures and net income of the communes)
x_5 = morbidity (the percentage of chronically ill 16- to 64-year-old persons)
x_6 = center-periphery location of the municipal association, a dummy variable (developed southern Finland = center)
y = cost of hospital bed per day: the share the member communes must pay for the municipal association for use.

Appendix II. The Effects of Political/Administrative Variables and 'Background' (Need and Resource Variables) on the Social Welfare Expenditures in Center-Periphery Groups of Finnish Municipalities. (Increase in R^2 in Multiple Regression Analysis when Political and Administrative Variables Are Each in Turn Added)[1]

Grouping	Independent variables					
	'Background'	'Background'+ Administration	'Background'+ SKDL Vote	'Background'+ SDP Vote	'Background'+ SDP, SKDL Vote	'Background'+ SKDL+ SDP+ Administration
Whole Country	0.347	0.359++	0.362++	0.414+++	0.437+++	0.438+++
Center of Center (Developed Finland, cities and towns)	0.484	0.557+	0.488	0.484	0.488	0.561
Periphery of Center (Developed Finland, rural municipalities)	0.183	0.188	0.201+	0.304+++	0.317+++	0.318+++
Center of Periphery (Underdeveloped Finland, cities and towns)	0.427	0.458	0.445	0.429	0.446	0.487
Periphery of Periphery (Underdeveloped Finland, rural municipalities)	0.049	0.120++	0.090++	0.196+++	0.308+++	0.324+++

[1] Plus signs (+) indicate the significance of the added variables when 'background' is controlled.

Variables
Background Variables
Percent gainfully employed (indicates need and resource)
Percent of gainfully employed in tertiary industries (indicates need and resource)
Percent of people 65 and older (indicates need)
Municipal tax revenues per capita (indicates wealth, resource)
Mortality in age cohort 14–64 years (indicates need)

Administrative Variable
General Administrative Expenditures per capita

Political Variables
SDP vote (Social Democrats)
SKDL vote (Communists)

Dependent Variable
Social Welfare Expenditures per capita.

NOTES

1. For the change of mood in political science see, e.g., Austin Ranney, 'The Study of Policy Content: A Framework for Choice', pp. 10–13 in Austin Ranney (ed.) *Political Science and Public Policy*. Chicago, Markham, 1968.
2. For an attempt in this direction, see Jean Blondel et al., 'Legislative Behavior: Some Steps towards a Cross-National Measurement', *Government and Opposition*, 1969–1970: 67–85.
3. For a discussion on the impact of the application orientation on the theoretical success of an approach, see Ilkka Heiskanen, 'Theoretical Approaches and Scientific Strategies in Administrative and Organizational Research. A Methodological Study', *Commentationes Humanarum Litterarum 39* (2), 1967: 41–51.
4. Ibid., pp. 20–21, 139–146.
5. A comprehensive analysis of local government finances and their impact on public services was started in the spring of 1973 by a project group (Deta-project) as part of a broader research program. The project is financed by the Academy of Finland, and the studies analyzed later are its pilot studies.
6. See, e.g., Robert H. Salisbury, 'The Analysis of Public Policy: A Search for Theories and Roles', pp. 166–167; in Austin Ranney (ed.), *Political Science and Public Policy*. Chicago, Markham, 1968; Theodore J. Lowi, 'Distribution, Regulation, Redistribution: The Functions of Government' in J. Ripley (ed.), *Public Policies and their Politics*. New York, Norton, 1966; L. L. Wade and R. L. Curry, Jr., *A Logic of Public Policy. Aspects of Political Economy*. Belmont, California, Wadesworth, 1970, pp. 79–103.
7. For a further elaboration of the different types of processes, see Tuomo Martikainen, 'Sisältö ja prosessit poliittisen sosialisaation tutkimuksessa' (Content and Process in the Study of Political Socialization), forthcoming.
8. See, e.g., Thomas J. Cook and Frank P. Scioli, Jr., 'Policy Impact Analysis. A Suggested Research Strategy' and Ira Sharkansky, 'Systems Analysis by McNamara and Easton: A Proposal of Marriage that Should Illuminate Linkage Between Public Expenditures and Service Performance', both in Thomas R. Dye (ed.) *The Measurement of Policy Impact*. Proceedings of the Conference on Measurement of Policy Impact, Florida State University, 1971.
9. For the concept of 'first-order impact', see, e.g., Cook and Scioli, op. cit.
10. For a good analysis of this type, see Douglas E. Ashford, 'The Effects of Central Finance on the British Local Government System'. A paper prepared for the American Political Science Convention, September, 1972, Washington, D.C.
11. Ernest Nagel, *Structure of Science. Problems in the Logic of Scientific Explanation*. London, Routledge & Kegan Paul, 1961, p. 447.
12. The study has been reported in full in Ilkka Heiskanen, Sirkka Sinkkonen, and Markus Härkäpää, 'Redistribution via Local Government: Central Government Policies and Their Constraints'. Paper prepared for the IX World Congress of International Political Science Association, Montreal, Canada, August 1973.
13. The study will be reported in full in Ilkka Heiskanen, 'Resurssit tarpeet ja poliittis-hallinnolliset tekijät julkisten palvelusten tuoton määrääjinä' (Resources, Needs and Politico-Administrative Factors as the Determinants of the Output of Public Services), forthcoming.