DEMOCRACY AND SOCIAL DEVELOPMENT:
PATTERNS OF ASSOCIATION IN
LATIN AMERICA, 1960–1965

by

Peter Evan Nelson

A Thesis Submitted to the Faculty of the
DEPARTMENT OF GOVERNMENT
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF ARTS
In the Graduate College
THE UNIVERSITY OF ARIZONA

1971
STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Peter Galen Nelson

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

Henry C. Kenski

HENRY C. KENSKI
Assistant Professor of Government

June 25, 1971
Date
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>vi</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Democracy and Socioeconomic Development</td>
<td>4</td>
</tr>
<tr>
<td>Government and Socioeconomic Development</td>
<td>7</td>
</tr>
<tr>
<td>Hypothesis Formulation</td>
<td>11</td>
</tr>
<tr>
<td>Democracy-Distribution Hypothesis</td>
<td>14</td>
</tr>
<tr>
<td>Income-Revenue Hypothesis</td>
<td>18</td>
</tr>
<tr>
<td>Inter-Method Comparison</td>
<td>21</td>
</tr>
<tr>
<td>2. THE INDEX OF DEMOCRACY</td>
<td>25</td>
</tr>
<tr>
<td>The Fitzgibbons Rankings</td>
<td>27</td>
</tr>
<tr>
<td>A Revision of the Fitzgibbons Index</td>
<td>32</td>
</tr>
<tr>
<td>3. THE INDEX OF GOVERNMENTAL ACTIVITY</td>
<td>36</td>
</tr>
<tr>
<td>Requirements for a Governmental Activity</td>
<td>36</td>
</tr>
<tr>
<td>Index</td>
<td></td>
</tr>
<tr>
<td>Selection of Variables for the Index</td>
<td>41</td>
</tr>
<tr>
<td>Indicators for the First Hypothesis</td>
<td>43</td>
</tr>
<tr>
<td>Indicators for the Second Hypothesis</td>
<td>45</td>
</tr>
<tr>
<td>4. METHODOLOGY</td>
<td>48</td>
</tr>
<tr>
<td>Data Organization and Manipulation</td>
<td>48</td>
</tr>
<tr>
<td>Fitzgibbons' Index</td>
<td>48</td>
</tr>
<tr>
<td>Socioeconomic Variables</td>
<td>50</td>
</tr>
<tr>
<td>General Observations Applied to Latin America</td>
<td>52</td>
</tr>
<tr>
<td>Socioeconomic Development- Inter-correlations</td>
<td>53</td>
</tr>
<tr>
<td>Democracy and Socioeconomic Development</td>
<td>55</td>
</tr>
<tr>
<td>Governmental Patterns and GNP/Capita</td>
<td>56</td>
</tr>
<tr>
<td>Testing the Two Hypotheses</td>
<td>58</td>
</tr>
<tr>
<td>Hypothesis Two: Democracy and Governmental Revenue</td>
<td>63</td>
</tr>
<tr>
<td>Statistical Relationships Between Democracy</td>
<td>64</td>
</tr>
<tr>
<td>and Governmental Variables</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>5. ANALYSES</td>
<td>Hypothesis 1 - Percentage Expenditure Variables</td>
</tr>
<tr>
<td></td>
<td>Democracy Index</td>
</tr>
<tr>
<td></td>
<td>Development Index</td>
</tr>
<tr>
<td></td>
<td>Hypothesis 1 - $/Capita Expenditure Variables</td>
</tr>
<tr>
<td></td>
<td>$/Capita of the National Budget - Democracy and Development</td>
</tr>
<tr>
<td></td>
<td>Democracy Index</td>
</tr>
<tr>
<td></td>
<td>Development Index</td>
</tr>
<tr>
<td></td>
<td>Hypothesis 2 - Revenue Variables</td>
</tr>
<tr>
<td>6. SUMMARY AND CONCLUSIONS</td>
<td>Derivation of the Hypotheses</td>
</tr>
<tr>
<td></td>
<td>Implications for Comparative Studies</td>
</tr>
<tr>
<td></td>
<td>Notes for Further Research</td>
</tr>
<tr>
<td>LIST OF REFERENCES</td>
<td></td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table                                                                 Page
1. Fitzgibbons' Index............................................. 49
2. Socioeconomic Development Indicator Correlations 55
3. Democracy and Socioeconomic Development Correlations.......................... 56
4. General Government Current Expenditure..................... 59
5. Correlations: Democracy and Percent of National Budgets.............................. 68
6. Correlations: Democracy and $/Capita.................... 69
7. Correlations: Democracy and GNP/Capita................ 70
8. Democracy-Expenditure Variables as Percent of National Budget: Means and Ranges........... 79
9. Means and Ranges, GNP/Capita: Expenditure Variables as Percent of National Budgets........ 86
11. Means and Ranges, GNP/Capita: $/Capita for Expenditure Variables...................... 97
12. Means and Ranges

V
ABSTRACT

This thesis attempted to discern relationships among democracy and social welfare variables in Latin America during the period 1960-1965. It was argued that democracy could be conceptualized by criteria relevant to the specific region during this period. The social variables chosen were in health, education and welfare. It was hypothesized that social expenditures, both as percentages of national budgets, and on a per capita basis, would vary directly with the democracy levels found in the different countries.

Statistical analysis was confined to total and partial correlations, and to range and mean comparisons. Data were chosen from statistical compendiums.

It was found the hypothesis was weakly confirmed. The education and health variables had the lowest correlations, while the different welfare variables exhibited the highest. Due to the limited scope of the thesis, however, it was felt additional research was needed before more substantial conclusions could be made.
CHAPTER 1

INTRODUCTION

A subject of increasing academic concern and study is the relationship between political and economic systems. Scholars have speculated for centuries about the interactions and interdependencies of government and economies. Not until the last century, however, have these speculations been tested by in-depth observation and empirical study. Today, with better data, increasingly sophisticated research tools, and improved theoretical and methodological techniques, the potential for research has increased, and the possibilities for meaningful applications of this knowledge have risen commensurately.

Three major changes which occurred after World War II gave impetus to the study of political economy and necessitated the development of sophisticated research tools and techniques. One was the rapid proliferation of nation-states in Africa, Asia, and the Middle East, "...the emergence into statehood of a multitude of nations with a bewildering variety of cultures, social institutions, and political characteristics".¹ With this proliferation there emerged new

forms and degrees of governmental and economic interrelationships, many radically different than their pre-statehood varieties. New sources of information were therefore provided by these emerging states, while their political and economic systems became objects of study and analysis by social scientists.

Closely related to this emergence process were two additional developments, "...the loss of dominance of the nations of the Atlantic community" and "...the emergence of communism as a powerful competitor in the struggle to shape the structure of national polities and of the international political system".² The former development was important because the philosophies and impact of nations in the West were not as powerful as before upon the newly emerging nations in the colonial and semi-colonial areas. Conversely, the latter development was important because communist philosophies and influence were enhanced in those areas.

With these three developments therefore, the necessity for an increased understanding of political and economic interrelationships is evident. Social scientists are faced with a mosaic of cultures, political systems, economic systems, and ideologies. This mosaic provides a basis for contrast and comparison, from which policy recommendations can be made. An enhanced knowledge of political economy is vital

²Ibid.
not only to formulate new hypotheses or to test old ones, but also to better enable decision-makers to initiate and execute policy. In this sense knowledge gained from social interaction research is goal-oriented – questions are raised, answers are provided, and recommendations made.

One area of research in political economy, and the one examined in this thesis, is the relationship between the nature of the political system and the system's extraction and distribution of economic resources. Specifically, attention is focused on the relationship between the relative degree of democracy or non-democracy within countries and the manner in which governments both obtain economic resources and distribute goods and services within their societies. This thesis hypothesizes that governmental budgetary allocations for social programs vary directly with the relative degree of democracy or non-democracy. Secondly, it hypothesizes that the percentage of a government's budgetary revenues obtained by direct taxes varies directly with its relative degree of democracy.

A variety of hypotheses and propositions regarding this aspect of governmental and economic interaction have been offered and tested. For this reason, a review of some of the literature in this area provides a general orientation regarding the direction and depth of conducted research. Additionally, a synthesis of this research enables the formulation of the hypotheses to be tested in this thesis.
Democracy and Socioeconomic Development

One area of study involving political and economic interaction concerns the relationship between democracy and socioeconomic development. Throughout history, the speculation over political rule and the distribution of resources has been phrased primarily in descriptive or normative terms. Aristotle's six-fold classification of political systems, for example, was linked to the distribution of economic wealth and the ownership of property. Similarly, Tocqueville's analysis of principal causes for democracy in the United States included two economic factors: the equality of economic conditions and the prosperity of the agricultural economy. Observations like these linked the authors' concepts and definitions of political systems to economic conditions, but they were limited in application by the lack of empirical data.

More recently, however, the relationships between economics and democracy have been investigated by empirical techniques. In Political Man: The Social Bases of Politics, Seymour Lipset examined the association between the degree of stable democracy and the degree of social and economic development for selected nations in Europe, North America,

---

4Ibid., p. 10.
and Latin America. Lipset's indicators of economic development were in four areas: wealth, industrialization, urbanization, and education. Additionally, his criteria of stable democracy required division of a fifty nation sample into four categories: European and English-speaking stable democracies, European and English-speaking unstable democracies and dictatorships, Latin-American democracies and unstable dictatorships, and Latin-American stable dictatorships. By comparing the arithmetic means and ranges derived for the four categories of development to the categories of stable democracy, Lipset indicated that on a geographical basis, the European and English-speaking stable democracies were higher in socioeconomic development than the unstable democracies and dictatorships. Similarly, the Latin American democracies and unstable dictatorships were higher than the Latin American stable dictatorships. Although his hypothesis that democracy was related to the state of development was


6Lipset's indices in each category were as follows: [a] wealth: per capita income, thousands of persons per doctor, persons per motor vehicle, telephones per 1000 persons, radios per 1000 persons, and newspapers per 1000 persons; [b] industrialization: percentage of males in agriculture and per capita energy consumed; [c] urbanization: percent in cities over 20,000, percent in cities over 100,000, and percent in metropolitan areas; [d] education: percent literate, primary education enrollment per 1000 persons, post-primary enrollment per 1000 persons, and higher education enrollment per 1000 persons.
tentatively confirmed, various criticisms were leveled at his criteria used for defining democracy.  

Another approach by James Coleman in *The Politics of the Developing Areas* also indicated association between socio-economic development and democracy. Coleman defined democracy in terms of the degree of political competitiveness within a country, while his eleven development indicators were similar to those used by Lipset. For the sixty-six countries analyzed, Coleman found the more politically competitive ones tended to place in the upper end of the developmental levels, while the lesser competitive ones tended to place at the lower end. The association between categories of competitiveness and levels of development, however, an aggregate comparison, was stronger than the individual country comparisons relating competitiveness and development. Thus, deviant cases did exist, indicating a

---


9 Coleman also placed his indicators into four developmental categories: [a] wealth - GNP per capita, thousands of persons per doctor, radios per 1000 persons, persons per vehicle, telephones per 1000 persons, and newspaper copy per 1000 persons; [b] industrialization - per capita energy consumption and the percentage of the population in labor unions; [c] urbanization - percent in cities over 100,000; [d] education: percent literate and the percent of the population in primary school enrollment. Coleman's comparisons were also on a geographical basis - Latin America and Africa/Asia.
country's rank in socioeconomic development did not necessarily correspond with its political competitiveness rank.\textsuperscript{10} Similar to Lipset, criticism was leveled against Coleman's methods for defining democracy and for the rankings of countries by the criteria he used.\textsuperscript{11}

\textbf{Government and Socioeconomic Development}

A second major area of interest is the relationship between governmental activity and socioeconomic development—the role and importance of the government sector in the economy at various stages of development. Research in this field has greatly increased during the postwar period, particularly with reference to the East-West conflict and in conjunction with studies in economic growth policy. For example, historical studies are conducted on Western European nations to determine factors in the initial growth process as well as to indicate interactions between the government and the economy. Walter Rostow's \textit{The Stages of Economic Growth} and Alexander Gerschenkron's \textit{Economic Back-

\textsuperscript{10} The observation that variable relationships and statistically significant correlations which are valid for aggregate analyses and may not be for individual or small group analyses is one which will be tested in this thesis. Formulation of the two hypotheses is dependent upon general and aggregate observations advanced by different authors. This thesis will later apply the hypotheses to a geographic region, and in so doing, observe whether the individual or aggregate observations are valid in a limited test case. These points are further elaborated in this and ensuing chapters.

\textsuperscript{11} Needler, \textit{op. cit.}, pp. 81-82.
wardness in Historical Perspective indicate studies of this
type. More recently, Robert Holt and John Turner's The
Political Basis of Economic Growth attempts to determine the
effects of the political system upon economic development.12

Whereas the historical works are largely theoretical
and qualitative, studies conducted on countries in the post-
war period are largely quantitatively oriented. An example
of this change is Simon Kuznets' pioneering research on
income and wealth for selected countries around the world.
These studies are valuable not only for their data content,
but also because they group countries in categories to facil-
itate cross-national and cross-group comparisons. Of
primary importance is his analysis of governmental revenues
and expenditures, and his conclusions based on this analysis.

The countries Kuznets studied are divided into seven
categories delineated by ranges of GNP [gross national prod-
uct] per capita.13 This categorization, therefore,
constitutes a continuum in which the lowest to highest income generating nations can be placed and ranked relative to each other. In his analysis of general government [central government plus lesser units - state, and local] current revenues and expenditures relative to GNP categories, he reaches four basic conclusions.

First, the ratio of government revenues [or expenditures] to gross national product is positively associated with per capita income: it is appreciably higher in the high than in the low income countries. Second, the ratio of government expenditures [or revenues] to gross national product varies far more than the share of government consumption expenditures in gross national product... Third, it follows that the ratio of government current expenditures to government consumption is appreciably higher in the high than in the low income countries...Finally, in the high income, more developed countries, general government collects proportionately more taxes [particularly direct] and disburses proportionately more in the way of transfers to households and other ultimate consumers. On the expenditure side, it is transfers that make for the wider range of the ratio of government expenditures to gross national product than of the share of government consumption in the latter. 14

These general conclusions are valuable because they provide a quantitative link between governmental activity and levels of income for different nations. His data indicate both the government's role and its importance in the economy; its role by the composition of revenues and expenditures, and its importance by its activity relative to measured economic activity. For example, Kuznets

14Ibid., p. 7.
indicates that "...direct taxes and transfers, both of which are proportionately greater in the high income countries, tend to reduce the inequality in the distribution of income by size among households, and all other conditions being equal, raise the ratio of consumption to income." With data of this nature, therefore, the researcher's ability to draw meaningful, quantitative conclusions is greatly enhanced. These conclusions, in turn, can be linked to more general hypotheses involving economic and political interaction.

Additional quantitative studies tend to confirm Kuznets' conclusions regarding the relationships of governmental revenues and expenditures to economic activity. In the World Handbook of Political and Social Indicators, the authors have used correlation techniques to establish a curvilinear relationship between the revenue of central governments as a percentage of GNP and the per capita GNP. Their analysis indicates the central government's role in the economy increases with development, but may diminish at very high levels of development.

Our graph shows that central government revenues [including those of social security and public enterprises] tend to be low in poor countries where so much of the economy is subsistence agriculture.

---

15 Ibid., pp. 7-8.

But in more fully developed states, with industry, modern communications, utilities, and a labor force that expects welfare benefits, the role of the government expands very substantially. Within limits this pattern is without exception; no developed state, for example, shows a government revenue percentage of less than 15%, although such a figure is fairly common in countries with less than $300 per capita G.N.P. It would seem that a modern economy cannot operate without substantial, government economic activity. 17

The authors also view consistent patterns and relationships among selected variables at different levels of socioeconomic development. These variables broadly match those of wealth, education, and urbanization used by Lipset and Coleman.

We have found, for example, a high correlation among such indicators of economic and social development as the percentage of the population in cities over 20,000, the percentage literate, the proportion of the population enrolled in higher education, the inhabitant-physician ratio, the number of radios per 1000, and S.N.P. per capita. 18

Hypothesis Formulation

Studies relating political systems to their extractions and distributions of economic resources have, therefore, been broadly analyzed from two perspectives. One perspective has been the relationship between democracy and various socioeconomic variables. In both Lipset's and Coleman's works, efforts have been made to see what, if any, relationship exists between countries considered via democracy/ non-democracy criteria and different indices in

17Ibid., pp. 308-309.
18Ibid., p. 293.
categories of urbanization, industrialization, wealth, and education. Their conclusions indicate that patterns do exist, that democracies tend to be more urbanized and industrialized, and they exhibit higher levels of economic wealth and education than non-democracies.

A second perspective views the relationships between governmental activity and socioeconomic development. Kuznets' research has indicated that the role and importance of government varies with the level of per capita income, data which include the manner in which governments obtain revenue and distribute goods and services. Similarly, Russett's data include high correlations among the socioeconomic variables themselves — that indicators of wealth [which include per capita income data], urbanization, industrialization and education tend to vary together. These two studies suggest that countries highly wealthy, urbanized, industrialized and educated have their governments play a larger role within the economy than those countries not as high in these socioeconomic categories. If these relationships are valid,\(^\text{19}\) then it is plausible to suggest different patterns of governmental revenues and expenditures exist.

\(^{19}\)While the authors did find strong relationships between per capita GNP and socioeconomic development, they indicated the relationship between per capita GNP and more explicitly political variables was not as close. Among these was a slight correlation between per capita GNP and the expenditures of the central government. Russett et al., op. cit., p. 293.
for countries at different levels of socioeconomic development. ²⁰

A synthesis of these research findings regarding political systems and the economies in which they operate provides a basis for additional hypothesis formulation and testing. Both perspectives — hypotheses relating democracy and socioeconomic development, and hypotheses relating governmental activity and socioeconomic development — consider a common dimension, the relationships of governments to their societies at different developmental levels. It is therefore the intention of this thesis to synthesize the two perspectives to attain additional hypotheses. The two hypotheses to be tested — that the manner in which governments obtain revenues and distribute goods and services is related to levels of democracy — are derived from this synthesis by the following propositions.

²⁰Russett's correlations between many of the socioeconomic variables employed by Lipset and Coleman and two of his indicators — Expenditures [and Revenues] of General Government, Social Security, and Public Enterprises as a Percentage of GNP — are statistically significant at the .05 confidence level. These correlations suggest patterns of governmental revenues and expenditures tend to vary with levels of socioeconomic development. Russett, op. cit., Appendix.
Democracy-Distribution Hypothesis

[1] In general, the processes of urbanization and industrialization tend to intensify interdependencies and interrelationships among peoples and groups within countries.

The contention that urbanization and industrialization are often related and tend to vary together is derived from the observations of Lipset, Coleman and Russett. In both processes, however, and particularly with industrialization, the habits, family relationships and life styles of individuals are changed to the point where many must increasingly look to the government for the solution of basic socioeconomic problems. Governmental solutions or attempted solutions, in turn, will be reflected by policy outputs, particularly with reference to welfare policies. As Richard Hofferbert notes:

...as a state becomes industrialized, the life styles of its inhabitants no longer rest upon an agrarian modified kinship basis stressing the values of individual self-sufficiency and the mutual obligation of members of small communities. Rather, the complexities of existence, the massiveness of mutual needs, and difficulties through small, private organizations creates a set of claims which are reflected in governmental activity. Whereas in a less industrialized society there may be other systems [themselves only a remote part of the political environment] which meets the needs of the society's members, as the style of life of the members reaches a certain level of interdependence [reflected in industrialization] there are claims for action [and the mechanisms for the statement of
these claims which are reflected in what has been labelled the "welfare orientation" of governmental organs. 21

Although Hofferbert discusses change in the United States, there is general agreement among authors that social change and modernization in all countries introduce altered and increasingly complex social interdependencies and interrelationships. As social change occurs, particularly via urbanization and industrialization, the effort of groups to increasingly look to government for resolution of basic socioeconomic problems appears to be a cross-national phenomenon. 22

[2] As industrialization and urbanization increase, the tendency for economic wealth and GNP per capita to also increase reflect an increased ability of the country to pay for socioeconomic and public welfare programs.

This second proposition is based on Russett's contention that high correlations exist among various socioeconomic development indicators and GNP per capita. Not only are there greater needs for public programs, therefore, but the countries can afford to spend at higher levels on a per

---


22 See, for example, Karl W. Deutsch, "Social Mobilization and Political Development," American Political Science Review, LV, No. 3 [September, 1961], pp. 493-514.
capita basis. In general, the wealthier, urbanized, industrialized and educated countries are more likely to need and better able to afford a public welfare orientation of their governments. The hypothesis that these welfare orientations are more likely to differ in democracies than non-democracies is shown by the remaining propositions.

Democratic governments are more responsive to demands from larger numbers of groups and segments within the society than are non-democracies. In urbanizing and industrializing democracies, governmental responsiveness is reflected by representation of groups and elements in need of and demanding governmental solutions to socioeconomic problems, particularly in areas of social legislation and welfare orientations.

Almond and Powell indicate all political systems are responsive to something — different internal or external demands and pressures. The salient questions to ask, however, are three: the responsiveness of the system to which groups or individuals, the policy areas in which the system is responsive, and the manner in which the system sustains responsive behavior. Thus, political systems can vary markedly in their ability, direction and quickness of response.

---


This thesis accepts the Almond and Powell contention that democracies, particularly developed ones, are more versatile and adaptive than less democratic political systems. Secondly, this versatility and adaptive ability will be shown in urbanizing and industrializing democracies by their ability to respond to new demands made upon the government by groups in need of social welfare legislation.

[4] Since democracies in general rate higher on socioeconomic variables than non-democracies, and since they tend to be more responsive to groups and segments of society in need of social welfare legislation, they will tend to show different patterns of governmental expenditures for social welfare legislation than non-democracies.

This proposition incorporates the reasoning of the previous three and enables the formulation of a hypothesis which can be tested. By asserting that democracies rate higher than non-democracies in categories of wealth, urbanization, industrialization and education, it can be hypothesized that democracies are in greater need of social welfare legislation than non-democracies. Secondly, since democracies tend to have higher income levels on a per capita basis, then their abilities to pay for social welfare programs are greater than the relative abilities of non-democracies. Thirdly, on the assumption democracies are more responsive than non-democracies to demands of groups and segments of society undergoing urbanization and industrialization, it is hypothesized their responsiveness will be
shown by their different governmental expenditures for socioeconomic welfare programs.

In conclusion, therefore, this hypothesis contends the greater the relative degree of democracy exhibited by a country, the greater will be the allocations of its budget for social welfare programs.

Income-Revenue Hypothesis

The formulation of a hypothesis examining the relationship between democracy and the manner in which governments obtain revenue is dependent upon the observations of Kuznets. His contention is that in the high income, more developed countries, general governments collect proportionately more taxes than the lower income, less developed ones, and particularly more in direct taxes. If it is assumed that democracies rate higher in socioeconomic development categories, then it can be hypothesized they would collect proportionately more revenues, particularly through direct taxes, than non-democracies.

This hypothesis can be derived by qualitative observation. Since democracies tend to score higher on indices of wealth, it is assumed they have greater distributions of income and less economic inequalities than non-democracies. Taxes and taxation policies are wealth distribution mechanisms since they alter income and wealth
relationships. Direct taxes by nature are generally progressive and in effect transfer wealth from high to low income groups. Therefore, the possibility exists that because democracies have greater distributions of wealth, their sources of governmental revenues will come proportionately more from direct taxes than will the revenues of non-democracies.

It must be emphasized that the two hypotheses to be tested are derived from general observations and statistical analyses offered in political and economic literature. In none of the examples given did any two authors use the exact number or the same countries in their samples, nor were the time periods strictly comparable. Additionally, conceptual and methodological difficulties were encountered by all the authors, difficulties which raised criticism concerning the interpretation of their results and the inferences drawn from their observations. Nevertheless, this thesis assumes that the propositions as stated are generally true in that they note similarities and differences among countries for socioeconomic and political variables.

A second point to be emphasized is that the studies conducted have been primarily on a group or categorical basis, as opposed to an individual country basis. Thus the general observations concerning groups relative to one another conceal information regarding the relationships of
countries to each other within each group, or among countries within different groups. This difficulty is compounded when works of several authors, using different countries and classifications, are synthesized.

The objective, then, is to condense these diverse works into a precise, logical, and ordered framework, one which retains the concepts of the authors, yet enables the hypotheses within the framework to be accurately stated and applied. Additionally, the countries tested by the hypothesis need to be compared on an individual as well as on a group basis. This objective and its attainment are discussed in this and remaining chapters of the thesis.

A synthesis of these two perspectives is valuable for several reasons. Of major importance is our lack of information in this area. There are studies on selected aspects of government activity relative to types of political systems [examples being research on education and military appropriations], but no comprehensive cross-sectional works have been compiled to this writer's knowledge. Second, this research can help examine the differences between the two perspectives used. A third reason is that social scientists will have yet another method for classifying countries
in order to compare and contrast them. Finally, there exist the possibilities of hypothesis formulation, prediction, or prescription. Our knowledge of variable interrelationships, particularly in the areas of social, political, and economic change, is still elementary. An enhanced understanding of government and economics obtained by a third perspective can help test previous hypotheses as well as generate new ones. Similarly, this information can help assess the possibilities of future-trends as well as recommend policy actions.

**Inter-Method Comparison**

The decision to use this synthetic approach is accompanied by several conceptual and methodological questions which are briefly presented in the remainder of this chapter. Succeeding chapters develop these points individually and indicate how the framework is narrowed to permit an actual test case.

---

25 Almond and Powell indicate the necessity as well as the problems of classifying political systems interacting with their societies. The authors suggest a method based on the capabilities functions of political systems, which in theory can classify all polities through time and space. *Op. cit.*, Chapter 9.

26 The rapidly increasing literature analyzing social change indicates the shift of emphasis by contemporary social scientists. Relationships between events are highly complex, however, often blurring independent/dependent variable analyses. See Hayward R. Alker, Jr., *Mathematics and Politics* [New York: Macmillan Company, 1963], Chapter 6.
Conceptually, the first questions consider the dimensions of analysis - the spatial setting as well as the time span to be covered. Spatially, a selection of countries could be a sample chosen randomly or by postulated criteria, or all the world's countries. The size of the sample, however, depends on several factors: the writer's area of interest [i.e., countries with similar cultural backgrounds, regional comparisons, communist versus non-communist countries, etc.], the availability, accuracy, and comparability of data for the countries chosen, and the minimum number to permit meaningful statistical analysis. Similarly, the time span must consider these factors as well as the decision whether to conduct a longitudinal or a cross-sectional analysis.

A second set of problems considers the political variable. The decision to contrast democracy to governmental activities depends on one's interpretation of democracy - a delicate problem encountered by Lipset, Coleman and others. In turn, the criterion or criteria chosen depend on the sample of countries and the time span under study. The use of democracy as an independent or dependent variable must also be considered. And, the relationships among the countries have to be uniform; one group cannot be ranked on one criterion, for example, while another group is ranked on a
second. In this sense the selection of a definition has to be fully justifiable and one which enables the ranking of countries on a democracy/non-democracy continuum.

The third set of conceptual problems considers the economic variables. This decision revolves about two factors: the unit of government to be used, and the indicators of governmental activity. For the unit, research can be conducted on the general government [which could include or exclude public enterprises], the central government, or lesser units. A selection of indicators, in turn, is dependent upon the orientation of the research and the manner in which democracy is to be related to governmental activity. For example, governmental revenues and expenditures can be expressed on a per capita basis, on a sectional basis [individual activities in proportion to the total budget], or in relation to measured economic activity like the gross national product or the net national income. Whatever the indicators chosen, they have to be justified in their usage and must interrelate among themselves as well as to democracy.

There also exist methodological problems which primarily deal with data sources and the statistical tests to be performed. Rules have to be formulated regarding the collection and use of data, the incorporation of error factors, and the treatment of missing data. Decisions also
have to be made regarding the data manipulation - what the tests indicate, how they can be used to relate the variables, and how significant they are.
The previous chapter indicates there are two interrelated problems involving usage of the term "democracy". One is conceptual - what the term itself connotes. There is no consensus regarding a comprehensive theory of democracy; consequently, there is no general agreement upon its preconditions, sustaining elements, or products. These problems are further complicated by cross-national patterns and contrasts which produce a kaleidoscopic mixture of cultures, philosophies, and values.

...democracy is a complex process within which there can exist a vast array of processes and institutions operating in various combinations. For when we deal with democracy, we are not only working with political, economic, and social factors, but also with a variety of ideals, aspirations, traditional practices and prejudices.

An additional conceptual difficulty is encountered when considering democracy in relation to a time period or a geographical location. If eighteenth century Britain is compared to twentieth century Britain by the latter's democratic standards, for example, the conclusion that the


former period was less democratic is obvious. In contrast to its contemporary European neighbors, however, the relative democratic achievements of Britain during that period are significant. Similarly, a geographical example is shown by contrasting contemporary institutions and political attitudes in Scandinavia to those of the Middle East. To compare the latter area by the former's standard of democracy may be fruitless. In this sense a new set of indicators based on their forms of institutions and their attitudes may be of greater value.  

A second and related problem is methodological - the question of establishing criteria to define democracy and to rank countries on a democracy continuum. These criteria depend in part on the countries chosen as well as the time period under study. Secondly, they must be logically and consistently applied in order to achieve as objective a ranking as possible. Priorities and rules must therefore be established, not to represent "the" concept of democracy, as one does not exist, but "a" concept.  

29This does not imply meaningful contrasts cannot be drawn from cross-cultural comparisons. An excellent example of conclusions obtained from a five-nation attitudinal survey is in Gabriel A. Almond and Sidney Verba, The Civic Culture [Boston: Little, Brown and Company, 1963], Chapter Twelve. The nations in the study, however, are Western in their political and philosophical heritage.
The Fitzgibbons Rankings

In light of these discussed problems, and in relation to this author's geographical area of interest, a work has been selected which ranks countries by democracy criteria. It is the article "Measuring Democratic Change in Latin America," by Russell H. Fitzgibbons. In it, he explains his attempts to define and measure democratic change in Latin America over the period 1940-1965. A discussion of this article follows, since much of his reasoning and five of his indicators of democracy are used in this thesis.

Fitzgibbons employs a survey method repeated at five year intervals. His questions are addressed to recognized experts who are observers of, and not participants in, the changing Latin American political processes. As the author himself notes, "Their evaluations are informed, but of course, subjective." In this sense his survey differs from the commonly understood concept of a poll in that the respondents are not randomly selected but are chosen for their expertise.

A second aspect of this survey is that the experts' knowledge is favored over more objective data which could be derived from an area census or statistical studies. As

31 Ibid., p. 133.
Fitzgibbons notes, either approach contains its respective advantages. The data method better eliminates subjective and emotional considerations and is also more mechanically efficient and accurate. However, it is often difficult to apply the data, and there is the danger of altered figures.\textsuperscript{32} Area specialists, in turn, are likely to range over a broad spectrum in their points of view and in their variety, amount, and recency of information. Although their subjective evaluations do introduce problems, their assets outweigh their liabilities and therefore favor this approach in the article.

The survey itself is based on fifteen criteria which contribute either directly or indirectly to democracy in Latin America. They represent preconditions, manifestations, and products of democracy, and are political, economic, social, cultural, and administrative in nature. As he indicates, his main reason for the choice of the criteria is that:

\ldots these particular measurements appeared to the writer to include the important conditioning and reflective components of the total picture of viable democracy in the Latin American context. The arrangement seemed to be a logical one, progressing from the very elemental factor of basic education and seminal socio-economic conditions, through conditions directly contributory to a democratic process, such as freedom of speech,

\textsuperscript{32}Ibid., p. 134.
press, etc. (necessary for meaningful campaigning), honest elections, and free party organization and activity, to more refined products of such a development, such as scientifically evolved public administration and intelligently organized local government.  

These criteria were therefore devised within a Latin American cultural context and applicable to that culture. Based on the author's judgment regarding their importance to the political process, a weighting system was created by him to value each criterion. As presented, his criteria and their relative weights were:

A. "An educational level sufficient to give the political processes some substance and vitality" (weight of 1);

B. "A fairly adequate standard of living" (weight of 1);

C. "A sense of internal unity and national cohesion" (1);

D. "Belief by the people in their individual political dignity and maturity" (1);

E. "Absence of foreign domination" (1);

F. "Freedom of the press, speech, assembly, radio, etc." (1–½);

G. "Free and competitive elections – honestly counted votes" (2);

H. "Freedom of party organization, genuine and effective party opposition in the legislature; legislative scrutiny of the executive branch" (1–½);

I. "An independent judiciary – respect for its decisions" (1);

---

33 Ibid., p. 136.
J. "Public awareness of accountability for the collection and expenditure of public funds" (1);

K. "Intelligent attitude toward social legislation - the vitality of such legislation as applied" (1);

L. "Civilian supremacy over the military" (1-1/2);

M. "Reasonable freedom of political life from the impact of ecclesiastical controls" (1/2);

N. "Attitude toward and development of technical, scientific, and honest governmental administration" (1); and

O. "Intelligent and sympathetic administration of whatever local self-government prevails" (1). 34

Having posited the criteria and their weights, the author then explained his data manipulation which produced an ordinal ranking of democratic attainment for the countries studied. Respondents were first asked to evaluate each criterion by letters A through E, which signified in their judgment whether the particular country, in reference to the criterion in question, attained a relative democratic achievement of excellent, good, average, poor, or insignificant. Second, each respondent was asked to evaluate his familiarity with the criterion and country in question by indicating great, moderate, or little familiarity.

The next step involved assigning numerical values to both the criteria and the evaluations. For each criterion,

---

34 Ibid., p. 137.
an evaluation of A was given five points, B four points, C three, D two, and E one point. Total raw scores were then taken for the latest (1965) survey and compared to the total raw scores of the four previous, five-year interval surveys. Although the number of respondents varied in each survey, the use of the total raw score permitted "...a crude determination of how the respondents collectively view the course of Latin American democracy over twenty years." It therefore served as a rough, comparative measuring device which noted perceived fluctuations in democratic attainment of the countries over time.

Fitzgibbons then proportionally adjusted each respondent's total score, so that in each case the adjusted raw score equaled 1000 points (as opposed to a theoretical maximum of 1700 points, or a theoretical minimum of 340 points). This normalization took advantage of a natural clustering effect around the 1000 point mark, and also tended to offset the subjective differences among the respondents, whose individual total scores ranged widely. The statistical adjustment, therefore, changed the totals for each country, although the relative rankings of the criteria remained the same.

Fitzgibbons then performed a variety of statistical tests and manipulations with both the total scores and

\footnote{Ibid., p. 139.}
individual scores, but which did not affect the outcome of the country rankings, and therefore are not discussed. What was of importance, however, was the final ranking of the countries for the period, the results of which are presented in Table 1.

A Revision of the Fitzgibbons Index

Fitzgibbons' article is valuable since it recognizes the relative nature of democracy. The author derives his criteria within the Latin American context, thereby assuring their relevancy in that region. Moreover, although his criteria are subjectively weighed, he attempts to modify this difficulty through the polling of many qualified respondents. His final rankings, therefore, provide a democracy index which tends to reduce the biases and prejudices of any one individual.

His index though, because it does represent aspects of the "total picture" of Latin American democracy, can be limited in application. Since it contains social, economic and administrative, as well as political criteria, care must be taken to ensure the ranked democracies are not contrasted on social, economic or administrative indices which are related to the criteria in the index. If they are, tautological problems arise, since the same indicators

\[36\] Ibid., p. 145-163.
are used in both the independent and dependent variables. An example of this complication is given by Needler:

The major drawback in using the Fitzgibbon rankings as a basis on which to compare political with social or economic development, however, is that some of the components requested from the respondents actually refer to social and economic, rather than strictly political variables. Thus it may be that the evaluations on which the rankings by degree of democracy are based are contaminated by the inclusion of evaluations based on social and economic criteria. 37

Needler's criticism is pertinent to this thesis since one variable, governmental revenues and expenditures, depends in part on the levels of social and economic development of the countries studied. As presented, therefore, Fitzgibbons' complete index cannot be contrasted to indicators of governmental activity.

This limitation can be reduced by employing an index which considers only political criteria. By eliminating those criteria believed representative of social, economic, and administrative conditions, the political ones remaining, in turn, can be contrasted to social, economic, or administrative indicators. Thus, tautological problems are avoided while the remaining political criteria can be used to establish a new democracy continuum.

This was the reasoning employed for the construction of a revised Fitzgibbons index. His fifteen indicators were analyzed as to whether they were largely political, economic, social, or administrative in composition. From

37 Needler, op. cit., pp. 82-83.
these fifteen, five were selected as being the most political and were used to form a new political definition of democracy. They were:

A. "Freedom of the press, speech, assembly, radio, etc."

B. "Free and competitive elections — honestly counted votes"

C. "Freedom of party organization, genuine and effective party opposition in the legislature; legislative scrutiny of the executive branch"

D. "An independent judiciary — respect for its decisions"; and

E. "Civilian supremacy over the military."

The argument that these remaining indicators are themselves dependent upon social and economic development cannot be completely eliminated, nor can the criticism that they do not represent a sufficient "minimum number" to develop an index of democracy. Although subjectively chosen, they do represent political indicators for "a" concept of democracy, ones which are still relevant to Latin American political processes. Secondly, they are uniformly and consistently applied, since they are extracted from Fitzgibbons' original fifteen. These attributes bring the

---

38 Fitzgibbons, op. cit., p. 137. The decision to select these five criteria was made after consultation with Professor Henry Kenski in the Department of Government. He was also instrumental in pointing out the problems the Fitzgibbons criteria as well as the manner in which to overcome them.
researcher no closer to a comprehensive theory of democracy, but they do eliminate the complications introduced by Fitzgibbons' interpretation and permit a new ranking of countries based on a revised index. This new index, therefore, enables the construction of a democracy continuum which can be used as an independent variable.
CHAPTER 3

THE INDEX OF GOVERNMENTAL ACTIVITY

Similar to the political index, an economic index to measure governmental revenues and expenditures must consider general requirements and constraints. The variables in the index must have relevance, both geographically and temporally. Data for the variables must also be available, accurate, and comparable cross-nationally. And, the variables must interrelate among themselves and to the hypothesis or hypotheses to be tested. It is the purpose of this chapter to examine these three requirements and to show how they are related to the indexes which measure governmental economic activity.

Requirements for a Governmental Activity Index

The conceptual difficulties of time and space encountered when an author attempts to devise an index of governmental activity are similar to those outlined for the democracy index in Chapter 2. In the economic index, care must also be taken to ensure the criteria chosen are relevant to the situation under study. A small example of geographic or cultural relevancy is governmental monetary support for the construction of mosques - a criterion distinctly limited in a Latin American region or polity.
Similarly, a study of governmental efforts to regulate air, water, and soil pollution in the eighteenth century would primarily demonstrate the obvious conclusion that governments then did not recognize pollution as a major (or even a minor) issue and took little if any steps to regulate it.

An index must therefore be selected which is comprehensive enough to be derived from the general, cross-national propositions used to obtain the original hypotheses, yet it must be applicable to a given geographical and cultural region during a specific time period— in this instance, to Latin America during 1960-1965. This index, therefore, and the criteria comprising it, should represent a bridge between a macro-analysis, whose focus is on criteria relevant to all polities, and a micro-analysis, whose focus is on the specific and unique characteristics of one polity.\(^{39}\)

A second major requirement considers data availability, accuracy and comparability. In actual practice, these stipulations are often violated for several reasons. Regarding the availability of data, figures of governmental

\(^{39}\)The contrasts between aggregate relationships and micro-relationships, and the tests of specific hypotheses derived from generalizations were noted in Chapter 1. Difficulties encountered by the differences in macro- and micro-theorizing and methodology are not new to the social sciences. For a discussion of these differences and the need to blend micro-studies and macro-studies, see Max F. Millikan, "Forward," in Lucien W. Pye, Politics, Personality, and Nation Building [New Haven: Yale University Press, 1962], p. viii.
economic activity are often not published for political reasons, or the data just does not exist because the countries do not have the sophisticated tools and the trained personnel to obtain them.\textsuperscript{40} Any selected index, therefore, would have to consider indicators broad enough to be used by many countries, yet not controversial to the degree they are never published or deliberately falsified.

Accuracy, the second stipulation, also presents problems. Where the data are unavailable, estimates are often made, themselves subject to error.\textsuperscript{41} Second, the danger of altered figures has been noted. Third, there are measurement problems even when conscientious efforts are made to gather, organize, and manipulate information. These problems primarily exist in the measurement of the gross national product and its related aggregate accounts, and in the measurement of population statistics.\textsuperscript{42}


\textsuperscript{41}Examples of the inaccuracies of data and data estimates are noted by Joseph Pincus, \textit{The Economy of Paraguay} [New York: Frederick A. Praeger, 1966], p. 265.

\textsuperscript{42}For a discussion of problems associated with the gross national product and its related aggregate accounts, see Paul Studenski, \textit{The Income of Nations} [New York: New York University Press, 1958], Difficulties encountered in the measurement of population statistics are examined by Russett et al., \textit{op. cit.}, p. 15.
Even if data are available and considered accurate, the comparison of data and data categories among countries raises complications. Errors often occur because countries use different accounting systems and different categories for data classification. Also, meanings may differ among categories whose definitions are fairly simple and considered standard - "secondary education" being one example.\(^{43}\) A second problem is data which involves conversion to a standard monetary unit, since exchange rates fluctuate and often do not represent the differences between the official and the real purchasing power of native currencies.\(^{44}\) A third, related problem, and one pertinent to Latin America, is the treatment of inflation, since rapid inflationary changes distort the value of goods and services in comparative studies.\(^{45}\) A fourth complication occurs when government goods and services are entered into aggregate data accounts. It is difficult if not impossible to accurately assess the real value (as opposed to accounting figures) of defense expenditures, highway and education expenses, etc. Moreover, these estimates, which often vary widely among countries, introduce greater error margins as the government

\(^{43}\)Scheuch, *op. cit.*, pp. 142-143.

\(^{44}\)Ibid.

\(^{45}\)Hla Myint, *The Economics of the Developing Countries* [New York: Frederick A. Praeger, 1965], Chapter One.
plays an increasingly important role in the economy. Complications like these, therefore, hinder meaningful comparisons among countries and compound the errors introduced by omitted or inaccurate data.

A third major requirement is that the index must relate to the hypotheses which are being tested. To meet this qualification, the variable or variables used in the index should relate individually to the hypotheses and interrelate with each other. Thus, there should not only exist a direct association between the independent and dependent variables, but the index itself used to test the hypotheses should be a collectively exhaustive entity whose individual indices are mutually exclusive.

Reference to this thesis' hypotheses exemplifies these three requirements. In order to examine whether democracy and governmental economic activity can be associated in Latin America, both the index indentifying


47 Achieving indicators and categories which completely measure one's hypothesis and which are mutually exclusive is an ideal goal. The objective, however, is to select those indicators which are least interchangeable yet can be related to the hypothesis and to one another. For examples of categories which are of value in comparative politics, see Karl W. Deutsch, "Toward an Inventory of Basic Trends and Patterns in Comparative Politics," American Political Science Review, LIV, No. 1 [March 1960], pp. 34-57.
democracy and the one identifying governmental economic activity must be operationally defined. The revised index of democracy, based on Fitzgibbons' criteria, was examined in Chapter 2. An index of governmental activity stressing social welfare programs has not yet been constructed. It must contain, however, certain indices which reflect governmental economic activity directed toward social welfare. Second, within the constraints set by data availability, accuracy and comparability for the Latin American countries, these indices should separately measure different aspects of social welfare, while their total, the social welfare index, should cover the author's concept of a governmental social welfare orientation. In this way, the indices can be related individually to democracy, yet their interrelationships indicate the indices are mutually exclusive while the index itself is collectively exhaustive.

**Selection of Variables for the Index**

Selecting indicators to identify governmental economic activity is therefore a complex process. Additionally, there is also the difficulty introduced by the requirements potentially neutralizing or offsetting one another. For example, a selection of indices highly relevant to Latin America, and ones which may meet the stipulations of data availability, accuracy and comparability,
may fail to meaningfully relate to the general propositions which enabled the derivation of the two hypotheses being tested. Conversely, indicators which may easily relate to the general propositions may be irrelevant to Latin America or may exist in such form as to be incomparable among themselves to among the different countries. An understanding of these problems introduced by the requirements, therefore, enables a better selection of indices which will minimize complications yet optimize the testing of the hypotheses.

This thesis, in an effort to minimize the complications encountered by the requirements, has relied upon statistical compendiums for definition and measurement of governmental expenditures directed toward social welfare. Additionally, they have been employed for the second hypothesis, to measure direct taxes as a proportion of governmental revenues. For both hypotheses, it is assumed they minimize complications in several ways. First, because they cover Latin America exclusively or include Latin America among other world regions, compendiums can be considered relevant to Latin America for the indicators chosen from them. Second, because they obtain data from individual countries, they represent the most accurate and available data published by official sources. Third, they are usually organized in such fashion as to make the data and data
categories interrelate among themselves and among countries. Thus, they facilitate inter-country comparisons and enhance inter-data relationships.

These assumptions do not obviate potential criticism that better data can be found through other, individual country sources, data which meet the three requirements better than those found in compendiums. Given time and resource constraints however, this thesis contends compendiums maximize information and minimize complications.

Indicators for the First Hypothesis

The statistical compendium Estudio Social de América Latina was ultimately selected as the source necessary to test the first hypothesis. It was reasoned that the social welfare orientations of governments, for comparative purposes, would best be analyzed via governmental expenditures for education, health and welfare. This work was chosen because one governmental budgetary category, "Social Programs," exhibited the following characteristics for the eighteen countries covered:

A. "Social Programs" was subdivided into seven areas: education, public health, work and social security, social assistance, housing, piped and drinkable water, and community development.

B. Expenditures in each of the seven areas were arranged in such fashion that their total was

the same as the composite "Social Programs" category. Thus, these areas were by definition mutually exclusive, while the category itself was a collectively exhaustive entity which met the criterion of a social welfare orientation;\textsuperscript{49}

C. Each of the seven areas was listed as a percentage of total governmental expenditures and as a percentage of "Social Programs". "Social Programs" itself was listed as a percentage of total governmental expenditures. Thus, relative comparisons among the seven areas and among countries could be facilitated;

D. Conversion coefficients between each country's native currency and the United States dollar were supplied in order to express budgetary allocations via a common medium; and

E. The above four characteristics were also expressed on a per capita monetary basis.\textsuperscript{50}

In this author's opinion, therefore, this source minimizes the complications created by attempting to stay within time and resource constraints, and concurrently, to satisfy the three requirements initially set forth. The areas subsumed by the category "Social Programs" are relevant to the Latin American situation both temporally and geographically. Data for the areas are available and the areas

\textsuperscript{49}These seven areas are arranged by the Pan American Union to be exclusive; nevertheless, there undoubtedly is some overlap among them for the different countries, since national accounting systems and budgetary accounts differ.

\textsuperscript{50}Pan American Union, \textit{op. cit.}, pp. 213-214.
themselves are comparable among countries.\textsuperscript{51} Since the work itself is a compendium, the accuracy of the data is only as good as the accuracy of official sources published by the countries themselves. Finally, the areas interrelate while the composite category is related to the hypothesis to be tested.

Indicators for the Second Hypothesis

Data to test the second hypothesis, that direct taxes as a proportion of governmental revenues varies with democracy, are also obtained from a statistical compendium. In the \textit{Yearbook of National Accounts Statistics}, the category "General Government Revenue and Expenditure" contains economic transactions for different countries.\textsuperscript{52} Within this category are two separate items: Direct Taxes on Corporations, and Direct Taxes on Households and Private Non-Profit Institutions. The former item is defined as "Taxes levied at regular intervals on profits, capital or net worth.

\textsuperscript{51}These characteristics were found by the author to be far superior than characteristics supplied by United Nations works like the \textit{Statistical Yearbook}. The seven areas represented finer gradations of social welfare orientation than areas listed by the United Nations. Additionally, the areas did represent a concerted effort to prevent overlaps among health, education and welfare, a detrimental situation often found in United Nations literature when international comparisons are made.

\textsuperscript{52}United Nations, Department of Economic and Social Affairs, \textit{Yearbook of National Accounts Statistics} [New York, 1969], Vol. I.
Corporate income and excess profits taxes, taxes on undistributed profits or on capital stock are included. The latter item is defined as "All taxes levied on the income of households and private non-profit institutions, such as personal income taxes, surtaxes, etc. Social security contributions of both employers and employees are included here." These items considered both separately and combined can then be related to the summary general government item, "Current Revenue", to obtain the proportions necessary to test the hypothesis.

These two items for the second hypothesis also minimize the complications introduced by the three requirements. The data are relevant to Latin America - governments exist and obtain revenues from different sources, among them direct taxes on corporations and households. Secondly, the data are as available and accurate as the government sources which furnish them. Their comparability, however, is enhanced by United Nations' efforts to standardize international accounts. Thirdly, the two items interrelate with each other and to the hypothesis. They are mutually

---

53 Ibid., p. xxii.
54 Ibid., p. xxv.
exclusive, yet the two combined form the collectively exhaustive entity, direct taxes, which can be related to the hypothesis.\footnote{Unfortunately, the United Nations lists general government categories for only fourteen Latin American countries. While other sources list tax information for a larger sample, it is not strictly comparable to the United Nations data, and, therefore, cannot increase sample size without introducing measurement distortion. These larger sample sources were not used originally because they failed to exclude income and taxes from government enterprises; an item noted by the United Nations and excluded from their direct taxes accounts.}
CHAPTER 4

METHODOLOGY

This chapter tests the two hypotheses. To do so, three steps are performed: establishing rules to organize and manipulate data, examining whether the general observations used to derive the hypotheses are valid in Latin America, and testing the hypotheses themselves. Although the final results are presented in tables, the interpretations of them regarding the two hypotheses are deferred until Chapter 5.

Data Organization and Manipulation

Most of the data sources necessary to examine the general observations and the two hypotheses have been previously noted. Fitzgibbons' democracy index was examined in Chapter 2. Additionally, the sources for the economic indicators, the statistical compendiums, were examined in Chapter 3 and reasons were given for their use. Rules regarding the construction of these indicators, however, were not given. These rules are presented below.

Fitzgibbons' Index

This index is vital for its role as the independent variable and because it limits the time dimensions
for the study. Fitzgibbons' original index applied to 1960-1965, while each respondent's total raw score was proportionately adjusted to equal 1000 points. Table 1 presents the final rankings of the countries based on his fifteen criteria.

Table 1. Fitzgibbons' Index

<table>
<thead>
<tr>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uruguay</td>
</tr>
<tr>
<td>Costa Rica</td>
</tr>
<tr>
<td>Chile</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Venezuela</td>
</tr>
<tr>
<td>Argentina</td>
</tr>
<tr>
<td>Colombia</td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>Peru</td>
</tr>
<tr>
<td>Panama</td>
</tr>
<tr>
<td>El Salvador</td>
</tr>
<tr>
<td>Ecuador</td>
</tr>
<tr>
<td>Guatemala</td>
</tr>
<tr>
<td>Dominican Rep.</td>
</tr>
<tr>
<td>Honduras</td>
</tr>
<tr>
<td>Nicaragua</td>
</tr>
<tr>
<td>Bolivia</td>
</tr>
<tr>
<td>Cuba</td>
</tr>
<tr>
<td>Paraguay</td>
</tr>
<tr>
<td>Haiti</td>
</tr>
</tbody>
</table>

To construct a revised, political index based only on five criteria, it was first decided to retain the original raw scores for the criteria, and second, to combine these raw scores for each criterion into a composite score. This composite score, therefore, represented the five political indices selected to form the democracy index in Latin America for 1960-1965.

A third decision was to use this index ordinally, to rank all the countries from the highest scoring one to
the lowest scoring one as first, second, third, etc. This step was taken to contrast the countries on the democracy index, but to contrast them relatively, rather than by absolute magnitudes. This ranking procedure was similar to the one employed by Fitzgibbon for his index, since he converted his adjusted raw score totals into ranks in order to contrast the countries on an ordinal basis. 56

Finally, Cuba was excluded from the democracy index and from all dependent variables. Cuba's system of accounts was not comparable to those of the other Latin American countries. Additionally, the information which did exist was sparse and could not be directly related to either of the two hypotheses. This omission, therefore, shifted the maximum number of countries in the sample from twenty to nineteen.

Socioeconomic Variables

With the modified political democracy index being used as the independent variable, a selection of data and methodology for the dependent variables was largely predetermined. Fitzgibbon's time period analyzed, and the one employed by the modified democracy index, was 1960-1965. In time,

56Fitzgibbon, op. cit., p. 140. It must be noted that Fitzgibbon's raw score adjustments did not change the relative ranks of the countries. The decision to use the data ordinally was made to coincide with Fitzgibbon's procedures, and because the points used to establish the index were oridinal in composition.
therefore, dependent variable data had to be chosen which best fit within this range. It was decided to select all data within the calendar years 1960-1966, the latter year chosen because several of the countries have yearly budgetary systems which do not coincide with calendar years but overlap them. Thus, the calendar year 1966 would include 1965 budgetary data for these countries, while the 1960 calendar year would include some 1959 data for them. If all countries were treatedly equally by this criterion, therefore, seven separate observations would be recorded to delineate 1960-1966. It was, however, decided that countries which had data continuously recorded for this period would consider only the first six observations: 1960, 1961, 1962, 1963, 1964 and 1965. If they did not have continuously distributed data, those data between 1960-1966 would be used. This system, therefore, gave preference to the calendar years 1960-1965 for which the democracy index was intended.

A second major decision was to treat all data ordinarily. It was felt the difference in budgetary accounting systems and the inaccuracies of the data did not warrant statistical techniques which normally can be used with interval data analyses. Although this decision limited the

57 Pan American Union, op. cit., p. 191.

number of data manipulations possible, it was felt an ordinal analysis for the socioeconomic indicators would adequately examine the validity of the two hypotheses as well as the general observations which generated the hypotheses.

**General Observations Applied to Latin America**

Chapter 1 noted that the two hypotheses to be tested were derived from general, geographical observations applicable to different time periods. It was believed that empirical foundation for these hypotheses would be strengthened if these observations were valid for Latin America during 1960-1965. This thesis sought to test whether a smaller sample exhibited the same or similar characteristics as the larger country samples on which the authors' observations were based. Specifically, attention was focused on the interrelationships of democracy, wealth, urbanization, industrialization and GNP/capita.\(^{59}\)

Lipset, in his analysis of socioeconomic development and democracy, contended that on a geographical basis the stable democracies and unstable dictatorships rated higher in categories of urbanization, industrialization and education than the stable dictatorships. Similarly, Coleman concluded that political system competitiveness and socioeconomic development were directly related within regions. Russett found high correlations among socioeconomic

---

\(^{59}\)An indicator to measure education, another of the measures mentioned by these authors as indicative of socioeconomic development, is examined later as part of the democracy-governemental expenditures hypothesis.
development indicators and GNP/capita, while Kuznets observed similarities between patterns of governmental revenues and expenditures and GNP/capita. If these observations are valid for Latin America, socioeconomic development indicators would highly intercorrelate, democracy would highly correlate with socioeconomic development, and patterns of governmental revenues and expenditures would correlate with GNP/capita. The validity of these observations is examined below.

Socioeconomic Development Intercorrelations

The following steps were taken to see to what extent socioeconomic development indices intercorrelated in Latin America. One indicator was chosen from each of three categories—urbanization, industrialization and wealth. Additionally, the indicator GNP/capita was chosen as a composite variable for the concept "economic development". Only one year was chosen to represent the period; where possible, it was 1963, the approximate midpoint between 1960 and 1965.

The indices were:

A. Urbanization - Percentage of the populace in cities over 2,000. This indicator represented the most uniformly applied statistic for population percentages in Latin America. All figures were for 1960.60

B. Industrialization - Energy consumption per capita (expressed in kilogram coal equivalents). This indicator represented a country's ability to use energy. Since energy is a necessary requirement for industrialization, the higher

this figure per capita, the more it could be assumed energy is being used for industrial processes.61

C. Wealth - Number of telephones per 100 population. This indicator was used by both Lipset and Coleman. Additionally, it was employed as an economic distributive indicator to compare to GNP/capita, since the latter indicator gives no suggestion regarding the distribution of GNP among the population. It was assumed the telephone was an inexpensive enough item which could be purchased by groups and individuals at different income levels, thereby enabling income distribution contrasts among countries.62

D. Economic Development - GNP/capita.63

In this instance, to contend that these socioeconomic development indicators intercorrelate would imply they vary together and positively. Thus, a high percentage of urbanization would be associated with a high degree of industrialization, wealth and GNP/capita. For the nineteen countries studied, their ranks on these four indicators were computed, and correlations between the indicators were made. The results are presented in Table 2.


62 Latin American Center, op. cit., Table 69. The data are for 1966.

63 Ibid., Table 74.
Table 2. Socioeconomic Development Indicator Correlations

<table>
<thead>
<tr>
<th></th>
<th>Urbanization</th>
<th>Industrialization</th>
<th>Wealth</th>
<th>GNP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanization</td>
<td>.895</td>
<td>.951</td>
<td>.851</td>
<td></td>
</tr>
<tr>
<td>Industrialization</td>
<td>.921</td>
<td>.832</td>
<td>.832</td>
<td></td>
</tr>
<tr>
<td>Wealth</td>
<td></td>
<td></td>
<td>.870</td>
<td></td>
</tr>
</tbody>
</table>

The high intercorrelations of all four indices suggest the four categories are positively related in Latin America during 1960-1965. All are significant at the .01 level, suggesting the relationships could have occurred by chance only once out of 100 times. Thus, the contention that urbanization, industrialization, wealth and GNP/capita are positively correlated is considered valid.

Democracy and Socioeconomic Development

A second examination involved the relationship of democracy to socioeconomic development. Both Lipset and Coleman found their respective democracy indexes were positively associated with their developmental indices. Similar to these authors, this thesis hypothesized its index of democracy would also be positively associated with socioeconomic development.

A test of the above hypothesis was conducted by correlation techniques. The democracy index for the
nineteen countries was correlated against each of the four socioeconomic development variables by the Spearman rank-order method. The results are presented in Table 3.

Table 3. Democracy and Socioeconomic Development Correlations

<table>
<thead>
<tr>
<th></th>
<th>Urbanization</th>
<th>Industrialization</th>
<th>Wealth</th>
<th>GNP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy</td>
<td>.84</td>
<td>.754</td>
<td>.84</td>
<td>.772</td>
</tr>
</tbody>
</table>

Again, the results are all significant and positive at the .01 level, suggesting that in Latin America during 1960-1965, there is a high probability the democracies, based on this thesis' index, are more urbanized, industrialized, wealth and have higher GNP's/capita. This conclusion, and the previous one, suggest that the general, large-sample observations by Lipset, Coleman and Russett are valid for Latin America.

Governmental Patterns and GNP/Capita

The third examination was to see whether Kuznets' observations were valid in Latin America. He contended the relationship between governmental expenditures (or revenues) as a percentage of GNP and GNP/capita was positive, while the ratio of governmental expenditures (or revenues) to GNP varied more than the share of government consumption expenditures in GNP.
To apply Kuznets' first observation, reference was made to the Yearbook of National Accounts Statistics to obtain general government data. The indicator chosen was general government current expenditure as a percentage of GNP for 1963. This ratio was ranked for the different countries and correlated with the 1963 GNP/capita rankings obtained earlier. The Spearman correlation is .44 and significant at the .01 level, suggesting that Kuznets' general observation is valid but weak in Latin America.

Kuznets' second observation was also examined. To see whether the ratio of general government expenditures to GNP varied more than the share of government consumption expenditures, an additional statistic was required. The fourteen countries used to test his first observation were examined for their general government consumption expenditures as percentages of the GNP for 1963. In turn, the

\[64^{*}\text{Op. cit.}\]

\[65^{*}\text{Ibid., selected tables. The ratio "general government current expenditures as a percentage of GNP" was computed from two separate indicators in the UN accounts. Thirteen of the countries listed were in this work. Brazil's ratio, however, was obtained from the Statistical Bulletin for Latin America, another United Nations compendium, bringing the total to fourteen countries. Nicaragua's figure was for 1965, the closest year to 1963 for general government data.}\]
range of this ratio for them was compared to the range of general government current expenditures/GNP. The results, summarized in Table 4 suggest his second observation is also valid.

Finally, the democracy index was contrasted to the current expenditure ratio. It was hypothesized this relationship would be positive, suggesting that democracies, which have higher GNP's/capita, would also have their governments play a larger role within the economy. The obtained correlation, .507, validates this supposition at the .05 level.

Testing the Two Hypotheses

In Chapter One the hypothesized relationship between democracy and governmental social expenditures was examined. It was later argued these expenditures could best be measured in education, health and social welfare. Also, the categories within these areas could be expressed both as percentages of the national budgets and on a dollar, per capita basis. By this breakdown there existed a total of fourteen potential variables to measure governmental expenditures.

Regarding percentage data, the decision was made to contrast the democracy index directly to the first five individual categories: education, public health, work and social security, social assistance, and housing. The last
Table 4. General Government Current Expenditure

Correlations Between General Government Current Expenditure as a Percent of GNP and GNP/Capita, and Comparisons Between the Ranges of General Government Current Expenditure/GNP and General Government Consumption Expenditure/GNP

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Sample</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>.442</td>
<td>N=14</td>
<td>.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Government Current Expenditure</th>
<th>General Government Consumption Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>High 28.90 (Uruguay)</td>
<td>16.85 (Brazil)</td>
</tr>
<tr>
<td>Low 7.04 (Paraguay)</td>
<td>6.95 (Guatemala)</td>
</tr>
<tr>
<td>Range 21.86</td>
<td>9.90</td>
</tr>
</tbody>
</table>
two categories, however, piped and drinkable water, and community development, were combined into one index by adding each category's budgetary percentage contribution. This combined index was formed because several countries did not allocate expenditures to one of the two categories, or there was no information regarding expenditures which were made. A combination of the two subsequently increased the sample size to be contrasted to the democracy index.

For an additional control, the composite variable "Other Social Programs" was created to represent those four categories not listed as education or public health. Its construction was similar to that of the drinkable water/community development composite variable: the budgetary percentage contribution of each of the four categories was added to form the composite category, which was expressed in variable form as a percentage of the total national budget.

In summary, eight separate variables were derived which could be individually contrasted to the democracy index and which were expressed as percentages of the total national budgets of the different countries. They were:

A. "Social Programs" - the master variable which subsumed the original seven separate categories.

B. "Education"

66 By this combination, all eighteen countries listed by the Pan American Union were included.
C. "Public Health"

D. "Other Social Programs" - a variable equivalent to $A - (B + C)$ and to $(E + F + G + H)$,

E. "Work and Social Security"

F. "Social Assistance"

G. "Housing"

H. "Piped and Drinkable Water/Community Development"

A second way the seven "Social Programs" categories were originally expressed was on a dollar per capita basis. This alternative provided an absolute magnitude contrast among the countries, as opposed to the first expression of governmental expenditures, which was a percentage contrast. It therefore expressed the monetary impact of governmental programs upon individuals, and was of value as a correction factor for population, since countries might spend high percentages of their budgets on social programs, yet spend little on a per capita basis.

Steps taken to create per capita social program variables were similar to those for the budgetary percentage variables. Countries were first ranked in four categories: $$/capita spent for the composite category, "Social Programs," and $$/capita spent for Education, Public Health and "Other Social Programs." The category "Other Social Programs" was in turn divided and expressed by the following variables:

A. $$/capita spent for work and social security;
B. \$/capita spent for social assistance;
C. \$/capita spent for housing; and
D. \$/capita spent for piped and drinkable water/community development.

An additional variable, \$/capita spent of the national budget, was used as a check against the others. It was hypothesized not only social program expenditures, but also total budgetary expenditures per capita were related to democracy, the latter hypothesis derived from this thesis' conclusion that governmental expenditures as a percentage of GNP and GNP/capita were related. Since democracies had higher GNP's/capita, the probability was also high they would spend larger absolute quantities of their total budgets on a per capita basis.

The eight percentage and the nine \$/capita variables present a total of seventeen to be contrasted to the democracy index. Since all are ordinally ranked, including the democracy index, Spearman rank-order correlations can be computed between the index and each of the separate dependent variables. However, the limitation of Estudio Social de America Latina to the two observations, 1962 and 1963, do not permit a complete coverage during the 1960-1965 time period. Nevertheless, this thesis asserts the average of these two observations indicates the differences among Latin American governmental expenditure patterns.
Hypothesis Two: Democracy and Governmental Revenue

Variables for the testing of the second hypothesis also need to be explicated. It was noted that Kuznets' observations regarding governmental expenditures and revenues were valid in Latin America within the 1960-1965 period. Secondly, the relationship between democracy and governmental expenditures (or revenues) as a percentage of GNP was found to be significantly positive. These observations suggest that the hypothesized relationship between direct taxes as a percentage of current revenues and democracy is also positive.

To test this hypothesis, the three revenue variables noted in Chapter Three were employed without modification. They were expressed as percentages of the general government current revenue and averages were compiled during 1960-1965. They were:

A. "Direct Taxes as a Percentage of Current Revenue" - this was the composite variable hypothesized to be positively related to democracy;

B. "Corporation Taxes as a Percentage of Current Revenue" - this was a sub-category of Direct Taxes expressed in variable form. Although not directly related to the revenue hypothesis, it is assumed positively related to democracy.

C. "Household Taxes as a Percentage of Current Revenue" - this was the other sub-category of Direct Taxes expressed in variable form. It is also assumed positively related to democracy.
The previous discussion has presented the variables used to test the two hypotheses. Additionally, rules were formulated regarding the presentation and manipulation of data for these variables. The exact relationship of these variables to the democracy index, however, has not yet been fully established.

Since this thesis relates governmental expenditures and revenues to relative levels of democracy, the contention that economic development differences among the countries must be accounted for is a valid one. As Kuznets has indicated, the relationship between levels of GNP/capita and governmental revenue and expenditure patterns is high. Similarly, Russett has indicated certain distributive indices correlate higher to socioeconomic than to political criteria. Since the democracies rate higher in socioeconomic development categories, the objection can be raised that any governmental expenditure and revenue contrasts between democracies and non-democracies could be related more to economic than to political differences.

To examine this possibility, this thesis has employed its democracy index in two separate ways. First, the index has been correlated directly to the variables testing the two hypotheses. These correlations would indicate whether or not democracy, irrespective of economic development, is positively associated with governmental revenue.
and expenditure patterns. Then, to examine these relationships independent of economic development, the correlation is controlled for by the variable GNP/capita, which is used as an over-all indicator of economic development. The resulting two sets of correlations, therefore, examine the relationships of democracy and governmental variables with and without the effects of economic development.

The second way took the opposite approach. The GNP/capita index was constructed as the independent variable and was correlated against the dependent governmental expenditure and revenue variables. This correlation examined the direct relationship between economic development and governmental budgetary patterns. Then, to examine the effects of democracy upon these correlations, a second set of correlations were computed, controlling for the democracy index. These two correlation sets, therefore, examined the relationship between economic development and governmental revenues and expenditures with and without the effects of democracy.

In summary, for each of the seventeen expenditure and the three revenue variables, there exist four separate

---

correlations which test the two democracy-governmental hypotheses offered in this thesis. They are summarized in Tables 5 and 6. Analysis of these tables is given in Chapter Five.
CHAPTER 5

ANALYSES

This chapter analyzes the hypotheses themselves to interpret the relationship of the democracy index to the governmental variables. It examines the different correlations in Tables 5, 6, and 7 to identify patterns and uniformities which may exist, and it seeks to eliminate those variables which appear least relevant to the democracy index. Additionally, a supplementary analysis is used to facilitate an interpretation of these findings, one which uses the data in its original interval form and computes means and ranges. This thesis maintains these separate approaches to data interpretation will adequately test the two hypotheses.

It was noted previously there were difficulties associated with an interpretation of the correlation coefficients and the significance levels. Problems associated with the data were stressed, while the observation was made that the Latin American countries were not randomly chosen. Nevertheless, it was argued both the coefficients and the significance levels would be valuable in obtaining conclusions.

Although these noted problems exist, data interpretation can be further clarified if definite cut-off points
<table>
<thead>
<tr>
<th>Variable</th>
<th>Demo.</th>
<th>Partial Demo.</th>
<th>GNP/C</th>
<th>Partial GNP/C*Demo.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soc. Prog.</td>
<td>.314</td>
<td>.168</td>
<td>.275</td>
<td>.055</td>
</tr>
<tr>
<td>Education</td>
<td>-.02</td>
<td>.055</td>
<td>-.07</td>
<td>.134</td>
</tr>
<tr>
<td>Health</td>
<td>-.10</td>
<td>-.206</td>
<td>.038</td>
<td>.182</td>
</tr>
<tr>
<td>Other Soc. Prog.</td>
<td>.5</td>
<td>.262</td>
<td>.455</td>
<td>.126</td>
</tr>
<tr>
<td>Work/SS</td>
<td>.54</td>
<td>.386</td>
<td>.417</td>
<td>.001</td>
</tr>
<tr>
<td>Soc. Asst.</td>
<td>.01</td>
<td>.292</td>
<td>-.23</td>
<td>-.398</td>
</tr>
<tr>
<td>Housing</td>
<td>.406</td>
<td>.432</td>
<td>.179</td>
<td>-.234</td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>.33</td>
<td>.33</td>
<td>.128</td>
<td>.128</td>
</tr>
<tr>
<td>Variable</td>
<td>Partial Correlations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demo.</td>
<td>GNP/C</td>
<td>GNP/C</td>
<td></td>
</tr>
<tr>
<td>Natl. Budget</td>
<td>.702</td>
<td>.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. Prog.</td>
<td>.741</td>
<td>.813</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.592</td>
<td>.538</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>.629</td>
<td>.729</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. Prog.</td>
<td>.764</td>
<td>.758</td>
<td>.414</td>
<td></td>
</tr>
<tr>
<td>Work/SS</td>
<td>.766</td>
<td>.796</td>
<td>.413</td>
<td></td>
</tr>
<tr>
<td>Soc. Asst.</td>
<td>.59</td>
<td>.426</td>
<td>.095</td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>.587</td>
<td>.427</td>
<td>.047</td>
<td></td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>.329</td>
<td>.717</td>
<td>.431</td>
<td></td>
</tr>
</tbody>
</table>
### Table 7. Correlations: Democracy and GNP/Capita

<table>
<thead>
<tr>
<th>Variable</th>
<th>Partial Correlations Democracy and Governmental Revenues</th>
<th>Partial Correlations GNP/Capita and Governmental Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demo.</td>
<td>Demo.·GNP/C</td>
</tr>
<tr>
<td>Direct Taxes</td>
<td>.529</td>
<td>.394</td>
</tr>
<tr>
<td>Corp. Taxes</td>
<td>.155</td>
<td>.314</td>
</tr>
<tr>
<td>House Taxes</td>
<td>.264</td>
<td>.24</td>
</tr>
</tbody>
</table>
are chosen for both correlation coefficients and significance levels, below which the variable or variables in question are considered "not-relevant" to the democracy index. Since this thesis is of an explanatory nature with all attempts made to see which, if any, variables relate to democracy, greater latitude of error is allowed than is normally done so in a more rigorous analysis, or under conditions which can be regulated or controlled by the researcher. For this reason, the statistical cut-off points chosen are .30 for correlation coefficients, and .20 for significance levels. It must be re-emphasized, however, that these are minimum points; the magnitudinal differences among correlations and coefficients above these levels must be presented and analyzed with caution.

Russett and Alker stress the difficulties involved and the assumptions required when significance levels are assigned to correlations. They note, however, statistical significance is useful when employed in a negative fashion -- to eliminate relationships based on a small number of cases or weak correlations. Used in this manner, they contend, significance levels are helpful in arguing that a relationship between two variables is weak and could easily have arisen by chance. To assert a relationship is significant, however, is more difficult and is a riskier proposition since it requires more rigid data assumptions. This thesis follows their suggestion that significance levels "...may be helpful as a means of establishing some criteria as to which relationships may be treated seriously, as probably produced by something other than chance." For both total and partial correlations they are used in a relative, comparative context, to assert one variable relates more to a given index than another, thereby suggesting the smaller possibility the former relationship could have occurred by chance. Russett, et al., op. cit., p. 263.
Hypothesis 1 - Percentage Expenditure Variables

Democracy Index

Referral to the total correlations [Table 7] indicates mixed results. Preliminary inspection shows that two variables, Education as a Percentage of the National Budget (hereafter called Education), and Public Health as a Percentage of the National Budget (hereafter called Health), are negatively related to the democracy index. These two and variable six, Social Assistance, also do not meet the minimum cut-off points previously established for "variable relevancy" to democracy. In this instance the three indices in question do not support the hypothesis at a statistically accepted level and are rejected from preliminary analysis.

Two additional variables, the composite index Social Programs as a Percentage of the National Budget (hereafter called Social Programs), and the combination index Piped and Drinkable Water and Community Development as a Percentage of the National Budget (hereafter called Water and Development), just meet the minimal correlation significance requirement --- .30. Additionally, both appear statistically significant at the .10 level (N=18), indicating their separate correlations could have occurred by chance ten percent of the time. An initial interpretation of these
results, therefore, suggests both variables tentatively support the hypothesis and should not be rejected. This interpretation is particularly noteworthy for variable 1, as it is a composite index and comprised of variables 2, 3, 5, 6, 7 and 8. Since variables 2, 3 and 6 have been previously rejected for statistical insignificance, one would expect higher significant correlations for the remaining ones.

This expectation is born out by the remaining correlations. Variables 4, 5 and 7 are all positive and acceptably significant. Moreover, the composite variable Other Social Programs has a correlation of .5, higher than Social Programs, the composite which includes expenditures on education and health.

A tentative summary regarding these total correlations indicates the mixed results previously noted. The over-all hypothesis is not fully substantiated by these eight correlations. Three are rejected as not relevant to the democracy index, two are minimally accepted, and three suggest stronger relevancy to it as indicated by their higher values and significance levels. A selection of uniformities or readily discernible patterns is also difficult at this stage. One preliminary suggestion is that the "welfare" aspect of governmental social orientations is more related to democracy than either the education or health
aspects, since variable 4 is considered significant whereas variables 2 and 3 are not. However, the non-significance of one welfare variable, Social Assistance, suggests a weakness in this generalization. The extent to which these budgetary differences among countries may be due to different levels of economic development, and the partial correlations which analyze these differences, are discussed below.

Chapter Four examined the rationale for the employment of partial correlation techniques. It noted that certain distributive indices correlate higher with socioeconomic than with political criteria, and it considered as valid the position that economic differences among the countries must be considered. Through partial correlations, it was argued, two objectives could be achieved. The first was that the democracy index could be contrasted to the expenditure (or revenue) variables to examine their relationships with and without the effects of economic development. By total correlations, the democracy-expenditure relationships could be explored regardless of different developmental levels. Then, through partial correlations, the developmental differences would be mathematically eliminated and the democracy-expenditure relationships could be examined again. The second objective was considered the opposite of the first. The development index was to be
compared to the expenditure variables to determine their relationships, regardless of the different democracy levels. Then, through partial correlations, a second set of development-expenditure relationships were to be computed, this time eliminating all democracy level differences. Both partial correlation approaches, it was argued, would focus on the expenditure (or revenue) hypothesis and would enhance an interpretation of the total correlations.

These partial correlations can assume three values relative to the total correlations to which they are being compared: increase their magnitudes, decrease them, or remain constant. In the first two instances, a conclusion would be that economic development differences among countries do affect the democracy-expenditure relationships. Conversely, no differences between the total and partial correlations (or small differences interpreted as negligible) suggest the relative independence of these variables from economic development differences. As in the case with total correlations though, the usage of partial correlations to definitely assert that significant relationships or differences exist, as opposed to statements they probably do not, is risky. In this sense they too are used more for relative, comparative information than for mathematical exactitude.
Referral to the partial correlations for the percentage-based expenditure variables indicates mixed results. Similar to the total correlations, not all the partials are positively associated with democracy — Health is negatively related. Moreover, only two variables, Work and Social Security, and Housing meet the minimal requirements for statistical acceptability regarding their correlation coefficients. The remaining six fall below the standard, suggesting the relationships between these expenditure variables and the democracy index are not statistically significant when economic development differences among countries are obviated.

Further information can be obtained by contrasting the partials to their total correlation coefficients which were examined earlier. In four instances, variables 1, 3, 4 and 5 there is a downward shift, two of which shift the variables from accepted statistical significance to rejection. Three variables, Education, Social Assistance and Housing increase in magnitude, while the remaining variable, Water and Development, appears unchanged. Again, the results are mixed.

It is important to note that the two variables which shifted from acceptance to rejection are both composite indices. These shifts suggest that governmental social expenditures considered as a whole are highly related to
levels of economic development; it is only when these expenditures are inspected separately that potential differences arise. For example, a preliminary and qualitative conclusion concerning the shifts in variables 2, 7 and 8 would be that their changes are minimal — their relationships to democracy are little affected by differences in economic development. Conversely, the upward shift in Social Assistance would suggest this variable's relationship to democracy strengthens when developmental differences are eliminated.

These preliminary conclusions regarding both total and partial correlations are further understood by examining the measured differences between the means and ranges of the expenditure variables. It is recalled this secondary analysis is supplemental to the correlations themselves — the data are grouped for visual inspection and interpretation only. The countries having data on a particular expenditure variable are dichotomized by the criterion "democratic" or "non-democratic" (based on the democracy index). Then, the range and mean of each half-group are obtained and contrasted to each other and to both groups
combined. The results of this data organization are presented in Table 8.69

Inspection of this data table supports the general conclusions regarding the total correlations. Education and Health both have the non-democracies, considered as a group, allocating larger percentages of their budgets for these programs than the democracies. These are the only two variables where the non-democratic group mean is larger and the total correlation is negative. In the case of Social Assistance, the third variable with a higher non-democratic mean, the correlation is positive (.01). It is recalled, however, these three variables are the only ones originally considered "not-relevant" to the democracy index.

For those variables considered relevant, there are visual differences in expenditure patterns. The two composite variables, Social Programs and Other Social Programs, both show differences between the democratic and the non-democratic group means ($X_D - X_N$). The larger mean difference

---

69 It must be emphasized the classification of countries in this manner does not mathematically separate the political and economic characteristics of these countries. It compares the percentage expenditures of the more democratic countries to those of the less democratic ones, but it does not account for the differences in GNP/capita. Thus, the point can still be raised that contrasts are largely due to economic developmental differences rather than political ones. This contention, however, does not negate the democracy-expenditure hypothesis, since the hypothesis assumes these developmental differences do in fact exist. In Table 9, countries will be contrasted along a High GNP/capita - Low GNP/capita dichotomy.
Table 8. Democracy-Expenditure
Variables as Percent of National Budget: Means and Ranges

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>Xd</th>
<th>Xn</th>
<th>Xd-Xn</th>
<th>Percent</th>
<th>Rd</th>
<th>High</th>
<th>Low</th>
<th>Rn</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soc. P.</td>
<td>579.4</td>
<td>32.2</td>
<td>24.1</td>
<td>33.6</td>
<td>30.8</td>
<td>2.8</td>
<td>11.6</td>
<td>23.1</td>
<td>46.0</td>
<td>22.9</td>
<td>22.7</td>
<td>44.6</td>
<td>21.9</td>
</tr>
<tr>
<td>Education</td>
<td>300.4</td>
<td>16.7</td>
<td>15.2</td>
<td>16.4</td>
<td>17.0</td>
<td>-0.6</td>
<td>3.9</td>
<td>15.2</td>
<td>24.4</td>
<td>9.2</td>
<td>11.8</td>
<td>23.6</td>
<td>11.8</td>
</tr>
<tr>
<td>Health</td>
<td>112.2</td>
<td>6.2</td>
<td>8.6</td>
<td>5.8</td>
<td>6.7</td>
<td>-0.9</td>
<td>10.5</td>
<td>7.9</td>
<td>11.3</td>
<td>3.4</td>
<td>8.6</td>
<td>11.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Other Soc. P.</td>
<td>169.2</td>
<td>9.4</td>
<td>12.1</td>
<td>11.3</td>
<td>7.5</td>
<td>3.8</td>
<td>31.4</td>
<td>8.0</td>
<td>15.4</td>
<td>7.4</td>
<td>9.4</td>
<td>12.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Work/S.S.</td>
<td>101.1</td>
<td>5.6</td>
<td>10.0</td>
<td>7.2</td>
<td>4.0</td>
<td>3.2</td>
<td>32.0</td>
<td>8.3</td>
<td>11.0</td>
<td>2.7</td>
<td>5.4</td>
<td>6.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Soc. Ass't.</td>
<td>22.6</td>
<td>1.4</td>
<td>3.1</td>
<td>1.3</td>
<td>1.5</td>
<td>-0.2</td>
<td>6.4</td>
<td>3.1</td>
<td>3.3</td>
<td>0.2</td>
<td>3.0</td>
<td>3.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td>2.6</td>
<td>1.5</td>
<td>0.4</td>
<td>1.1</td>
<td>42.4</td>
<td>2.5</td>
<td>2.5</td>
<td>2.6</td>
<td>0.0</td>
<td>2.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>28.6</td>
<td>1.6</td>
<td>4.0</td>
<td>1.9</td>
<td>1.3</td>
<td>0.6</td>
<td>15.0</td>
<td>3.2</td>
<td>3.6</td>
<td>0.4</td>
<td>4.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Key: T=Total budgetary percentages for all countries
X=Average budgetary percentages for all countries
R=Total range for all countries
Xd=Mean percentage for most-democratic half-group
Xn=Mean percentage for least-democratic half-group
Xd-Xn=Mean difference between half-groups
Percent=Xd-Xn/R or mean difference between half-groups relative to the total range for all countries
Rd=Range for most-democratic half-group; highs and lows
Rn=Range for least-democratic half-group; highs and lows
for the latter variable explained is by the negative effects of both Education and Health upon the former. Additionally, it should be noted that Work and Social Security indicates the widest group difference of any of the single indices, suggesting the democracies are most distinguished from the non-democracies by this welfare criterion. Nevertheless, that five of the eight percentage variables do show positive mean differences supports the positive correlations obtained earlier.

An additional observation is obtained by viewing the high and low ranges of each half-group. In all instances but four, the democracies have a country with a higher percentage expenditure "high" value as well as one with a higher "low" value for the eight variables. These figures help explain the higher group means for the democracies, and secondly, indicate the small likelihood of any given non-democracy expending a greater percentage of its budget for social programs than the highest spending democracy. In two of the four instances, differences are in Education and Health, variables negatively correlated with the democracy index.

A final and related observation considers the total range of each of the variables — the difference between the country which spends the highest percentage of its budget on any criterion and the one which spends the least (R). In order to correct for the fluctuations in ranges introduced by the relative importance of the different variables within the
budget, a percentage column \((X_D - X_N / R)\) has been introduced. The higher this percentage for any variable, the greater the difference exists between the democracies and non-democracies for expenditure amounts, relative to the total range of that variable. Examination of this column indicates Education, Health, and Social Assistance have the three lowest percentages, while the composite welfare variable, Other Social Programs, has a higher percentage than the Social Programs one. These observations again suggest the greatest differences between the democracies and non-democracies for governmental social expenditures are those within the welfare rubric — Work and Social Security, Housing, and Water and Development.

This examination of the democracy index relative to the different percentage-based variables for both total and partial correlations has, therefore, enabled some tentative conclusions. The first considers the supposition that expenditure categories would all be positively related to the index. Education and Health are not, although neither variable's negative correlation is considered statistically significant. Thus, although the supposition is not fully substantiated by the data, it is important to note it is not significantly disproven. A second conclusion considers the total correlations. Even with the low minimum values posited for statistical acceptance guidelines, it is evident the
relationships between democracy and these variables are not "clear-cut." Both the correlations and the supplemental range and mean analyses suggest democracies and non-democracies can be distinguished by their expenditures — particularly for welfare programs. The importance of these differences, however, is more difficult to assess. In this instance the inadequacies of the data, as well as the conceptual and methodological difficulties of cross-national comparison, compound the problems of interpretation. A judgment would be that any correlation above 0.3 does suggest a variable's relationship to the index. The different correlations for variables above this minimum, however, may best be contrasted by relative rather than by absolute comparisons.

A third conclusion regards the partial correlations. When economic development differences are eliminated, the democracy index is still considered relevant to only three welfare variables, suggesting that economic development plays a role in determining the extent to which a country can allocate a given percentage of its budget to different social programs. The importance of economic development in relation to various expenditures, and the question whether these expenditures are more related to development than to democracy, are examined in the following section.
Development Index

This section analyzes the extent to which the various expenditure variables are related to economic development. It does so in a manner similar to that employed by relating these variables to the democracy index -- through the use of total and partial correlations and by range and mean computations. By employing total correlation techniques, and by comparing the results to the total correlations obtained in the last section, two analyses are possible: selecting those variables accepted as statistically relevant to development, and examining the differences in importance between these variables' relationships to development as opposed to democracy. Similarly, by using partial correlation techniques and by eliminating the differences in democracy ranks among the countries, an understanding of the importance of democracy to the development-expenditure relationships is facilitated. For these analyses, the indicator GNP/capita is still used as a composite measure of development.

An examination of the total correlations indicates not all the variables are positive -- both Education and Social Assistance are negatively related to development. A second observation, and one which incorporates the two negative correlations, considers the minimum acceptable standards for correlation relevancy. Only two of the eight
variables, Other Social Programs, and Work and Social Security, go beyond the minimum, whereas the other six fall short. This is in contrast to the democracy-expenditure correlations, where five variable relationships are accepted as relevant.

Inspection of all the variables indicates the magnitudinal differences between the two indexes. In one instance only, Health, does a variable relate more positively to development than to democracy. In the remaining seven cases the variables are lower in magnitude, suggesting they do relate more to the democracy than to the development index. This drop is most noticeable for the four welfare variables, again supporting the previous conclusion that differences between democracies and non-democracies are best shown by welfare allocation patterns.

When the partial correlations are analyzed, the effects of democracy upon the development-expenditure relationships are shown. In only two cases do the correlations rise when democracy rankings are eliminated — Education and Health — the same two variables which were negatively correlated with the democracy index. However, neither values rise to a level of acceptable relevancy. In five remaining cases the partial magnitudes drop, while Water and Development does not exhibit change. Again, the drop is most noticeable for the welfare variables,
particularly 4, 5 and 7. One welfare expenditure, Social Assistance, exhibits a definite negative relationship to development when democracy differences are eliminated.

Table 9 gives supplemental evidence to the total correlations. When the countries are dichotomized by the criterion High GNP/capita—Low GNP/capita, the low GNP/capita countries have higher group means on two variables — Education and Social Assistance — the same two which have negative total correlations. With the exception of Health, the remaining variables show higher means for the high GNP/capita countries, supplementing the positive correlations obtained. Earlier comments made regarding the individual ranges of the countries in the different groups for each variable are also valid. Similar to the "Democratic" group, the High GNP/capita group is more likely to contain countries which allocate the highest percentage of their budgets to a given social program. Conversely, they are less likely to allocate the least percentage amount to any program.

In conclusion, a relationship between democracy and the percentage-based expenditure variables does exist, although the statistical standards necessary to delineate this relationship have been lowered more than they would normally have been in a more rigorous analysis. The data suggests allocations for Health and Education cannot be
Table 9. Means and Ranges
GNP/Capita: Expenditure Variables as Percent of National Budgets

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>X_h</th>
<th>X_l</th>
<th>X_h-X_l</th>
<th>Percent</th>
<th>R_h</th>
<th>High</th>
<th>Low</th>
<th>R_l</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soc. P.</td>
<td>579.4</td>
<td>32.2</td>
<td>24.1</td>
<td>33.0</td>
<td>31.3</td>
<td>1.7</td>
<td>7.2</td>
<td>23.1</td>
<td>46.0</td>
<td>22.9</td>
<td>22.7</td>
<td>44.6</td>
<td>21.9</td>
</tr>
<tr>
<td>Education</td>
<td>300.4</td>
<td>16.7</td>
<td>15.2</td>
<td>16.3</td>
<td>17.1</td>
<td>-0.8</td>
<td>5.5</td>
<td>15.2</td>
<td>24.4</td>
<td>9.2</td>
<td>11.8</td>
<td>23.6</td>
<td>11.8</td>
</tr>
<tr>
<td>Health</td>
<td>112.2</td>
<td>6.2</td>
<td>8.6</td>
<td>5.9</td>
<td>6.5</td>
<td>-0.6</td>
<td>6.9</td>
<td>7.9</td>
<td>11.3</td>
<td>3.4</td>
<td>8.6</td>
<td>11.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Other Soc. P.</td>
<td>169.2</td>
<td>9.4</td>
<td>12.1</td>
<td>10.9</td>
<td>7.9</td>
<td>3.1</td>
<td>25.6</td>
<td>8.0</td>
<td>15.4</td>
<td>7.4</td>
<td>9.4</td>
<td>12.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Work/S.S.</td>
<td>101.1</td>
<td>5.6</td>
<td>10.0</td>
<td>6.8</td>
<td>4.4</td>
<td>2.3</td>
<td>23.3</td>
<td>8.3</td>
<td>11.0</td>
<td>2.7</td>
<td>5.4</td>
<td>6.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Soc. Ass't.</td>
<td>22.6</td>
<td>1.4</td>
<td>3.1</td>
<td>1.1</td>
<td>1.8</td>
<td>-0.7</td>
<td>21.6</td>
<td>3.1</td>
<td>3.3</td>
<td>0.2</td>
<td>3.0</td>
<td>3.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Housing</td>
<td>2.6</td>
<td>1.4</td>
<td>0.5</td>
<td>0.9</td>
<td>34.6</td>
<td>2.5</td>
<td></td>
<td></td>
<td>2.5</td>
<td>2.6</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>28.6</td>
<td>1.6</td>
<td>4.0</td>
<td>2.0</td>
<td>1.2</td>
<td>0.8</td>
<td>20.6</td>
<td>3.2</td>
<td>3.6</td>
<td>0.4</td>
<td>4.0</td>
<td>4.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Key:  
T=Total budgetary percentages for all countries  
X=Average budgetary percentages for all countries  
R=Total range for all countries  
X_h=Mean percentage for most-democratic  
X_l=Mean percentage for least-democratic  
X_h-X_l=Mean difference between groups  
Percent=X_h-X_l/R or mean difference between groups relative to the total range for all countries  
R_h=Range for most-democratic half-group; highs and lows  
R_l=Range for least-democratic half-group; highs and lows
meaningfully related to either democracy or development — that if a pattern exists, it is in relation to other criteria. Second, those variables which are considered relevant are those considering welfare aspects — Work and Social Security, Housing, Water and Development, and Social Assistance, in that order. Third, the variables are more positively associated with the democracy than with the development index, conclusions obtained from both the correlations and the range and mean analyses.

Hypothesis 1 - $/Capita Expenditure Variables

This portion of the first hypothesis examines a second way the expenditure variables can be expressed — by dollars per inhabitant. As before, a lenient standard is applied to the data to determine criteria of relevancy — the correlations must be at least 0.3 and significant at the 0.2 level. In addition to the eight variables used previously, a ninth, $/capita of the National Budget, is included in the analysis. Its purpose is to examine the over-all relationship between democracy, economic development and budgetary outlays. An interpretation of these nine variables is given below.

$/Capita of the National Budget – Democracy and Development

The first set of correlations [Table 6] considers whether the democracies tend to spend more per inhabitant for
their total budgets, and second, whether differences in economic development affect expenditures. If budgetary differences are evident, then the argument the democracies are better equipped to afford higher social expenditures is strengthened. The obtained correlation (Variable 10), .702, is positive and significant at .01, thereby substantiating the argument.70

When economic development differences are eliminated by the partial correlation, the resulting relationship is still positive but falls short of the minimum standard set for relevancy. This would suggest the total dollar amounts of the national budget spent per capita are heavily affected by the levels of economic development of the different countries. For this variable, then, democracy is linked to development; democracies can spend more because they are more developed.

This observation is strengthened by reference to the GNP/capita-$/capita of the National Budget correlations. The total correlation, .832, is higher than the total correlation between democracy and the variable. Moreover, when democracy

70 It was noted in Table 4 that the correlation between general government current expenditure as a percentage of GNP and GNP/capita is positive (.442) and significant at 0.1. This would suggest the relationship between democracy and $/capita of the National Budget is also positive, since the correlation between democracy and GNP/capita is significantly positive (.772).
differences are eliminated, the partial drops to .65, which is still significant at .01. These data, therefore, suggest that total governmental budgets per capita are more related to development than to the democracy index per se, and second, that the democracies, since they are at higher developmental levels, are better able to afford higher outlays for social programs contained within the budgets. 71

Democracy Index

Referral to the eight expenditure variables (10-17) indicates all are positively related to the democracy index. Additionally, all are significant at .01, except for Water and Development, which is significant at 0.1. These high values are a contrast to the lower correlations obtained by relating the democracy index to these variables expressed as percentages of the national budgets.

Scatterplots made of these relationships, however, suggest the high correlations may be misleading. In several of them, the correlations are affected by countries at the extremes. That is, a few "highly democratic" and a few

---

71 A comparison of the partials is also interesting. When democracy is compared to the budgetary variable, the partial goes from .702 to .168, a drop of .534, and one which makes it "not relevant" to democracy. This is in contrast to the development-budgetary partial, which goes from .832 to .65, a drop of .182. From this criterion, a possible (and logical) conclusion is that while developed countries can afford higher per capita monies for social programs independent of democracy, democracies cannot unless they are developed.
"highly non-democratic" countries conform most to the hypothesized relationship. Those in the middle of the spectrum do not exhibit a pattern which would tend to substantiate the hypothesis. Three variables which most visually demonstrate this difficulty are: Other Social Programs, Health, and Water and Development. The acceptance of these high values, therefore, must be done so with caution, since the outliers distort the correlations obtained.

When the economic development differences among the countries are eliminated, the remaining partials all show a decreased but positive value, indicating that levels of development are important in determining different per capita social expenditures. Two of them, Health and Water and Development, drop below the minimum acceptable standard and are no longer considered relevant to democracy independent of development. This drop for these two variables would support the observations made concerning their scatterplots, since it was noted their high correlations were largely due to values at the extremes. By eliminating these extreme points through the mitigation of economic differences, the correlations drop to a non-acceptance level.

Effects of outliers upon correlation coefficients are discussed by Blalock, op. cit., p. 290. For the six separate per capita expenditure variables, Pearson product-moment correlations were also conducted, and all were significant at .05, suggesting the differences between the rank-order and Pearson methods did not solely account for the high correlations.
For the remaining variables, two are significant at .05 (Other Social Programs, Work and Social Security), three at .1 (Education, Social Assistance, and Housing), and one is at .15 (Social Programs). That they are suggests their relationships to democracy is more than one only because the democracies are in a better position to afford higher expenditures per capita. That is, criteria other than developmental ones account for the different governments allocating monies to social programs.

An examination of the means and ranges for the "democratic" and "non-democratic" groups substantiates the positive correlations for the per capita expenditure variables [Table 10]. In all instances the mean of the democratic group is higher than its non-democratic counterpart. Secondly, in all instances the democratic group has the highest "high" value for any variable, while the non-democratic group has the lowest "low" value. Thus, while overlaps do exist and some democracies go below certain non-democracies on different variable criteria, the extreme values, highs and lows, are held by democracies and non-democracies, respectively. These data also support an earlier observation made regarding the scatterplots — that the extreme end points of the democracy/non-democracy continuum tend to uphold the hypothesis.

A tentative conclusion regarding these variables, therefore, is that per capita expenditures tend to relate to
Table 10. Means and Ranges
Democracy: $/Capita for Expenditure Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>Xd</th>
<th>Xn</th>
<th>Xd-Xn</th>
<th>Percent</th>
<th>Rd</th>
<th>High</th>
<th>Low</th>
<th>Rh</th>
<th>Rn</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natl. Budget</td>
<td>847.9</td>
<td>47.1</td>
<td>160.4</td>
<td>70.8</td>
<td>23.4</td>
<td>47.5</td>
<td>29.0</td>
<td>141.1</td>
<td>167.2</td>
<td>26.1</td>
<td>35.8</td>
<td>42.6</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>Soc. P.</td>
<td>271.5</td>
<td>15.1</td>
<td>39.9</td>
<td>23.0</td>
<td>7.1</td>
<td>15.9</td>
<td>40.0</td>
<td>34.4</td>
<td>42.0</td>
<td>6.6</td>
<td>7.2</td>
<td>9.3</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>208.7</td>
<td>11.6</td>
<td>30.2</td>
<td>16.4</td>
<td>5.7</td>
<td>10.7</td>
<td>35.4</td>
<td>25.3</td>
<td>31.0</td>
<td>5.7</td>
<td>28.3</td>
<td>29.1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>54.7</td>
<td>3.0</td>
<td>11.4</td>
<td>4.5</td>
<td>1.6</td>
<td>3.0</td>
<td>25.9</td>
<td>10.7</td>
<td>11.9</td>
<td>1.1</td>
<td>2.3</td>
<td>2.7</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Other Soc. P.</td>
<td>85.5</td>
<td>4.8</td>
<td>13.8</td>
<td>7.8</td>
<td>1.7</td>
<td>6.1</td>
<td>44.4</td>
<td>12.6</td>
<td>14.2</td>
<td>1.6</td>
<td>3.2</td>
<td>3.6</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Work/S.S.</td>
<td>52.0</td>
<td>2.9</td>
<td>10.0</td>
<td>4.9</td>
<td>0.9</td>
<td>3.9</td>
<td>39.4</td>
<td>9.0</td>
<td>10.0</td>
<td>1.1</td>
<td>1.6</td>
<td>1.3</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Soc. Ass't.</td>
<td>9.8</td>
<td>0.6</td>
<td>2.0</td>
<td>0.8</td>
<td>0.3</td>
<td>0.6</td>
<td>27.8</td>
<td>2.0</td>
<td>2.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.7</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>8.9</td>
<td>0.5</td>
<td>2.4</td>
<td>0.8</td>
<td>0.2</td>
<td>0.6</td>
<td>24.4</td>
<td>2.4</td>
<td>2.4</td>
<td>0.7</td>
<td>0.7</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>14.4</td>
<td>0.8</td>
<td>4.5</td>
<td>1.3</td>
<td>0.3</td>
<td>1.1</td>
<td>24.2</td>
<td>4.2</td>
<td>4.5</td>
<td>0.2</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

Key: T=Total budgetary percentages for all countries
X=Average budgetary percentages for all countries
R=Total range for all countries
Xd=Mean percentage for most-democratic
Xn=Mean percentage for least-democratic
Xd-Xn=Mean difference between groups
Percent=Xd-Xn/R or mean difference between groups relative to the total range for all countries
Rh=Range for most-democratic half-group; highs and lows
Rn=Range for least democratic half group; highs and lows
democracy, even when economic development differences among countries are eliminated. All variables are positive in both total and partial correlations, although two variables, the ones with extreme end points upholding the correlations, drop below the non-acceptance level for the partials. These conclusions are in contrast to the expenditures expressed as percentages of the budget, data which have yielded mixed results. The relationships of these variables to development, and the effects of democracy upon development, are discussed below.

Development Index

This portion of the analysis considers the relationships of the separate per capita expenditure variables to the levels of development in the different countries. Since the correlation between democracy and development is high, one would assume a high correlation among these variables and development. The analysis examines this assumption, and secondly, examines the variables in a comparative context — in relation to the total correlations involving the democracy index.

An examination of Table 5 indicates all variables are positively related to development. Three of them: Education, Social Assistance, and Housing, are significant at .05; the remaining five are significant at .01. None, however, correlate as high as $/capita of the National Budget,
suggesting the ability to afford social programs does not necessarily predetermine the allocation of monies to them. At the minimum, there exists no linear relationship between what a country's total budget is per capita and what proportion of the budget is allocated to any given program.

When the total correlations are compared to the ones between democracy and the variables, two relationships warrant mention. In two cases, Health and Water and Development, the correlations are higher for the development than for the democracy index. These two variables, it was noted earlier, have democracy scatterplots which indicate extreme values distort the value of the correlations. A review of the scatterplots between these variables and the development index, however, suggests these distortions are not as prevalent, thereby giving substance to the higher correlations obtained.

Other than these two exceptions, a comparison of both sets of total correlations does not reveal a readily identifiable pattern. Social Programs and Work and Social

---

73 A correlation was run between $/capita of the National Budget and $capita Social Programs. The resulting value, .855, does indicate a high degree of relationship between a country's ability to afford social programs and its allocation of monies to them. Social Programs, however, is an aggregate variable; the lower correlations between the individual programs and development suggest the ability-allocation relationship is not as strong when these programs are considered separately.
Security also relate more to development than to democracy, while four others relate more to democracy. A qualitative analysis of these differences is that they are not extreme, that either index relates "equally well" to the variables. This lack of discernible difference (other than the two exceptions noted) between the indexes is no doubt largely due to the high correlation between democracy and development.  

The partials indicate the expenditure-development relationships when democracy differences are eliminated. All the variables show a drop between the total and partial correlations, suggesting the democracy index does have an effect. In five of the eight variables, however (10, 12, 13, 14, 17), the resulting partials retain correlations at the .05 level, indicating that democracy differences do not alter development-expenditure relationships to the degree they are no longer considered relevant. This is particularly important to Social Programs, which retains significance at .01.  

---

74 A review of the development scatterplots in comparison to the democracy scatterplots underlie this statement.

75 The partial for the democracy-Social Programs relationship is .304, significant at .05. Since both the total and partial correlations are higher for the development than for the democracy index, a conclusion is that this composite expenditure variable is more related to development than to democracy. This conclusion, however, does not hold for the individual social programs.
Two variables whose partials are significant warrant mention. Both Health and Water and Development retain their relevancy to development when democracy differences are eliminated. This is in contrast to the democracy-expenditure correlations, where the partials below the accepted minimum when developmental differences are eliminated. This contrast again suggests that the effects of democracy upon these variables are not as great as developmental effects upon them.

In three instances the partials drop below the minimum acceptance level: Education, Social Assistance, and Housing. This is in contrast to their relationships to democracy, where the partials retain significance at 0.1. A conclusion, therefore, is that the differences in democracy scores are important to the per capita expenditure of monies to these programs, more so than developmental differences.

Finally, a review of the means and ranges for the High GNP/capita and the Low GNP/capita groups substantiates the positive correlations obtained [Table 11]. In all instances the highest group means are within the High GNP/capita countries. Similarly, a highly developed country always exhibits the highest extreme value for any variable, while a country in the low development category always exhibits the lowest extreme. These differences do suggest
Table 11. Means and Ranges

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>Xh</th>
<th>Xl</th>
<th>Xh-Xl</th>
<th>Percent</th>
<th>Rd</th>
<th>High</th>
<th>Low</th>
<th>Rn</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natl. Budget</td>
<td>847.9</td>
<td>47.1</td>
<td>160.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. Prog.</td>
<td>271.5</td>
<td>15.1</td>
<td>39.9</td>
<td>22.2</td>
<td>8.0</td>
<td>14.2</td>
<td>35.6</td>
<td>34.4</td>
<td>12.6</td>
<td>12.6</td>
<td>42.0</td>
<td>7.2</td>
<td>9.3</td>
</tr>
<tr>
<td>Education</td>
<td>208.7</td>
<td>11.6</td>
<td>30.2</td>
<td>16.0</td>
<td>6.1</td>
<td>9.9</td>
<td>32.9</td>
<td>25.3</td>
<td>31.0</td>
<td>5.7</td>
<td>28.3</td>
<td>29.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Health</td>
<td>54.7</td>
<td>3.0</td>
<td>11.4</td>
<td>4.5</td>
<td>1.6</td>
<td>2.9</td>
<td>25.6</td>
<td>10.7</td>
<td>11.9</td>
<td>2.3</td>
<td>1.1</td>
<td>2.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. P.</td>
<td>85.5</td>
<td>4.8</td>
<td>13.8</td>
<td>7.4</td>
<td>2.1</td>
<td>5.3</td>
<td>67.2</td>
<td>12.6</td>
<td>14.2</td>
<td>3.2</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work/S.S.</td>
<td>52.0</td>
<td>2.9</td>
<td>10.0</td>
<td>4.6</td>
<td>1.2</td>
<td>3.3</td>
<td>33.2</td>
<td>9.0</td>
<td>10.1</td>
<td>1.6</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. Ass't.</td>
<td>9.8</td>
<td>0.6</td>
<td>2.0</td>
<td>0.7</td>
<td>0.5</td>
<td>0.3</td>
<td>12.9</td>
<td>2.0</td>
<td>2.1</td>
<td>0.7</td>
<td>0.7</td>
<td>0.1</td>
<td>0.04</td>
</tr>
<tr>
<td>Housing</td>
<td>8.9</td>
<td>0.5</td>
<td>2.4</td>
<td>0.8</td>
<td>0.3</td>
<td>0.5</td>
<td>12.8</td>
<td>2.4</td>
<td>2.4</td>
<td>0.7</td>
<td>0.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Water/Dev.</td>
<td>14.4</td>
<td>0.8</td>
<td>4.5</td>
<td>1.4</td>
<td>0.2</td>
<td>1.1</td>
<td>25.6</td>
<td>4.2</td>
<td>4.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Key: T=Total budgetary percentages for all countries
X=Average budgetary percentages for all countries
R=Total range for all countries
Xh=Mean percentage for most-democratic half-group
Xl=Mean percentage for least-democratic half-group
Xh-Xl=Mean difference between half-groups
Percent=Xh-Xl/R or mean difference between half-groups relative to the total range for all countries
Rd=Range for most-democratic half-group; highs and lows
Rn=Range for least-democratic half-group; highs and lows
variations in per capita expenditures exist among countries at different developmental levels.

An analysis of the per capita expenditure variables, therefore, has produced several conclusions. One is that the ability to afford higher social expenditures from a total budget is related to development, but development by itself cannot account for the differences among countries — democracy differences, in other words, affect the expenditures. A second concerns the uneven effects of the democracy index upon the variables. It influences Education, Social Assistance, and Housing the most, and Health and Water and Development the least, the latter two whose scatterplots suggest a stronger relationship to the development index. A third conclusion is that extreme values tend to bias the statistics. Middle range values of the distribution often appear random, while the hypothesis tends to be confirmed by values at the extremes. Although this condition is most pronounced for Health, Water and Development, and Other Social Programs, it is present in other scatterplots.

Hypothesis 2 - Revenue Variables

This section analyzes the second hypothesis offered in this thesis: that the democracy index is positively correlated with the manner in which governments obtain revenues. Reference to Table 7 indicates all three variables are positively related to the democracy index, but only Direct
Taxes meets the minimum requirements, having a .05 significance level. The hypothesis is, therefore, substantiated for the composite category but not for its separate components.  

When developmental differences are eliminated, the partial for Direct Taxes is still positively related to the index and significant at .10. This suggests more than the higher developmental levels of the democracies account for their obtaining proportionately higher revenues by direct taxation. Although developmental differences do have an effect, as evidenced by the drop from the total to the partial correlation, political criteria also influence the relationship. This drop also appears for the sub-category, Household Taxes. However, the converse appears true for the remaining sub-category. Corporation Taxes rise when developmental differences are eliminated, suggesting these differences have a constraining influence on the variable's relationship to democracy.

An examination of the means and ranges for these variables provides supplementary information [Table 12]. All three show a higher mean for the democratic group, substantiating the positive correlations obtained. Secondly,  

---

Examination of the scatterplots for Corporation Taxes and Household Taxes suggest even the low positive correlations may be misleading. Both are affected by outliers which uphold the hypothesis; when removed, the remaining values appear random. This is not so for the Direct Taxes scatterplot.
Table 12. Means and Ranges

Democracy: Revenue Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>Xd</th>
<th>Xn</th>
<th>Xd-Xn</th>
<th>Percent</th>
<th>Rd</th>
<th>High</th>
<th>Low</th>
<th>Rn</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Taxes</td>
<td>450.4</td>
<td>32.2</td>
<td>40.8</td>
<td>39.8</td>
<td>24.5</td>
<td>15.3</td>
<td>38.4</td>
<td>20.3</td>
<td>55.2</td>
<td>19.9</td>
<td>34.3</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>Corp. Taxes</td>
<td>171.5</td>
<td>13.2</td>
<td>30.8</td>
<td>16.2</td>
<td>9.6</td>
<td>6.6</td>
<td>21.4</td>
<td>30.8</td>
<td>37.4</td>
<td>2.6</td>
<td>7.4</td>
<td>13.5</td>
<td></td>
</tr>
<tr>
<td>House Taxes</td>
<td>253.0</td>
<td>19.4</td>
<td>46.8</td>
<td>23.5</td>
<td>14.8</td>
<td>8.7</td>
<td>18.6</td>
<td>46.8</td>
<td>51.0</td>
<td>4.2</td>
<td>14.0</td>
<td>18.7</td>
<td></td>
</tr>
</tbody>
</table>

GNP/Capita: Revenue Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>X</th>
<th>R</th>
<th>Xd</th>
<th>Xn</th>
<th>Xd-Xn</th>
<th>Percent</th>
<th>Rd</th>
<th>High</th>
<th>Low</th>
<th>Rn</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Taxes</td>
<td>450.4</td>
<td>32.2</td>
<td>40.8</td>
<td>37.1</td>
<td>27.2</td>
<td>9.9</td>
<td>24.3</td>
<td>20.3</td>
<td>55.2</td>
<td>19.9</td>
<td>34.3</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>Corp. Taxes</td>
<td>171.5</td>
<td>13.2</td>
<td>30.8</td>
<td>13.4</td>
<td>12.9</td>
<td>0.5</td>
<td>1.6</td>
<td>30.8</td>
<td>33.4</td>
<td>2.6</td>
<td>7.4</td>
<td>13.5</td>
<td></td>
</tr>
<tr>
<td>House Taxes</td>
<td>253.0</td>
<td>19.4</td>
<td>46.8</td>
<td>23.6</td>
<td>14.6</td>
<td>9.0</td>
<td>19.3</td>
<td>46.8</td>
<td>51.0</td>
<td>4.2</td>
<td>14.0</td>
<td>18.7</td>
<td></td>
</tr>
</tbody>
</table>

Key: T=Total budgetary percentages for all countries
X=Average budgetary percentages for all countries
R=Total range for all countries
Xd=Mean percentage for most-democratic half-group
Xn=Mean percentage for least-democratic half-group
Xd-Xn=Mean difference between half-groups
Percent=Xd-Xn/R or mean difference between half-groups relative to the total range for all countries
Rd=Range for most-democratic half-group; highs and lows
Rn=Range for least-democratic group; highs and lows
a democratic country in each instance has the greatest percentage of direct, corporation, or household taxes from current revenues. Thirdly, the percentage differences between means relative to the total range ($X_D - X_N / R$) is greatest for Direct Taxes, again stressing the relevancy of the combined index as opposed to either of the two sub-categories. Finally, a deviation is present regarding the minimum range values for Corporation Taxes and Household Taxes. In both instances a democratic country has the lowest value, rather than a non-democratic one.\footnote{For Corporation Taxes, there are three democratic countries below the combined mean for both groups; for Household Taxes there are two.} Except for these two deviations, the group data tend to support the hypothesis.

Additional information is available when the revenue variables are correlated with the development index. Only one total correlation, Direct Taxes, is considered relevant and acceptable at the .15 level. This value, however, is not as high as the one between the variable and democracy, again suggesting that democracies obtain proportionately higher taxes for reasons other than developmental ones. This supposition also applies to the separate sub-categories. Although neither is accepted as relevant, the lower developmental correlation values, as opposed to the higher, positive ones between the sub-categories and the democracy index,
suggest democracy levels affect in some manner the acquisition of corporation and household taxes.

The partials all drop when democracy differences are eliminated, thereby giving credence to the revenue hypothesis. This drop is most pronounced for Direct Taxes, where the partial is no longer accepted as relevant to development. Moreover, the magnitudinal drop (.425) is greater than the magnitudinal drop between total and partial correlations for the Direct Taxes-democracy relationship (.388), which again suggests this variable relates more to democracy than to development. Although partials for Corporation Taxes and Household Taxes do not acquire inverse relevancy, both drops are greater than their respective counterparts for the democracy relationship. Differences in democracy apparently have an effect upon them.

Finally, references to the means and ranges for these variables substantiate correlation findings [Table 12]. All three means are higher for the most developed group, values which support the positive correlations for Direct Taxes and Household Taxes. Moreover, the difference between means for the three variables \((X_H - X_L)\) is in each case lower than the respective counterparts for the democracy-

\[78\] Although the total correlation for Corporation Taxes is negative, the difference between the High GNP/capita and Low GNP/capita means is a low 0.5 percent.
revenue relationships. These lower values substantiate the supposition that the variables are more related to the democracy index than to the development one.
CHAPTER 6

SUMMARY AND CONCLUSIONS

This final chapter brings together the various elements of the thesis. The derivation of the two hypotheses is first summarized, although the mathematical observations regarding their application are omitted. A second section draws some conclusions which relate specifically to the thesis, and more generally have implications for cross-national comparisons that consider development concepts. A final section suggests methods for conducting further research.

Derivation of the Hypotheses

An initial observation from which the hypotheses were derived concerned political and economic interactions. It was noted research involving these interactions could be dichotomized into relationships between political system types and levels of socioeconomic development, and relationships between levels of economic development and governmental revenues and expenditures.

Examining political system types, reference was made to the studies of Seymour Martin Lipset and James Coleman. These studies defined democracy by various criteria and contrasted countries within four socioeconomic categories.
wealth, urbanization, industrialization, and education. Employing their separate definitions, both authors concluded the democracies were more developed. Although problems existed regarding their concepts and methodologies, this thesis assumed as valid their contention that "democracies" could be distinguished from "non-democracies" in terms of socioeconomic criteria.

A second approach related levels of economic development defined by GNP/capita, to governmental revenues and expenditures. The cross-national studies of Simon Kuznets were first noted. He observed that countries within different income ranges had their general governments collect and allocate monies in distinguishable patterns, thereby analytically separating the role and importance of governmental units within the economy at various levels of economic development. These studies were further substantiated by observations of Bruce Russett, who noted regularities between central government revenues and degrees of GNP/capita. From these two authors, therefore, the conclusion was that governmental expenditure and revenue patterns could be distinguished at different GNP/capita levels or ranges.

From the two perspectives viewing economic and political interrelationships, and from the conclusions obtained from these perspectives, two hypotheses were derived. One related governmental distributions to relative degrees
of democracy, and was obtained in the following manner. First, it was assumed that the processes of urbanization and industrialization created interdependencies among peoples and groups within countries, processes which made them look increasingly to government for the solution of basic socio-economic problems. Governmental solutions or attempted solutions, in turn, would be reflected in policy outputs, particularly with reference to welfare policies. Second, it was assumed economic wealth and GNP/capita increased as urbanization and industrialization increased; countries more urbanized and industrialized, therefore, would be better able to afford a welfare orientation of their governments. Third, it was assumed democratic governments were more responsive to their citizens, particularly in areas involving social welfare. From these three assumptions this thesis concluded that democracies, since they were more urbanized, industrialized, wealthy and responsive, would need, could afford, and could achieve a greater social welfare orientation of their governments. Moreover, this orientation would be shown by differences in governmental expenditure patterns for social welfare variables. Although the first and third assumptions were not tested empirically, they were obtained from works which had cross-national applications.

A second hypothesis, which contended governmental revenues could be related to relative levels of democracy, was also derived from the two perspectives. The observation
of Kuznets that governments in higher per capita income countries receive greater proportions of their revenues from direct taxes was assumed valid. This observation was combined with the Lipset-Coleman conclusions that democracies are wealthier than non-democracies, with GNP/capita being one index of economic wealth. Since per capita income and governmental revenues were related, and democracy/non-democracy criteria were related to per capita income, it was hypothesized that democracies could be distinguished from non-democracies by different governmental taxation patterns.

One important point stressed concerned the general nature of the two perspectives. It was noted and emphasized the author's used different countries in their samples, analyzed these countries over different time periods, and employed different methodological and mathematical techniques. Moreover, it was emphasized the patterned relationships which were exhibited tended to hold more for categories of countries rather than for countries considered individually. These complications, and the manner in which countries were originally compared (i.e., by groups), necessitated a more precise conceptualization of the two hypotheses, one which would enable them to be tested by a logical procedure and which would compare countries on an individual basis. The problem, therefore, was to narrow the general observations to a particular application. This was done and the two hypotheses were tested and analyzed.
Implications for Comparative Studies

One conclusion drawn from this study regards the scale of the indices, particularly for the social welfare variables. It was shown that the correlations varied markedly when finer gradations of indices were considered, suggesting that developmental studies need extensive data analyses within major variables as well as among them. A finer gradation of Health, for example, might consider efforts of governments to obtain extra-national aid (i.e., by loans or grants from national or international agencies) as well as their domestic efforts. Although the relationships between these sub-indices and different developmental or political criteria may be more difficult to formulate, their examination may be rewarding and aid further research and hypothesis formation.

Scale should also include the distributions of expenditures, a measurement admittedly neglected in this thesis. It is important to note the politics of distributions -- Lasswell's "who gets what, when, and how." Additionally, these distributions should be considered on a geographic basis. A country may have an adequate education program when gross national indicators are considered, but a regional comparison may indicate considerable disparities. Although more difficult to obtain data on resource distributions, the added efforts by the researcher can be of value.
A second general conclusion concerns the relationships between the different independent and dependent variables. The existence of a correlation does not provide an explanation — rather, it requires one. That the hypotheses are accepted as basically valid does not imply that the dependent variable explanation is given. Moreover, there are no implications regarding causation among variables. An expanded analysis of development should, therefore, further encourage questions concerning why relationships exist, and it must consider causal processes.

A related conclusion, and perhaps the most obvious from this study, is that a great deal more information is needed before meaningful observations or statements can be made regarding political and economic interaction in developing countries. Although it is difficult to measure variance with rank order statistics, it is obvious that only a small fraction of the variation in the dependent variables has been accounted for by the independent variable. To suggest otherwise would assume a greater explanatory ability of the data than that which is warranted. This cautious attitude does not imply studies of this type are not of importance, or do not add more information regarding political economy; it is a recognition that conceptual and methodological horizons must be continually expanded.

A few examples can be given concerning these necessary expanding horizons. An obvious link between political
speculation (what is hypothesized) and political application (policy) is that of the political actors themselves — yet it is in this crucial area that there exists a paucity of information. In order for social science to better comprehend the dimensions and variations of policy, greater efforts must be concentrated on the study of those elites in the decision-making process. We need a better understanding of their perceptions of their environments, of the constraints that limit their actions, and of their values. Although seminal and highly imaginative thrusts have been made in these areas, an enhanced analysis of political elites can no doubt aid the description and explanation of political economy. This is particularly true for those newly emergent, third-world countries, which face a multiplicity of problems, often do not have a political system capable of dealing with them, and are severely limited by economic constraints.

A second expanded area of study is concerned with the policy process itself. More information is needed concerning the nature of the bureaucracy, its relationship to the political elites, and its formulation or interpretation of policy objectives. A study of this type would include aspects of bureaucratic tradition within countries, relative strengths and weaknesses (efficiency, communication links, reliance on professional advice, etc.), and the creation of short or long range plans which involve the public sector. Thus, the nature of the bureaucracy in relation to the policy process may account for differences in policy outputs among countries.
A third area would concentrate on the nature of economic constraints facing the countries. Although environmental parameters as urbanization and industrialization broadly deliniate nations, an intensive study of specific economic factors may enhance comparison. Thus, whether a country is facing a chronic balance of payments problem, whether it has a large export sector with erratic price fluctuations, whether it is embarked on a policy of heavy industrialization, whether it is rapidly changing its taxation policy — all these are factors which have a bearing on its generation of outputs. Since policy objectives are greatly limited by what a country has economically, greater efforts must be made to relate economic constraints to governmental decisions.

Fourth, more information is needed in the study of outputs not directly related to economic factors. This thesis, for example, has concentrated on percentage and per capita expenditures — both being related to economic considerations. Democracies and non-democracies may differ considerably, however, in the quality of services offered, in their quickness of response to demands for social welfare, or in policy areas as consumer protection laws or industrial safety regulations, even if they are at similar developmental levels as suggested by the broad, aggregative socioeconomic indices. A greater emphasis is, therefore, needed on variables qualitative in form and more independent of specific economic considerations.
A final suggestion is concerned with culture — those variables as historical tradition, religion and lineage relationships which may affect political processes and outputs. Although much of social science is concerned with the selection of indicators independent of cultural differences, emphasis must also be stressed on those factors which are common to some societies yet foreign to others as possible determinants of policy. This thesis has studied Latin America, arguing the region has common cultural elements which facilitate comparison. Yet a converse argument can be made, that cultural differences are greater than similarities. An expanded analysis of policy, particularly within a developmental framework, should, therefore, consider cultural criteria and attempt to relate them to political and economic factors.

An over-all conclusion regarding this thesis and its implications for political economy, is that it demonstrated more of what we don't know rather than provided conclusive descriptions or explanations. There are indications social welfare policy is linked to democracy, but the nature and extent of these linkages are largely undetermined. Before stronger conclusions are possible, greater theoretical and methodological efforts must be made, both in the areas discussed above and in related ones. Our accumulation of knowledge has only begun.
Notes for Further Research

It must be emphasized this thesis has been concerned with research on an elemental level. It has derived two hypotheses from general observations in political and economic literature, and it has tested them in a specific situation using aggregate data. Additional research, however, can be conducted in the same or in related areas.

One direction would be to enlarge the sample of countries studied, to define their democracy relationships by criteria relevant to those countries, and to contrast their expenditure-revenue patterns by the same or different economic variables. This approach necessitates a re-conceptualization of democracy; additionally, problems in methodology and data are likely to arise. An advantage to increased sample size though is that the researcher has a greater number of cases to support his observations or conclusions.

A second direction would consider the differences in one country or several countries over time, i.e., a longitudinal analysis. This approach would also incur conceptual and methodological difficulties. It would, however, be more intensive, and would focus on the particular and unique characteristics of individual countries. Observations made from this focus, in turn, might later be generalized for application cross-nationally.
A third direction would be to link longitudinal or cross-national analyses to political economy models and constructs, particularly to those which consider political change. These linkages, in turn, would be valuable in two ways: they would help refute or support observations made in the models, and concepts expressed in the models would enable further hypothesis formulation for political and economic interaction. Thus, the linkages would be reinforcing and cumulative.

Finally, more sophisticated mathematical techniques can be used to organize and manipulate data. This thesis has expressed its data limitations and has provided reasons for its low level of data manipulation. Where better data exist, however, advanced mathematical computations would undoubtedly be of increased value.
LIST OF REFERENCES

Books


**Articles**


