Transferability in Cross-National Planning and Urban Policy Research: A Mapping Method and Pilot Demonstration

E. R. Alexander
Tel-Aviv University*

In cross-national study, learning from example is limited by transferability, which may be constrained by differences in contextual factors affecting planning and urban policy. A method is presented of generating groups of countries that are similar on selected contextual factors. The method is demonstrated by countries grouped into groups of varying similarity in their planning and urban policy-relevant contexts, using as variables development, size, centralization, proportion of public sector, and culture. The analysis produces groups of relatively similar countries, and others which are somewhat distinct or relatively unique. Transferability of planning and urban policy research findings and planning experience may be inferred using these country-groups as a map. The method can be applied using other variables relevant to the specific analysis.

Keywords: clustering, cross-national, mapping, planning, policy, transferability, urban.

INTRODUCTION

We embark upon cross-national study of planning and policy to learn from the broader perspective offered by comparative research that transcends national boundaries and cultural prejudices. In the social sciences such learning is descriptive or explanatory (Sartori, 1994). In the policy sciences, the purpose of learning is not only knowledge; it is also action.

Here the focus is planning and urban policy, where planning means primarily spatial and settlement planning, but can also include various other sectoral forms of planning that merge into policy arenas, such as housing, transportation or environmental planning. As will be apparent later, however, application of the method presented here is not limited to these research topics, but extends (with appropriate adaptations) to any area of comparison where the territorial nation-state is the relevant frame of reference.

The case for comparative study of planning processes and outcomes has been well made, and needs no elaboration (Masser, 1984; Williams, 1986). One objective of comparative planning studies is the improvement of planning practice; this

* Public Policy Program, Tel-Aviv University, P.O.B. 39040 Ramat Aviv, Tel-Aviv 69978, Israel.

An earlier version of this paper was presented at the joint International Congress of the Association of Collegiate Schools of Planning and the Association of European Schools of Planning, Oxford, UK, July 1991.

presumes transferability of findings and conclusions. But transferability is limited by the relevant characteristics of the action context (Masser, 1986). Differences in planning and policy contexts may critically constrain the trade in experience across national boundaries and cultural spheres.

Generalization will be more likely, and transferability of research findings and experience more possible, the more similar countries are on relevant dimensions. Besides its implications for transferability, the question of degrees of similarity or difference is also relevant for descriptive research (Sartori, 1994), and affects case selection and generalization in cross-national studies (e.g. Knoke et al., 1996).

This is the basis for the 'Logic of Comparisons' which offers one basis for choosing contexts (national, urban or cultural) for study (Masotti and Walton, 1976), and for Sharpe's 'First Law' suggesting cross-national study of countries with similar contexts (Williams, 1986:27). On the other hand, systematic comparison might suggest choosing a small number of cases to highlight their differences on selected dimensions (Kohn, 1987).

When we look for generalizations from single cases, we often assess the transferability of our findings intuitively, drawing on our experience of similar or different settings (Alexander, Alterman and Law-Yone, 1983), as do many cross-cultural studies based on multiple cases (e.g. Castells, 1985; Hansen, Higgins and Savoie, 1990). In this fashion, the set of possible countries to which particular conclusions might also hold good is identified, and recommendations may suggest how the lessons of specific experiences—successes or failures—might be applied elsewhere. Alternatively, looking at a particular case one might conclude that its characteristics make it unique; this was my conclusion after a review of planning in the Netherlands (Alexander, 1988).

Here a systematic approach is offered for 'mapping' the degree of similarity and difference between countries on a set of relevant variables. This method can be used to specify a set of contexts to which research conclusions based on one case or several instances might be generalizable, to define a group of similar countries for cross-national study, or to identify several countries as cases which display differences on selected characteristics.

A pilot test of the method develops groups of countries with similar planning contexts, based on their characteristics on a few selected contextual factors. The conclusions of this test, however (the clusters of similar countries), are not presented as a substantive validation of any theory linking these contextual variables with planning behavior or outcomes, but as a demonstration of the method which can be applied using any variables that are relevant to the study in question.

CONTEXTUAL FACTORS

What are the contextual factors relevant to comparative planning research, factors which may significantly affect planning practice and the development and implementation of policy? A definitive answer to this question demands an explanatory

theory of planning. No such theory exists,[1] and developing one is well beyond the scope of this article. Consequently, any selection of such factors must be somewhat arbitrary.[2] It is acknowledged, however, that planning forms and processes, and their outcomes, are associated with various combinations of systemic variables in their contexts.

Among such variables the level of economic development, the form of political organization, and prevailing historical traditions have been suggested (Friedmann, 1967). Other factors may include countries' political economies (from command to market systems), their centralization, and their scale (size and population). Similar factors have been identified as affecting urbanization and settlement patterns (Bourne and Sinclair, 1984). These are to a degree measurable.[3] Other more intangible factors may include socio-cultural traits such as authoritarianism, tribalism, or 'clientilismo'. Specific factors may affect transferability in a specific case or issue, for example, the structure of the housing market will undoubtedly affect the relative success of some housing incentives, or infrastructure and transportation technology may limit the feasibility of transferring some settlement patterns.

Here I want to apply some of these factors to generate clusters of countries of varying degrees of similarity in their planning and policy-relevant contexts. The formal generation of such groups can become a methodological tool for comparative research. The groups of countries presented here as similar on a number of specific dimensions, and the ones identified as relatively unique, may also serve as a kind of global transferability map for comparative planning research involving the following factors as relevant contextual dimensions.

Development (DEVE): This factor reflects the widely perceived idea that wealthy, developed countries are different from less developed and poorer ones. This difference is not a value-laden one, as it was considered in 1950s theories which equated development with progress, but it is a qualitative difference nevertheless. The fact that different levels of development affect planning practice and policy implementation (not to mention a host of other aspects of life) is widely—if often only implicitly—acknowledged. U.N. data and statistics are an example, as is all the literature that distinguishes between developed and less-developed countries or is addressed solely to the former or the latter.

Various measures of development exist, but the most widely accepted is Gross National Product (GNP). To eliminate the effect of countries' sizes on this factor, the measure used here is per capita income, i.e. GNP/population (Central Intelligence Agency, 1990). This indicator is relatively crude, reflecting only countries' relative aggregate level of development, but it should serve the purpose of the methodological test intended here.[4]

Size (SIZE): Size, in the sense of absolute scale, affects many aspects of national character, and undoubtedly affects planning practice and policy development and implementation as well. Size may affect national character and behavior through other mediating variables, such as complexity (expressed, perhaps, in number and diversity of economic sectors, among other aspects), and heterogeneity (of ethnic or

social groups, for example). This is the dimension that expresses the difference between, say, a sparsely populated land such as Mali and a crowded country like Japan, a small country like Luxembourg and a large one like Brazil, or a concentrated 'city-state' like Singapore and an extensive country such as Canada.

As the examples suggest, there are several aspects of size. One is area: the sheer territorial extent of a country. Another is population. Combining these two suggests a scale of size, ranging from large populous countries like India and the U.S.A. at the one extreme to small sparsely populated ones such as Bahrain or Swaziland at the other. The intermediate points on this scale, however, are somewhat arbitrary, as we do not know enough about the trade-off between area and population to decide whether a more extensive country with a smaller population, such as Saudi Arabia, is 'bigger' or 'smaller' than a smaller land with a larger population, such as Colombia. Other aspects of size could be entered to refine an indicator, such as population density in the area occupied by human activity.

For our purposes here, simple measures are sufficient. Accordingly, rather than develop a complex index for size, two of its component variables, area (AREA) and population (POPN) have been entered separately. For the first, the country's area in square kilometers is used; for the second, its 1990 population (Central Intelligence Agency, 1990).

Centralization-Decentralization (CENT): This is a relatively intangible factor which, however, is an important aspect of a country's planning and policy context. Basically it characterizes the devolution of political and decision making power, but it is difficult to tie to one particular dimension of its governmental structure. Accordingly, I have explored the effects of the following surrogate variables that may express one or another aspect of the centralization-decentralization scale.

Two of these reflect the country's formal governmental structure in the sense of how it is divided into secondary jurisdictions. The first is its division into higher level areas: states, provinces, regions, or districts (DIST) (Central Intelligence Agency, 1990). The second is its number of lowest-level local governments: cities, towns, villages, townships, or parishes (LOCO) (Worldmark Press, 1988).

Another variable reflecting the devolution of power is resource dependence of regional and local units of government on central government. To the extent that direct central government expenditures are the major means of implementing urban and other policies, decisions are more centralized. But if other units of government can deploy resources independently, the country is more decentralized. Of the revenue sources which can contribute to such decentralization, local governments' own revenues are the more important. Unfortunately, data on this could not be found for a sufficient number of countries. The other source of local government resources is transfers from central government (TRNS), which are expressed as a percentage of GNP so as to eliminate the effects of size and development (World Bank, 1983).

Finally, besides the jurisdictional subdivision of a country and its local governments' resource dependence, the constitutional—legal and political devolution of authority is another aspect of centralization. This is probably its least tangible, but perhaps its most important dimension. Here it has been entered by rating each country's regime (REGM) on a scale of 1 (most centralized) to 3 (most decentralized).

Public Sector (PUBL): An important factor in every country's planning and urban policy context is its social-economy: to what extent is economic control exercised by the public or the private sector? The recognition of this factor is reflected in the traditional division into 'First-', 'Second-' and 'Third World' countries, where the first represented those developed countries with a dominant private sector (even though some, like the European social democracies, had significant public sectors as well), while the second included all the world's command economies. Now recognized as much too gross, and indeed overtaken by events, the obsolescence of these categories does not weaken the importance of their underlying basic premise.

Due to the complexity of economic, institutional, and political arrangements, it is not easy to get a reliable index of the relative size of a country's public sector. Often, state enterprises are autonomous or 'off-budget' so that direct government expenditures may understate the scale of public involvement in the economy. In some countries, government planning may exercise influence over a dominant private sector by leveraging relatively small expenditures (this is the philosophy behind U.S. categorical grant programs. for example), so that public involvement may also be underestimated. Sometimes, as several observers have remarked of Japan, governmental involvement in planning and policy is not through direct economic control at all, but through a complex interacting network of social, cultural, and institutional relationships (Murakami, 1982; Okimoto, 1990).

In default of a better indicator, however, the relative size of a country's public sector is reflected in the amount of its governmental expenditures relative to its GNP. The available data (World Bank, 1983) showed 'general government consumption', but this is only an approximation to the real dimension of public expenditures. This figure was therefore increased by the expenditures on 'Departmental and Public Enterprises', to give a better total, and divided by GNP. With the caveats expressed above, a cluster analysis of countries using only this index suggests that it is fairly reliable, in the sense that it did not yield attributions which were patently absurd.

Culture (CULT): Another factor affecting countries' planning and urban policy contexts may be their respective cultures. For our purposes, culture is meant in a somewhat narrower sense than, for example, anthropologists' meaning, and is intended to focus more on a society's political administrative culture. Although there is some debate on how to conceptualize this dimension, it is recognized as potentially important in cross-national comparisons (Martz, 1994).

In this sense, one country's culture might be described as a mixture of political democracy and rational bureaucracy, while another's could be characterized as dominated by tribal or clan associations or 'clientilismo'. Obviously, this is quite intangible, and any broad assignment of cultural categories must be at least somewhat arbitrary.[5] Culture may well be correlated with some of the other contextual variables used here, for example CENT or PUB.[6] Notwithstanding this caution, I decided to test what difference, if any, the inclusion of even arbitrary cultural attributions might make to the grouping of countries by relative similarities of planning contexts.

Every country in the sample was assigned to one of the following categories of political administrative culture, each of which represents a bundle of related traits for which the name is merely a shorthand. The numerical notation, too, is no more than an analytical convenience which reflects what are, in fact, nominal categories:[7] 1. African; 2. Asian-Pacific; 3. Confucian-Oriental; 4. European social-democratic; 5. Islamic; 6. Latin-American; 7. Market-liberal; 8. Mediterranean; 9. Other.

ANALYSIS

A set of forty countries was chosen for analysis. This set was arrived at in two stages. The first stage was an arbitrary selection of countries from all the nations which are members of the U.N. to focus on Europe and America but include some representation from Africa, Asia and Australasia while eliminating most of the smallest countries. This produced a list of 72 nations. The forty nations making up the analytical set are those for which the data were available for the factors listed above. For some countries one data item was missing, but they were still included in order to retain a sufficiently large and somewhat representative sets.[8] Table 1 shows these countries and their data on the respective factors used in the analysis.

A cluster analysis (Wilkinson, 1990) of the set of countries was done to identify groups of similar countries. This analysis juxtaposes subjects based on the degree of correlation between their characteristics on the selected variables, and its output is a hierarchical 'tree' which can be 'cut' at any desired level to choose a number of groups of related subjects (the fewer and larger the groups, the lower the within-group correlations, and the more diverse each group is).

Like factor analysis, cluster analysis uses quantitative data or numerical scores characterizing the subjects to signify their similarities or differences. When the analysis includes several factors, it does not offer any theory or explanation to account for their interaction in producing the results that it does. The groups produced by cluster analysis are a hypothesis, rather than an assertion, of association or similarity, and the analyst can determine the final clusters according to the acceptable degree of homogeneity within groups.

The first six runs of the analysis tested each factor separately to provide a check of the consistency of the method and the data. Runs 7 and 8 produced clusters of

Table 1: Countries and factors.

NATION	*AREA*	*POPN*	*DEVE*	*DIST*	*LOGC*	*TRNS*	*PUBL*	*REGM*	*CULT*
Austria	83,850	7,642,275	136,009	9	2314	10.3	0.1909	1	4
Bahrain	620	520,186	7,550	1	11	2.8	0.2196	1	5
Barbados*	430	262,688	5,250	1	12	15.3	0.1606	1	9
Bolivia	1,098,580	6,706,854	660	9	1,000	e 5.9	0.1375	1	6
Burundi	27,830	5,645,997	255	15	114	28.1	0.1160	1	1
Cent.Afr.R.*	622,980	2,877,365	453	16	175	28.1	0.1375	1	1
Colombia	1,138,910	33,076,188	1,110	32	b 972	5.9	0.0852	1	6
Denmark	43,070	5,131,217	14,300	15	275	d 45.2	0.2793	1	4
Dominican R.	48,730	7,240,793	790	30	72	d 17.5	0.0915	1	6
Ecuador*	283,560	10,506,668	935	21	a 150	5.9	0.1505	1	6
El Salvador	21,040	5,309,865	1,020	14	262	d 15.5	0.1494	1	6
FR Germany	248,580	62,168,200	15,300	10	c 8,505	d 5.7	0.2057	2	4
Finland	337,030	4,977,325	15,000	12	b461	d 21.3	0.1936	1	4
France	547,030	56,358,331	14,600	22	3,714	6.6	0.1676	2	4
Ghana	238,540	15,165,200	400	10	a 267	d 28.1	0.1251	1	1
Greece*	131,940	10,028,171	5,605	51	b 18,338	8.6	0.1579	1	8
Honduras	112,090	5,259,699	890	18	b 284	0	0.1674	1	6
Iceland*	103,000	257,023	16,200	37	222	25.1	0.1209	1	4
Indonesia	1,919,440	190,136,221	430	27	b 67,782	d 17.0	0.1191	1	2
Ireland	70,280	3,500,212	8,900	26	85	e 25.3	0.2021	1	4
Italy	301,230	57,664,400	14,000	20	c 8,091	d 14.3	0.1645	1	8
Jamaica	10,990	2,441,396	1,529	14	14	d 13.1	0.2169	1	9
Japan	377,835	123,642,461	15,600	47	3,250	54.3	0.1081	2	3
Kuwait	17,820	2,123,711	10,500	1	4	2.8	0.1828	1	5
Luxembourg	2,586	383,813	17,200	3	118	d7.3	0.1340	1	4
Mali*	1,240,000	8,142,373	220	7	279	28.1	0.2381	1	1
Netherlands	37,290	14,936,000	13,900	12	b 714	28.4	0.1945	2	4
New Zealand	268,680	3,295,866	11,600	105	b 361	d 2.5	0.1899	1	4
Norway	324,220	4,252,806	17,900	19	b454	d 17.1	0.1951	1	4
Panama*	78,200	2,425,400	1,648	10	505	7.75	0.2215	1	6
Portugal*	92,080	10,354,497	6,900	18	300	8.6	0.1751	1	8
Spain	504,750	39,268,700	10,100	17	a8,000	d2.9	0.1163	2	8
Sri Lanka*	65,610	17,196,436	370	24	a 51	17.0	0.0882	1	2
Surinam*	163,270	396,813	3,215	1	9	7.75	0.2500	1	6
Sweden	449,960	8,526,452	17,900	24	280	16.7	0.3007	2	4
Switzerland	41,290	6,742,461	17,800	26	d3,028	d0.9	0.1242	3	4
UK	244,820	57,365,700	14,300	92	11,079	15.9	0.2252	1	4
USA	9,372,610	250,410,000	21,082	51	19,000	d 11.0	0.0185	3	7
Venezuela	912,050	19,698,110	2,700	24	c 613	d 14.3	0.1341	1	6
Yugoslavia	255,800	23,841,608	5,464	6	527	16.5	0.1627	3	9

* TRNS: Barbados = mean Jamaica, Dominican Republic; Burundi = Ghana; Cent.African Republic = Ghana; Colombia = Bolivia; Ecuador = Bolivia; Greece = mean Italy, Spain; Iceland =mean Denmark, Finland, Norway, Sweden; Kuwait = Bahrain; Mali = Ghana; Panama = mean El Salvador, Honduras; Portugal = mean Italy, Spain; Sri Lanka = Indonesia; Surinam = mean El Salvador, Honduras.
a: 1987 b: 1986 c: 1985 d: 1980 e: 1979 f: 1976
All AREA POPN, DEVE, DIST data are 1990 figures; LOGC data is 1988 except where noted: All TRNS data is 1981 except where noted.

countries using all the factors except culture (with only TRANS and REGM for the centralization-decentralization dimensions), and two sets of different weights, to produce the groups of countries shown in Table 2. The results were not sensitive to the range of weights used. Runs 9 to 12 used the same factors, but introduced all four of the centralization-decentralization indicators, again with different weight coefficients applied to the factors. Again, the results were robust over the range of factor weights used; they are shown in Table 3 below. Runs 13 to 15 were like Runs 7 and 8 but with CULT added. They, too, proved to be insensitive to changes in factor weights, and the resulting groups are shown in Table 4.

Table 2: Country groups—Cluster #1.

Variables (weights):	*DEVE (0.25–0.30); SIZE: POPN, AREA (0.20–0.25); CENT: TRNS, REGM (0.20–0.25); PUBL (0.25–0.30)*		
1.	6.		7. Italy
1.0.1 FR Germany	6.1.1	Dominican Republic	
France		Sri Lanka	----------
Spain	6.1.2	Burundi	
1.0.2 Switzerland		Cent.African Rep.	8. Iceland
		Ghana	
----------	6.1.3	El Salvador	----------
		Mali	
	6.1.4	Barbados	9. Netherlands
2. Yugoslavia		Denmark	----------
		Ireland	

	6.2.1	Austria	
3. Indonesia		Finland	
	6.2.2	Kuwait	
		New Zealand	
	6.2.3	Bahrain	
4. Japan		Greece	
		Portugal	
5.01 U.S.A.	6.2.4	Jamaica	
Colombia		Panama	
		Surinam	
5.0.2 Venezuela			
	6.3.1	Ecuador	
		Honduras	
	6.3.2	Bolivia	
	6.4	Sweden	
	6.5	Luxembourg	
	6.6	United Kingdom	

Table 3: Country groups—Cluster #2.

Variables (weights):	*DEVE (0.20–0.30); SIZE: POPN, AREA (0.20–0.30); CENT: DIST, LOCG, TRNS, REGM (0.20); PUBL (0.20–0.30)*		
1. Iceland	4.1	Japan	5. Bolivia
	4.2	Yugoslavia	
2. Netherlands	4.3.1	FR Germany	6. Ecuador
		France	Honduras
		Spain	
	4.3.2	Switzerland	
3. Italy	4.4	U.S.A.	7. Greece
	4.5.1	Colombia	
		Venezuela	
	4.5.2	Dominican Repub.	8. New Zealand
		Sri Lanka	United Kingdom
	4.6. 1	Burundi	
		Cent. African Rep.	
		Ghana	9. Indonesia
	4.6.2	El Salvador	
	4.7	Sweden	
	4.8.1	Denmark	
		Ireland	
	4.8.2	Finland	
		Norway	
	4.8.3	Luxembourg	
	4.8.4	Portugal	
	4.8.5	Austria	
		Kuwait	
	4.8.6	Bahrain	
		Jamaica	
		Panama	
		Surinam	
	4.8.7	Mali	
	4.9	Barbados	

Table 4: Country groups—Cluster #3.

Variables (weights):	DEVE (0.20–0.30); SIZE: POPN, AREA (0.10–0.20); CENT: TRNS, REGM (0.10–0.20); PUBL (0.20); CULT (0.20–0.30)			
1.1	Mali	2.1	Iceland	3. Netherlands
1.2.1	El Salvador	2.2.1	Luxembourg	----------
1.2.2	Burundi	2.2.2	Italy	
	Cent.African Rep.	2.2.3	Greece	4. Yugoslavia
	Ghana		Portugal	
1.2.3	Dominican Rep.	2.2.4	New Zealand	
1.2.4	Sri Lanka	2.2.5	Austria	
1.2.5	Barbados		Finland	
	Jamaica		Norway	
		2.2.6	Denmark	
1.3.1	Bahrain		Ireland	
	Kuwait	2.2.7	United Kingdom	
1.3.2	Panama			
	Surinam	2.3	Sweden	
1.4. 1	Bolivia			
	Ecuador	2.4.1	FR Germany	
	Honduras		France	
1.4.2	Venezuela		Spain	
1.4.3	Colombia	2.4.2	Switzerland	
1.5	Indonesia			
1.6	U.S.A.			
1.7	Japan			

Table 5: Aggregated country groups.

Relatively Unique Planning Contexts	*Somewhat Distinct Planning Contexts* (most like)	*Related Groups—Similar Contexts* (most like)
1. Iceland	7. Bolivia (18)	14. FR Germany France
Indonesia	8. El Salvador (10,19,22)	Spain (1,3,9,11,12,16)
3. Italy		
	9. Luxembourg (1,3,11,15)	15. Austria Finland
4. Japan		Norway (1,3,9,11,12,16)
5. Netherlands	10. Mali (8,19,22)	
		16. Denmark
6. Yugoslavia	11. Sweden (15,16,17)	Ireland New Zealand
	12. Switzerland (14)	U. Kingdom (9,15,17)
	13. U.S.A.(18)	
		17. Greece Portugal (1,3,9,15,16,19,20)
		18. Colombia Ecuador Honduras Venezuela (2,19,21)
		19. Barbados Jamaica Panama Surinam (18,21,22)
		20. Bahrain Kuwait (2,18,19)
		21. Dom. Rep. Sri Lanka (19)
		22. Burundi Cent.Afr.Rep. Ghana (8,10,19)

FINDINGS

The numbering of the countries in Tables 2–4 indicates their relationship and closeness.[9] Given the number and complexity of the factors involved, it is not surprising that the results are not intuitively 'transparent' in the sense of being able to clearly identify groups that are close on one or a few given factors. We cannot readily see, therefore, a cluster of, say, large populated centralized highly developed nations, or another of small sparsely populated decentralized ones. But some similarities can be confidently inferred.

In Table 2, for example, a group like 4.6.1 (Burundi, Ghana, Central African Republic) clearly represents a modest range of differences in area (27,830–23,8540 km^2), and population (2.9–15.2 million) putting these nations in the lower middle range of size, a narrow range of per capita incomes (from $255 to $400) which places them among less developed countries, very similar (relatively centralized) regimes, and a moderately developed public sector (from 11.6% to 13.75% on a range of 2% at the minimum in the U.S.A. to a maximum of 30% in Sweden).

It is noteworthy, incidentally, that culture was not included as an explicit factor in the runs which produced Tables 2 and 3. Nevertheless, many of the clusters of related countries are clearly also culturally linked. The Caribbean countries of Jamaica, Panama and Surinam are grouped in Table 2, as are France, Germany, and Spain—Western European social democracies. Other such groups are 6.3 (Bolivia, Ecuador and Honduras—Latin American) in Table 2, and 4.6.1 (Burundi, Central African Republic and Ghana—African) in Table 3.

This suggests that culture may be associated with some of the other factors. But the relationship is clearly not a simple one, otherwise groupings would not appear which seem anomalous when judged by cultural propinquity, such as 5.0 in Table 2 which incudes the U.S. with Colombia and Venezuela, or 4.5 in Table 3, where Sri Lanka is grouped with three Latin American countries.

The results of the cluster analysis are especially provocative, in fact, when they generate groupings that are counterintuitive. These may alert us to unsuspected relevant contextual similarities, such as the ones implied by the link between Kuwait and New Zealand (6.2.2 in Table 2) or the grouping of Denmark with Ireland instead of with its more obvious Scandinavian neighbors.

Table 5 shows (#14–22) the groups of countries with similar planning and urban policy contexts which appear consistently in each of the runs. Examination of the factor data in Table 1 reveals the relevant context traits that characterize each group. Thus Group #14, for example (France, Germany and Spain) are all developed (with per capita incomes of over $10,000), relatively large (populations ranging from 39 millions to 62 millions, and areas from 250,000 to 550,000 km^2), are in the intermediate range of centralization, have a moderately developed public sector (ranging from 11 to 20% of their GNP) and share a western European political- administrative culture.

Group #19, on the other hand (Barbados, Jamaica, Panama, Surinam), are much less developed (with per capita incomes ranging from $1,529 to $3,215), small in area and population (from 262,000 to 2.43 millions), high in centralization, and with a quite well-developed public sector (from 16 to 25% of GNP). Coincidentally (though this was not an explicit factor), they share a Caribbean location and some related cultural traits.

The cluster analysis also reveals that not all countries fall into groups that exhibit similar planning and urban policy contexts though, as the numbering in the tables indicates, they are more closely related to some groups than to others. As expected, as the number of countries in a group increases, the group becomes more heterogeneous. But some countries' contexts do not easily fall into any groups: the analysis fairly consistently shows them to be relatively distinct. This suggests that their contexts are rather different from all the others' in terms of the combinations of factors used here. In Tables 2 to 4 Indonesia, Iceland, Japan, The Netherlands and Yugoslavia all consistently appear as unique, while some other countries, for example the U. S., Italy and Sweden show up as unique in some but not all of the runs.

CONCLUSIONS

Systematic analysis confirms the premise that countries can be grouped with respect to their relative similarity on selected traits which may be relevant to their planning and urban policy contexts. The cluster analysis produced such groups which were related on the factors used: development, size, centralization, public sector, and culture. Several groups emerged quite consistently irrespective of the exact combination or weighting of the factors.

The analysis also suggests that similarity, and with it, relative ease of transferability between countries within one group or in closely related groups, is not evenly distributed among all countries. Some countries are more distinct, though they are somewhat related to some groups, and several countries seem to have relatively unique planning and urban policy contexts. This implies that transferability of the findings of planning or urban policy research and the experience of planning practice from such countries to others may be quite limited, because of the uniqueness of their contexts.[10]

Clearly this also has implications for comparative research methodology. If it is true that the factors used here indeed reflect significant dimensions in a country's planning context, then the resulting clusters of countries can serve as a 'similarity map' for assessing the transferability of research findings. Such a map can also guide the choice of country cases for comparative crossnational research, whether the aim is to maximize transferability by reducing the variances, or whether the aim is to vary the contexts so as to produce broad generalizations. Systematic clustering of countries using predetermined hypothetical variables can address these issues which

research methodologists have frequently raised (e.g. Sartori, 1994; Kohn, 1987; Williams, 1986).

This analysis is in effect a pilot test of a method which can be widely applied. It can be replicated over a more exhaustive set of countries, using the same factors, or other hypotheses about factors affecting planning and urban policy contexts can be tested. The same method can be used to check for transferability in specific case studies, by developing relevant factors from the case material itself, and 'mapping' the groups of similar countries to which the study's findings or recommendations might also apply.

NOTES

1. This is similar to the situation in research on political regimes, in spite of its long tradition of comparative quantitative analysis using contextual variables (Rokkan, 1970).
2. To some extent it was also limited by the ease of constructing appropriate indices and the ready availability of data.
3. Such contextual factors and regime indicators are a common feature in research on political systems and behavior, e.g. population size/density (Aiken, 1976); stability and income distribution (Bollen, 1980; Muller, 1988); centralization of government (Lichbach, 1984); and size of government/public sector (Taylor, 1981). Sullivan (1996) provides a particularly systematic example in his analysis of governance in one hundred nations, in which relevant dimensions include population, zone/region, political and constitutional system, economic-political ideology, and culture.
4. Per capita GNP has been criticized as well for reflecting only the monetary product, e.g. barter transactions in traditional economies, or noncompensated labor such as housewives' work are not included (Doggan, 1994). It could also be refined to reflect other similarities or differences in planning and policy contexts, where relevant, e.g. to show income distributions (scaled in a computed GINI index).
5. The selected dimensions of culture have varied widely, usually depending on the focus of the study. For example, Martz (1994) and other comparative studies of Latin American politics defined political culture in terms of attitudes towards democracy, while Sullivan (1996) uses the term culture to summarize a country's blend of ethnicity, nationalism and statism.
6. This is less of a problem for the method applied here, cluster analysis, which is more like factor analysis than regression analysis in not demanding independence or non-colinearity of all variables.
7 The numbers also do not imply an ordinal ranking that could reflect any particular ethnocentric scale of values.

8. In the cases of Barbados, Burundi, Central African Republic, Colombia, Ecuador, Greece, Iceland, Kuwait, Mali, Panama, Portugal, Sri Lanka, and Surinam, data on central government transfers to local government were missing. The mean for the group of a priori most similar countries was substituted; e.g. for Barbados we used the mean of Jamaica and Dominican Republic. In the cases of the Central African Republic, France, Indonesia, Japan, Portugal, and Yugoslavia, there were no data on Departmental and Public Enterprise Expenditures, and this coefficient was constructed using the overall mean.

9. The absolute ordering in which the countries appeared in each run is arbitrary, and only their relative order is significant; consequently, the numbering must be read only to indicate relative closeness of countries. Differences in absolute ordering explain apparent inconsistencies between Tables 2–4; these are resolved and integrated in Table 5.

10. It is interesting that one of these countries is The Netherlands, and that this analysis confirms my previous intuitive conclusion (Alexander, 1988).

REFERENCES

Aiken, M. (1976) Urban social structure and political competition: A comparative study of politics in four European nations. In Walton, J. and Masotti, L. H. (eds.) *The City in Comparative Perspective: Cross-.National Research and New Directions in Theory.* New York: Sage.

Alexander, E.R. (1988) The Netherlands' unique planning system: A visitor's comparisons. *Rooilijn,* 5/88 (PDI-University of Amsterdam): 145–150.

Alexander, E.R., Alterman, R. and Law-Yone, H. (1983) *Evaluating Plan Implementation: The National Statutory Planning System in Israel.* Oxford: Pergamon.

Bollen, J. (1980) Issues in the comparative measurement of political democracy. *American Sociological Review,* 45:572–587.

Bourne, L. S. and Sinclair, R. (1984) Introduction. In Bourne, L. S., Sinclair, R. and Dziewonski, K. (eds.) *Urbanization and Settlement Systems: International Perspectives.* New York: Oxford University Press.

Castells, M. (1983) *The City and the Grassroots: A Cross-Cultural Theory of Urban Social Movements.* London: Edward Arnold.

Central Intelligence Agency (1990) *The World Factbook 1990.* Washington. D.C.: USGPO.

Doggan. M. (1994) Use and misuse of statistics in comparative research—Limits to quantification in comparative politics: The gap between substance and method. In Doggan, M. and Kazancigil, A. (eds.) *Comparing Nations: Concepts, Strategies, Substance.* Oxford: Blackwell, pp. 35–71.

Friedmann. J. (1967) The institutional context. In Gross B.M. (ed.) *Action Under Planning: The Guidance of Economic Development.* New York: McGraw-Hill.

Hansen, N., Higgins, B. and Savoie, D.J. (1990) *Regional Policy in a Changing World.* New York: Plenum.

Knoke, D., Pappi, F.U., Broadbent, J., and Tsujinaka, Y. (1996) *Comparing Policy Networks: Labor Politics in the U.S., Germany and Japan.* Cambridge: Cambridge University Press.

Kohn, M.L. (1987) Cross-national research as an analytic strategy. *American Sociological Review*, 52:509–523.

Lichbach, M.I. (1984) *Regime Change and the Coherence of European Governments.* Denver, CO: University of Denver, Graduate School of International Studies.

Maize, J.D. (1994) Comparing similar countries: Problems of conceptualization and comparability in Latin-America. In Doggan, M. and Kazancigil, A. (eds.) *Comparing Nations: Concepts, Strategies, Substance.* Oxford: Blackwell, pp. 239–259.

Masotti, L.H. and Walton, J. (1976) Comparative urban research: The logic of comparisons and the nature of urbanism. In Walton, J. and Masotti, L. H. (eds.) *The City in Comparative Perspective: Cross-National Research and New Directions in Theory.* New York: Sage.

Masser, I. (1984) Cross-national comparative studies: A review. *Town Planning Review*, 55:137–149.

Masser, I. (1986) Some methodological considerations. In Masser, I. and Williams, R. (eds.) *Learning From Other Countries: The Cross-National Dimension in Urban Policy-Making.* Norwich: Geo Books, pp. 11–22.

Muller, E.N. (1988) Democracy, economic development and income inequality. *American Sociological Review*, 53:50–68.

Murakami, Y. (1982) Toward a socioinstitutional explanation of Japan's economic performance. In Yamamura, Y. (ed.) *Policy and Trade Issues of the Japanese Economy: American and Japanese Perspectives.* Seattle, WA: University of Washington Press.

Okimoto, D.I. (1990) *Between MITI and the Market: Japanese Industrial Policy for High Technology.* Stanford: Stanford University Press.

Rokkan, S. (1970) Cross-cultural, cross-societal and cross-national research. In UNESCO (ed.) *Main Trends of Research in the Social and Human Sciences—Part One: Social Sciences.* The Hague: Mouton.

Sartori, G. (1994) Comparing why and how: Comparisons, miscomparisons and the comparative method. In Doggan, M. and Kazancigil, A. (eds.) *Comparing Nations: Concepts, Strategies, Substance.* Oxford: Blackwell, pp. 14–34.

Sullivan, M.J. III. (1996) *Comparing State Polities: A Framework for Analyzing 100 Governments.* Westport, CT: Greenwood Press.

Taylor, C.L. (1981) Limits to governmental growth In Merritt, R.L. and Russett, B.M. (eds.) *From National Development to Global Community,* London: Allen and Unwin, pp. 96–114.

Williams, R. (1986) Translating theory into practice. In Masser, I. and Williams, R. (eds.) *Learning From Other Countries: The Cross-National Dimension in Urban Policy-Making*. Norwich: Geo Books, pp. 23–39.

Wilkinson, L. (1990) *SYSTAT: The System for Statistics*. Evanston, IL: Systat, Inc.

World Bank (1983) *World Tables: The Third Edition; Vol. 1: Economic Data from the Data Files of the World Bank*. Baltimore/London: Johns Hopkins University Press.

Worldmark Press, Ltd. (1988) *Worldmark Encyclopedia of the Nations*. New York: Wiley.