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WINNERS AND LOSERS IN ECONOMIC DEVELOPMENT: ATTRIBUTES WHICH EXPLAIN INTERNATIONAL CONFLICT AND COOPERATION

A Dissertation

Presented in Partial Fulfillment of the Requirements for the

Degree of Doctor of Philosophy

with a

Major in Political Science

in the

College of Graduate Studies

University of Idaho

by

Mary Lou Moore

May 2000

Major Professor: Jack E. Vincent, Ph.D.

AUTHORIZATION TO SUBMIT

DISSERTATION

This dissertation of Mary Lou Moore, submitted for the degree of Doctor of Philosophy (Ph.D.) with a major in Political Science and titled "Winners and Losers in Economic Development: Attributes Which Explain International Conflict and Cooperation," has been reviewed in final form. Permission, as indicated by the signatures and dates given below, is now granted to submit final copies to the College of Graduate Studies for approval.

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ABSTRACT

Attributes that are associated with economic growth, power development and political system is important to understanding the relationship of economic development and international conflict and cooperation. Those associations are testable using Attribute Theory. Economic growth is expected to suppress conflict and promote cooperation. Democratic growth is expected to suppress conflict and promote cooperation. Power growth is expected to foster conflict and suppress cooperation.

Each of 144 nations is scored on demographic and developmental variables in the World Bank data set. Those same 144 nations are also scored on 22 "conflict" and "cooperation" items, derived from the WEIS and Vincent scales. Rank order correlations are calculated among the variables; factor analyses were performed on the data subsets (Attributes and Behaviors) utilizing Spearman's *rho*. A time frame of 1970-1989 was adopted for the period of study. The factor analysis of the 46-variable data matrix yielded a reduced-dimensional structure for the predictor variables, with four or five "factors" accounting for a large proportion of the variance. Correlation results will allow the testing of hypotheses derived from the literature as well as an evaluation of how economic growth occurs. The analysis will also clarify how such development changes affect international conflict and cooperation.

PREFACE

National economic development is frequently a primary concern of national leaders, businessmen, investors, and academics. Development theory has two distinct components: pure economic theory (factors relating to supply and demand, etc.) and infrastructure considerations (factors such as population size, educational attainment, etc.) that may impinge upon and affect economic outcomes. Do infrastructure factors help account for why nations differ so radically in respect to their development? Can critical infrastructure factors be identified in order to assist states so that they can construct effective policies to foster development? Can methodologies be developed to assist in the task of identifying such critical factors? Much of the infrastructure literature appears to ignore these last two questions. That is, infrastructure development literature is rich in theory but weak in testing and in rank ordering (in terms of importance) these critical factors that may be useful in policy development. It is the purpose of this dissertation to develop a methodology to test empirically major infrastructure development propositions for the purpose of identifying and ranking such potentially important critical factors and indicating their policy implications. In addition, a test will be conducted on the effects of rising economic development on the tendency of states to cooperate and/or engage in conflict in the international system.

INTRODUCTION

Some of the most important issues in the world concern the creation and distribution of wealth. We can assume that every state, and nearly every person, wants more "new" wealth; and also, it would seem, nearly every person or state has ideas about how to achieve this new wealth. At the end of the twentieth century, surely development accompanies the creation of much "new wealth," and many of the development requisites seem obvious enough: one must have land, water, raw materials, capital, technology, and a wide spectrum of trained people. And when "new wealth" is attained, there has to be some kind of effective transport to move goods and to favor production processes. One can also quickly posit the necessity of certain attitudes and values in a culture, if "new wealth" is to be achieved in significant amounts. One of the surprises of "aid projects" from developed Western countries, when attempts are made to install them in less-developed areas, is that traditional attitudes can be a very effective barrier to change and to acceptance of change. In the same arena, quality of life variables, like stability, are now widely perceived as necessary, and there are many other factors that could be mentioned, such as the "leadership" quality of the decision-makers and institutions of a culture.

The present study begins from the idea that an empirical validation of various ideas on "wealth creation" can be attempted now, using publicly available materials and existing measurement techniques; furthermore, the empirical correlates of wealth can be taken as indicators of the validity of many hypotheses in "wealth creation." Thus, an

analyst may assert that, say, "education" is a stronger and more salient variable than is "population density." One could "score" each of a sample of countries on these two variables, and then correlate the scores with some criterion (such as GNP/capita), with each other or with other variables. These correlations might confirm one's opinions and directional hypotheses, or they might not. But any analysis would, at some point, have to come to terms with the empirical correlations observed. If *surprising* relations among variables result, then the empirical statistics could be the starting point for more intensive study.

Such an analysis, if successful, might lead to more focused treatment of policy issues. For instance, when "predictor" variables do not "predict," are the results perhaps explainable as statistical artifacts or data limitations? Or, do they demand a different interpretation? Certain recent methodological findings also favor an empirical approach to the prediction and interpretation of complex events. One illustration of this is the now-well-known fact that simple linear equations can often "capture the variance" of a complex judgment process. The results of a complicated human judgment process may, in fact, be reproducible by a linear weighting scheme. The judgment process itself is surely a very involved procedure, but the *outcomes* of the judgment may be best estimated by a linear aggregating scheme; and possibly even more interesting, the statistically derived model of the process may be more *valid* than the original judgments obtained from human experts.

In a capsule, this dissertation looks at three propositions for infrastructure development testing and rank ordering; first, economic growth is expected to suppress conflict and cooperation in the international system. Growth-to-wealth is a major

characteristic of economic development. Lester Thurow enumerates "eight rules" that are well thought-out (but have not been tested). Secondly, power growth is expected to foster conflict and suppress cooperation in the international system. It motivates much of international violence. Third, democratic growth (political and civil rights) is expected to suppress conflict and promote cooperation. Therefore, democratic growth and economic development may lead to world peace, whereas power development may only further enhance violence in the international system.

I have sought some explanation for this phenonoma using factor analysis as a statistical interpretation. The only claim to novelty would lie in the idea of using *three* infrastructure development propositions as a testbed for the hypotheses rather than just one. As far as I know few studies, if any, have treated all three infrastructure development subjects, or tested them, using the methodology developed here.

CHAPTER 1

DEVELOPMENT SUCCESS OR FAILURE

Exploration of economic development success or failure focuses on power, political liberties or system, and quality of life. Jack E. Vincent, Borah Professor, undertook one such recent study. He indicates that:

> Scholars do not agree on what "drives" the international relations system, in the sense of weighting the relative importance of several potentially important factors, such as power, economic development and political system. This was particularly true during the cold war where a set of power configurations and relations occurred which may not be repeated for the foreseeable future. We now have an opportunity to evaluate whether the importance of such factors as power, economic development and political system, were unique to [the] cold war era or may tend to prevail in a similar way in new systemic arrangements, as in the present pattern, or in still other patterns likely to develop in the future. The purpose...is to set the stage for such an evaluation by focusing on the "middle period" of the cold war (the years from 1966 to 1978) where data is rich enough to attempt such an evaluation.

The opportunity to evaluate such factors in this research project is significant.

In a later study, Vincent further lays out the importance of quality of life factors such as democracy and economic development as they relate to peace by stating that:

> Considerable research has been published of late maintaining that democracy may be a key factor relevant to peace. The basic argument is that democracies do not tend to use force against one another and may tend to be more peaceful generally. Much of this literature, however, ignores the question of how to promote democracy, considering its potential significance? That is, how do we get states to become more democratic? Can we expect democracy to emerge when certain conditions are met? Here the literature is confusing if not contradictory. (Vincent and McCluskie, 1997: 77)

Much of Vincent and McCluskie's study is an investigation of the relationship between quality of life and democratic practices or the way the improvement of quality of life can bring about democracy.

Vincent's previous investigation of the 1970s to determine if there is a strong relationship between democracy and quality of life supports his recent research. He states:

> A previous study found a strong association in the 1970s between shifts in quality of life indicators and shifts in democracy (viewed as a dependent variable). However, examination of the1980s, in this study, did not indicate the same strong relationships. Nevertheless, at the end of the decade, the most democratic states stood far above the most undemocratic states on most quality of life indicators. When positive quality of life shifting occurs, it will likely move the world system in a democratic direction. This possible relationship support foreign policy decision-makers concerned about increasing democracy and peace on a worldwide scale. (Ibid.)

The issue of "rising economic development" is a strong assumption in this research project; that is, infrastructural considerations such as education, wealth, and population size are important to the way nations develop economically, how they pursue economic development, and whether or not they are successful. Important to the discussion of rising economic development are a nation's attributes. What are the attributes that seem to be related to economic development?

Some researchers have ignored the impact of "domestic-level variables" as an explanation for economic development (Sterling-Folker, 1997: 1). Economic interdependence influences the way powerful states pursue their strategies (Papayoanou, 1997). Therefore, democracy and economic interdependence should promote economic development (O'Neal and Russett, 1997). Where nations such as the former USSR have

not had a democratic history, there is evidence of vulnerability to democratic peacefulness (Braumoeller, 1997). The research, then, focuses on domestic-level attributes as well as internal violence that might affect rising economic development in nations. For example, low fertility rates, high life expectancy, low birth and death rates are predicted to be linked to economic development. Bowman, a political scientist, argues "...as the wealthiest countries are typically durable democracies and the poorest are typically not democracies, the continued widespread acceptance of the economic development thesis of democracy is understandable..."(1996: 289-308). Political values are necessary for economic development. However, as Forrester, an M.I.T. scientist, argues, "Our greatest challenge now is how to handle the transition from growth to equilibrium..."(Forrester, 1971: 138). Clearly, this transition is an important aspect for the stability of further national development.

BACKGROUND

W.W. Rostow (Chilcote, 1981: 279), an economist-historian who played a vital role as advisor to President Lyndon B. Johnson during the Vietnam War, suggests that nations develop in five stages: there is the "traditional society, preconditions for 'take off' appear, then take off occurs, a drive toward maturity, and the age of high mass consumption takes place." He later added the search for quality of life as the sixth stage to the stages theory of development. A.F.K. Organski, a prominent political scientist, (Chilcote, 1981: 279-80) focuses on the role of government in stage theory and he includes four stages: "primitive national unification, industrialization, national welfare, and abundance." The importance of increasing government efficiency in mobilizing human and material resources toward national ends is his basic theme. In line with this,

Chalmers Johnson, a Japan expert, (1982) argues that some countries, such as Japan, must depend upon governmental intervention to become industrially strong. Government type, democratic or autocratic, may be important in this regard.

Bruce Russett, a political scientist, (Russett, Starr 1995: 476) argues (I paraphrase here) that states are not free, partially free, or free. Political institutions can be democratic, or a mixture of democracy and socialism, or autocratic in structure and function. The relationship of government type to economic development remains an important but seldom-explained research issue. Numerous other assertions will be treated in connection with the predictions of growth or no growth.

ADDITIONAL OBSERVATIONS

A subject of interest in this "information age" is the growth-to-wealth idea that was mentioned at the outset of this study. Lester C. Thurow, an M.I.T. economist, has written a seminal piece on the subject. The effort here is to explore my findings in the light of Thurow's notion of growth-to-wealth, which he lays out using eight rules.

Rule #1 is "no one ever becomes rich by saving money." Thurow argues that the current information age is in fact a "third industrial revolution" which has created vast fortunes; e.g., Bill Gates. The nouveau riche encompasses more billionaires in the U.S. than ever before. The phenomenon happened because of disequilibrium—old industries faltered, new ones emerged—and successful entrepreneurs invested in the new plants and equipment, forsaking the outdated corporations (1999:57).

Rule #2 is "sometimes successful businesses have to cannibalize themselves to save themselves." Disequilibrium brings about circumstances that destroy the old, even if the old is still successful. Those industries and businesses that are successful must be

willing to perform this destruction before the competition does. Thurow states that "...only six of what had been the twenty-five biggest firms in 1960 were still on the list in 1997. Most had been merged into other companies, but two of the twenty-five had gone out of business...." (Ibid., 59)

Rule #3 is important in the light of this dissertation: "Two routes other than radical technological change can lead to high-growth, high-rate-of-return opportunities: sociological disequilibriums and developmental disequilibriums." Certain social and cultural changes produce economic developmental changes. Thurow puts it this way: "What might be called developmental disequilibrium exists whenever countries or entrepreneurs can replicate the activities of the developed world in the underdeveloped world." This occurs commonly in Asian countries that visit the West in order to replicate Western business success and acumen. They hope to transfer that economic and cultural success to their countries. It is the way "sociological opportunities to change human habits" are presented. However, this method does not always build new wealth, instead, it may only reproduce and transfer the current or existing wealth. It often does not signify the creation of new capital. (Ibid., 60)

Rule #4: "Making capitalism work in a deflationary environment is much harder than making it work in an inflationary environment." The new "information age" is one of globalization. It is how production is now carried out—cars, semiconductor chips, and oil—to mention three industries. Clearly, educated workers are needed to keep productivity high, but low demand for workers can lower wages, and reduce the work force. The problem is the same in the United Kingdom, Germany, France, the United States and Japan. Global competition keeps prices low (Ibid.).

Rule #5: "There are no institutional substitutes for individual entrepreneurial change agents." Thurow argues, "Capitalism is a process of creative destruction. The new destroys the old." This process keeps economies growing. However, it is when societies are unable or unwilling to allow entrepreneurs to develop that difficulties in social systems and economies occur. Social systems, usually democratic ones, prefer ideas, new thinking, and innovation. They can suppress them as well. History provides numerous examples (Ibid., 62).

Rule #6: "No society that values order above all else will be creative; but without some degree of order creativity disappears." Thurow cites China as an example of this phenomenon. In the fifteenth century, the Chinese were highly productive, embracing change, and technology. World exploration, agricultural knowledge, and mathematics put them ahead of European thinkers. Instead of continuing on that path, the Chinese rejected and abandoned their intellectual contributions because new ideas seemed threatening to society. Thurow looks at Russian history as a counterpoint to the Chinese example. Music, science, chemistry, literature, and mathematics all flourished despite chaotic social conditions. In this instance, chaos was Russia's creative problem, which did not allow it to grow further. The outcome of both examples is that the advancement of knowledge in society needs the balance of both order and chaos.

Rule #7: "A successful knowledge-based economy requires large public investments in education, infrastructure, and research and development." Thurow states that, "The new economic game is simultaneously a team game and an individual sport. Without the support of the team the individual fails. Without individual initiative the team fails. Both are necessary." Society, such as in the U.S., profits from successful

research and development. Thurow calls it "social rates of return on R&D spending...[which] is about 66 percent compared to 24 percent of financial return on R&D spending." The discussion is about private sector versus government R&D, which is important—where one produces breakthroughs (the private corporation), the other (government) can support long-term development, as in biotechnology. (Ibid., 64)

Rule #8: "The biggest unknown for the individual in a knowledge-based economy is how to have a career in a system where there are no careers." Although advanced degrees and education are highly touted as pathways to careers, the "lack of career opportunities is dramatically visible in earnings data...." The problem, the way Thurow sees it, is that "There are lots of jobs and unemployment is low, but opportunities to acquire skills and the higher wages that go with them don't exist...." (Ibid., 66) Thurow's issues of growth-to-wealth are major ones for furthering the world's economic development. Testing those assumptions is important as well.

COMPREHENSIVE METHODOLOGY MODEL

Factor analyses were performed on data subsets and rank order correlations were calculated among the 23 attributes, the nine "cooperation" scores and the thirteen "conflict" scores. The resulting factor scores were correlated using the statistician's Spearman's *rho* (a distribution-free statistic). *Rho* correlation results are then used to test hypotheses derived from the literature. Then, a test is conducted to see if the predictors fit the theory by utilizing factor analysis with Kaiser Varimax Rotation. Economic development itself is neutral as a predictor of growth, so a test is conducted on conflict and cooperation for this phenomenon. In the work reported here, correlation of information from data banks and behavior rating systems to national attributes and

behavior types is carried out. The working hypothesis is that such correlations will help illuminate the factors that underlay both attributes and political behavior. It is the purpose of this research project to develop a methodology to empirically test major infrastructure development propositions for the purpose of identifying and ranking such potentially important critical factors and indicating their policy implications. In addition, a test is conducted on the effects of rising economic development on the tendency of states to cooperate and/or engage in conflict in the international system.

DATABASE TO BE USED

Data used in testing are taken from the Martin Peace Institute's archives. Attribute indicator only variables with complete information are used[1] and include population total, urban population percent, fertility, life expectancy, infant mortality, population per physician, passenger cars, urban population total, urban population percent of total, population growth rate annual percent, population growth rate *urban* annual percent, population density per square kilometer, crude birth rate, crude death rate, arms exports in millions, armed forces in thousands, armed forces per 1000 of population, arms imports in millions, civil rights, military expenditures in millions, political rights, and GNP (size). National attributes are represented by D_V1 to D_V23 with shifts shown as DIFF. Cooperation indicators include: surrender, praise, promise, express regret, extend economic aid, make agreements, ask for information, offer proposals, and the

[1]Developed by Jack E. Vincent, Borah Professor of Political Science, for the Martin Peace Institute at the University of Idaho.

Vincent Scale of Cooperation.[2] National cooperation behaviors are represented by D_COP1 to D_COP9 with shifts shown as DIFF.

Conflict indicators include: reject, accuse, protest, deny, demand, warn, threaten, hold demonstrations, reduce diplomatic actions, expel from country, and seize possessions, use force and the Vincent Scale of Conflict.[3] National conflict behaviors are represented by D_CON1 to D_CON13 with shifts shown as DIFF.

The years considered are 1970 to 1989, both across time (changes may or may not be significant across time) and within this time frame, in five-year segments.

POWER89 [This is a combination index created by adding the z-scores of number of nuclear weapons, D_V2 (population), D_V17 (armed forces in thousands), D_V18 (armed forces per 1000 population), D_V21 (military expenditures in millions) and D_V23 (GNP).] (Note: D_ indicates the total in the 1970-89 time frame.)

Table 1 describes the predictions of the linkages for growth or no growth. Each prediction is based on previous research (indicated by ***), an assumption made in the literature (**), or an assumption made by the researcher (*). Naturally, all H's and L's in the Table would reverse for the predictors relating to below average increase in GNP/capita.[4] They provide the key attributes that are predicted to be linked to growth or no growth (development or no development). The *rho* will indicate if the theory works. Table 2 predicts the shifts or degrees of change in conflict and cooperation, whether low, moderate or high.[5] Conflict and Cooperation Indexes are provided in Appendix A.

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[2] Developed by Professor Jack E. Vincent for the Martin Peace Institute.

[3] Developed in conjunction with Vincent Scale of Cooperation for the Martin Institute by Dr. Vincent.

[4] GNP/Capita in large populations dampen growth; that is, population is the "dampener." GNP/Capita is not an independent variable; it is the criterion upon which the other variables are predicted or measured. The growth measure *is* independent, however. A – or + indicator for population and GNP/Capita will not

TABLE 1. ATTRIBUTE PREDICTIONS

*Predictions of Linkages to Above Average Increase in GNP Per Capita (V1)

Attributes		Greatest or Least Growth in GNP Per Capita
V4**	Fertility	H

Low fertility rates are predicted to be highly associated with high growth in GNP per capita. I linked low fertility rates with high growth in GNP Per Capita because Forrester's study provides important information. He states that "...with four times as much population in underdeveloped countries, their rising to the economic level of the United States could mean an increase of 10 times in the natural resources and pollution load on the world environment...." (Forrester, 1971:135)

V5** Life Expectancy H

High life expectancy rates are predicted to be highly associated with high growth in GNP per capita. Forrester also states that "...It is certain that resource shortage, pollution, crowding, food failures, or some other equally powerful force will limit population...." The linkage is low life expectancy is caused by material shortages that, if resolved, could prolong lifetimes. Those material shortages are prevalent in less developed countries. (Ibid.)

V6* Infant Mortality H

Investigator's Assumption—Low infant mortality is predicted to be highly associated with high growth in GNP per capita. The link here is the effect of resources, education, and medical care and food availability in developed nations.

V7* Population per Physician H

Investigator's Assumption—Low population rates per physician are predicted to be highly associated with high growth in GNP per capita. The linkage is that less developed nations do not have educational facilities with which to educate high numbers of physicians. Therefore, only a few doctors look after large numbers of people in these nations.

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predict, but only indicate changes; population may be relevant. (The opposite would predict low growth rates in GNP per capita.) It is true that population does define GNP/Capita, but it has an impact beyond the definitional one. I consider passenger cars as an attribute that links society in transportation and infrastructural expressions.

5Development is neutral as a predictor for both economic development and power base. The power base variable includes the traditional militarism factors such as total military manpower, military manpower power per 1000 population, defense expenditures in millions, and included in this study, nuclear weapons, as a major predictor of a nation's power.

V13** Population Density Per Square Kilometer H

High population density per square kilometer is predicted to be associated with high growth in GNP per capita. Why the linkage? The assumption is that highly industrialized nations support high population density per square kilometer. Forrester states that, "...The goal of the city is to expand and raise its quality of life...." (Ibid.,139)

V14* Birth Rate H

Investigator's Assumption—Low birth rates are predicted to be highly associated with high growth in GNP per capita. The linkage is that the more children in a family (in less developed states), the greater chance of overall family well being. This is an assumption not found in highly developed states with high GNP/Capita.

V15* Death Rate H

Investigator's Assumption—Low death rates are predicted to be highly associated with high growth in GNP per capita. The linkages are resources, education, medical and technical advances, and food availability in highly developed states.

V16*** Arms Exports in Millions H

High arms exports in millions are predicted to be highly associated with high growth in GNP per capita. The linkage is that highly industrialized states' prosper economically and become more secure by exporting arms to other states. The link is not for fomenting war. Kinsella argues, "...The combined flow of the US and Soviet arms to the Middle East had no significant impact on regional conflict in the aggregate. But when individual state behavior is examined, distinct patterns are apparent. American arms transfers to Israel exercised a restraining influence on both Israel and its Arab rivals, whereas Soviet transfers to Egypt and Syria had the opposite effect." (P. 323). "Our results appear to be nearly consistent with the reformed image rather than the orthodox image of the cold war. Superpower arms transfers to Israel, Egypt, and Syria, taken as a whole, are not consistently related to the initiation of overt military intervention among these parties." (P. 326) (Kinsella, 1995: 306-329)

V17*** Armed Forces in Thousands H

High armed forces in thousands are predicted to be highly associated with high growth in GNP per capita. I link this phenomenon with the stable democracy model. Hammarstrom says, "...Previous studies have shown that the diffusion of interstate military conflict is a rare phenomenon which seems to be confined to relations among contiguous countries within a given region. The specific processes behind this general pattern, however, are still not well understood...." (Hammarstrom, 1994: 263-280)

V18*** Armed Forces per 1000 Population H

Low armed forces per 1000 population are predicted to be highly associated with high growth in GNP per capita. Here the linkage is that modern democracies are less war prone. Professor Skauge shows that, "...The study of civil-military relations has traditionally focused on unstable societies subject to frequent interventions from the armed forces, or on societies in situations of war or war-readiness...." (Skauge, 1994: 189-203)

V19** Arms Imports in Millions H

Low arms imports in millions are predicted to be highly associated with high growth in GNP per capita. The linkage compares highly industrialized nations and less industrialized nations. Dr. Goose et.al. state, "...Rwanda is only the latest example of what can happen when small arms and light weapons are sold to a country plagued by ethnic, religious, or national strife....Yet the international community continues to ignore trade in those weapons, concentrating instead on the dangers of nuclear arms proliferation." (Goose et. al., 1994: 82-96)

"...Some theories, especially radical ones, of underdevelopment and authoritarianism in the developing world lay much of the blame on poor countries' dependence on and penetration by the rich, industrialized countries.... If these theories are correct, stable peace within the industrialized countries is impossible without such exploitation." (Russett, 1996: 325-348)

V20*** Civil Rights, 1 Equals the Most, 7 Equals the Least H

High civil rights are predicted to be highly associated with high growth in GNP per capita. The linkage compares liberal democracies with more authoritarian states. States that are less repressive have high stability and productivity. White argues, "In general, the results suggest that Catholics and Republicans experience more state repression in Northern Ireland than do Protestants and Loyalists, and this is important. In part this may be explained by the greater disruption caused by Catholics and Republicans." (P. 347). "Our analyses offer important findings concerning state repression in a liberal democracy. Most notably, the state repression in this one 'liberal democracy' appears to follow a pattern similar to that found in research on less democratic states.... Finally, these findings threaten the frequent classification of Great Britain as a non-repressive country." (P. 349). (White, 1995: 330-352)

V21*** Military Expenditures in Millions H

High military expenditures in millions are predicted to be highly associated with high growth in GNP per capita. For example, the linkage between highly industrialized states and weapons development demonstrates this technological advantage.

"A considerable amount of research has been done explaining the growth effect of defense spending in the context of less developed countries (LDCs). The theoretical framework[s] used in such analyses, however, have been derived in large part from neoclassical economic theories, which were in turn based on Western economic experience...." (Park, 1993: 79-93)

"...Most empirical researchers interested in armaments, arms races, their causes and effects focus on measures based on military expenditures.... In communist countries, expenditure-based measures of military burdens tend to understate military effort; in most Third World countries the size of the economy is underestimated and therefore expenditure-based measures tend to be inflated...." (Weede, 1995: 229-232)

"...While a number of studies have reported that higher defense budgets stimulate growth, others have shown that an increase in military burden (the military expenditure to GDP ratio) may hinder economic expansion. Furthermore, a third set of studies concluded that military expenditure helps economic growth in resource-rich but not in resource-constrained countries, or that it neither helps nor hinders economic growth to any significant extent...." (Antonakis, 1997: 89-100)

V22*** Political Rights, 1 Equals the Most, 7 Equals the Least H

High political rights are predicted to be highly associated with high growth in GNP per capita. Researchers such as Pacek, Benoit, and Bowman demonstrate linkages of highly developed political institutions and high economic productivity.

"...Despite disagreement over some specifics of the relationship, the preponderance of evidence clearly suggests that short-term macroeconomic fluctuations affect electoral outcomes.... The political stakes may also be greater in developing countries, in that economic adversity exacerbates existing sociopolitical tensions to a far greater degree than in the West." (Pacek, 1995: 745-759)

"Substantively, the results indicate a difference in rates of war involvement between regimes that are non-free and regimes that are partly free, because most of the expansion into three classifications came from further dividing the non-democracy category. This differential relationship between states at lower levels of freedom suggests interesting possibilities for future research in the foreign policy behavior of partly authoritarian regimes." (Benoit, 1996: 636-657)

"...As the wealthiest countries are typically durable democracies and the poorest are typically not democracies, the continued widespread acceptance of the economic development thesis of democracy is understandable. There is another group of countries in addition to the poor nondemocracies and the rich democracies, the middle income countries which have experienced tremendous volatility and variance in levels of formal democracy...." (Bowman, 1996: 289-308)

V23*** GNP (Size) H

High GNP/size is predicted to be highly associated with high growth in GNP per capita. The linkage here is countries with large GNPs are usually highly developed states. Economic development is more desirable than war.

"...The theory in question was developed by Professor Akamatsu Kanane (1896-1974), and is known as the 'theory of the flying geese pattern of development,' or *gankoo keitai hattenron* in Japanese. The theory itself is little known outside Japan; somewhat more widespread is its fame, however, which is unnecessarily negative.... The theory was used to legitimize the Japanese Greater East Asian Co-Prosperity Sphere (*Dai Tooa Kyooeiken*); ..." (Korhonen, 1994: 93-108)

"...Prompted by persuasive research findings that democracies are less likely to use war as a tool of statecraft and arguments that war itself is obsolete, academics and policymakers are reevaluating economic incentives as ways to resolve disputes and influence outcomes...."(Crumm, 1995: 313-330)

*For all of the predictions in the above Table, the opposite pattern is predicted to be associated with low or high growth in GNP/capita.

CHAPTER 2

ATTRIBUTE THEORY AND ECONOMIC DEVELOPMENT

Attribute theory is the theoretical basis from which this study is developed. Jack E. Vincent explains attribute theory this way:

> Attribute theory works with two collections of variables, A-Space, referring to attribute variables, and B-Space, referring to behavior variables. It argues that A-space, expressed as factor scores, should account for B-space variables, also expressed as factor scores. Reducing the number of variables through factor analysis is integral to the theory since it is not possible to perform a multiple regression analysis on a variable set where v, the number of variables, exceeds n, the number of subjects. The term monad refers to the subject of study, i.e., individual nations. Thus when individual nations are scored on the factor dimensions of a factor analysis of attribute variables; the scores should account, in correlational terms, for the factor scores generated from an analysis of behavioral variables.... To put it another way, if we know a nation's attribute location in factor score terms, we can predict its behavior (also expressed in terms of factor scores). (1977: 3-4)

In international relations studies, attribute theory imparts a critical and important foundation for developing sound analyses because it illuminates both the attributes and behavior patterns of states.

In his work *Project Theory,* Vincent provides the index factors for Attribute space (A-space) rotated loadings. (Vincent, 1979: 160-164) The percentage of variance explained in these loadings, 31.17% out of 144 variables, shows economic development to be the best predictor of a nation's propensity for conflict and cooperation. Table 2 is provided to indicate the way comparisons in the shifts in economic development and shifts in power base factors are calculated to determine which is more significant for

conflict and cooperation. The Table illustrates the comparisons needed to determine if indeed there are major shifts in the areas of economic development, power base, and democracy that explain changes in conflict and cooperation. Table 2 is relative because partition of the shifts determines what happens when a democratic state versus an authoritarian state increases in economic development, or power base; therefore, the argument is that the impact of economic development will be smaller than power base indicators but may increase nonforceful aspects of conflict in democracies. However, power base factors may indicate *both* conflict and cooperation. In effect, the research and testing cuts across all three dimensions.

TABLE 2. SUBJECT PREDICTIONS[6]

Independent Variable → ↓	Dependent Variable	Conflict Variable	Cooperation Variable	Shift
1. Economic Development		L to M	H	^
2. Power Base*		H	L	^
3. Democracy		L	H	^

Since there are only 22 variables available to cover in this study, the same space in the factor analysis is scanned that has been scanned before using *Project Theory* (1979:160-164). Each predictor is orthogonal; that is, has zero correlation.

Joseph Hewitt and Jonathan Wilkenfeld, both political scientists, (1996: 123) argue that "the presence or absence of democratic norms of conflict resolution will dictate whether or not such crises will be likely to escalate to violence.... We posit that as

[6] *Population, GNP/Capita, military manpower power per 1000 population, total military manpower, total defense expenditures in millions, and now nuclear weapons are included in the power base indicator shown above. The degree of change is indicated by ^ for shifts in conflict or cooperation, either moderate or high.

the prevalence of democracies in crisis increases, the likelihood of escalation of military hostilities decreases, while the likelihood of involvement and effectiveness of international organizations increases...." They argue that there is a "dampening effect of democratic composition on the escalation of violence,..." (Ibid.). Conflict, threat, and use of force often found in industrial nations' actions, such as that of the U.S., might be instructive. It is a matter of "perceiving threats and using force..." (Fordham, 1998: 567). Economic coercion can occur as a response to conflict; e.g., the U.S. and Iraq, and may be significant for economic factors. (Drezner, 1998) "The growing body of literature on international studies suggests that democracy heightens the possibility of less conflict;..."(Remmer, 1998: 25). However, can economic coercion also be linked positively to cooperation?

CHAPTER 3

CAUSAL MODEL

In testing attribute theory, Vincent argues that "...A-space monadic attributes should predict monadic behavior. The term *monadic* refers to the subjects of the study; i.e., individual nations. Thus, when individual nations, such as the United States, are scored on the factor dimension of a factor analysis of attribute variables, such scores, according to attribute theory, should correlate with those representing the behavior of such nations." (1977: 112) Vincent further argues "traditional literature that explains behavior in terms of such factors as differences in economic development, in political systems (e.g., democratic vs. authoritarian)...actually operates (perhaps unknowingly) within this framework..." (Ibid., 464).

Because of the importance of the issue of "rising economic development" in international relations studies, there is a need to measure what that role implies for increasing militarism and power in states. Since the end of World War II, Japan has prospered economically and has enjoyed great status as an economic giant, yet is considered to lack significant military power. Its military expenditures are set by law at just under 1 percent of GNP, which is a large figure based on that nation's wealth (a new variable may have to be created for this factor). Iraq, on the other hand, experienced "rising economic development" over the last 20 years and turned that development into militarism and has engaged in aggression towards several regional neighbors. Can a model of linkages of attributes to development and to behavior help illuminate why such extreme differences in behavioral outcomes should occur? Are there theoretical reasons

to expect such differences in international relations studies beyond attempting to explain issues in terms of the personality of a Saddam Hussein of Iraq, or a Qaddafi of Libya, or a Castro of Cuba?

Most empirical research tends to either relate attributes to attributes or relate attributes to behavior. In this dissertation both are looked at, i.e., the attributes that are associated with economic development have been examined, testing performed, and attempts made to determine the relationship of economic development to international conflict and cooperation. Central to this research project is the claim that economic development, although it increases the "status" of a state in relation to other states, may, in general, enhance cooperation rather than promote conflict (recognizing, however, the possible personality exceptions treated above). R. J. Rummel, a prominent political scientist, posits that economic development is a direct result of freedom: "Freedom is an economic engine of jobs, wages, increased earnings, new technology, and greater human choice." (1996: 62) However, a nation may have to develop economically to enjoy both political and civil rights (Vincent, 1987). For many states, democracy and economic development may go together. The question that arises and is explored here is: why do some nations who develop strong economies remain stable and peaceful while other nations divert their wealth toward power objectives and militaristic postures? What causes economic development? Does economic development affect conflict and cooperation?

LINKAGES AND/OR CAUSAL RELATIONSHIPS

Michael Sullivan's work in *International Relations: Theories and Evidence*, indicates that "...the presence of a statistical correlation between two variables does not

necessarily imply a causal relationship between them...."(1976: 5) This being the case, can a "cause" which links economic development with conflict and cooperation be found by applying correlational techniques?

Jack E. Vincent, in *International Relations, Theory,* states that:

> The notion of cause in the social sciences is a controversial subject. Full treatment is beyond the scope of this book. In the science of international relations, it is usually considered important, however, to distinguish between correlation and cause. The definition of correlation has been given elsewhere and will not be repeated here. An important question in international relations is: how is the concept of correlation distinct from the concept of cause? One possible definition of cause is: ^a = where a refers to a variable that is manipulated, b a variable that is not manipulated, and ^ indicates the degree of change. If a social scientist has control over a situation and observes that whenever he changes a, he gets a corresponding change in b, then, using the above definition, he can say that a causes b. Most international relations' scholars are seldom in a position to have such control over the variables they study. Unfortunately, if such manipulation is done in a laboratory setting, and causes are identified, the applicability of the findings to the international relations system can be challenged on the grounds that the laboratory system is not isomorphic with the real system. Lacking control in the international relations system, the investigator can only assume an isomorphic relationship which is not demonstrated. Also, even in experimental situation, ^a seldom equals ^b, that is, correlations between ^a and ^b are usually less than 1.0. In such situations, terms such as "a influences b," rather than "a causes b," are normally employed, because some ^b is not accounted for by ^a. In spite of these difficulties most international relations scholars feel that it is important to attempt to identify likely causes, even in situations where control is lacking. It should be noted in this connection that examination of simple correlations between variables does not suffice. Consider the variables:

1	1
2	2
-1	-1
-2	-2

If we change the first variable by multiplying it by 3, we get:

3
6
-3
-6

This new changed variable will still correlate 1.0 with:

1
2
-1
-2

Thus, even in a situation where we have a perfect correlation, we do not know whether changes in a are likely to be associated with changes in b. In addition, it is possible to have a zero correlation between two variables and to view one as causal in respect to the other. Consider the variables:

1	1
2	2
-1	1
-2	2

These variables are orthogonal, that is, they have zero correlation. If the first variable is changed to:

+4 and the second variable changes to:	+4
+3	+3
0	+2
-1	+3

Our definition of cause has been met. That is, ^a = +3
+1
+1
+1
and ^b = +3
+1
+1
+1

If such a result was observed every time a was manipulated this

> would be strong evidence that a causes b. That is, we have met our definition of cause, even though the variables are not initially related in correlational terms. At this point, the inquiring student might ask why social scientists deal at all with correlations. The answer is that correlations indicate to us whether we can predict values of one variable from another, and, in addition, of course, when applied to ^ quantities, we impute cause from the observed correlations when a has been manipulated. In this connection, it is very important to understand that in the absence of manipulation, cause cannot be demonstrated. If, empirically, without manipulating a, it is observed that: ^a = ^b, it is possible that when a is manipulated no changes will be observed in b. In such a case, it is usually assumed that a third variable or variables has been causing the empirically observed changes in both a and b. If it is a single variable, when it is found, manipulated changes in that variable will be associated with changes in the first two variables. Unless this variable is manipulated, however, its relationship to the first two variables could be caused by still another variable.
>
> The logic concerning cause can be extended to more than one variable and this is summarized by the expression: ^a + ^b + ^c = ^d, illustrating the three variable case. By this we mean, if a and b and c are manipulated collectively they can account for the changes in d. The relative contributions might be expressed through the parameter weights of .7, .8, .3. In such a case the formulation is saying that some of the variables are more important than others, but none of them, by themselves, are sufficient to account for the changes in d. Again, in the absence of manipulation, it cannot be asserted, simply because the equality is observed, that a, b, and c are causing d, for the same reasons explained above, concerning "other" variables. On the other hand, such observed relationships indicate which variables are likely, or possible, causes of d. Real world experiments then, have to be performed to see if the desired effect is obtained. (1978: 4-7)

Although *proof* of cause is *not* the focus of this dissertation, the significance of *proof* is indeed important to the discussion of the *causes* of economic growth, power development and political and civil rights development.

In this research project, the data is prepared to allow tests—consistent with the thesis—across time as well as within time, by creating change variables, as discussed above (See Table 2). If the changes go in the direction the theories predict, then strongly associated variables may be prime candidates for "manipulation" based on the arguments presented above. For example, if a variable such as "newspaper circulation" is deemed critical to development, then policies to promote that circulation in lesser-developed nations may assist in promoting development. In the absence of manipulation, however, such correlational fits will only be "suggestive of," not "proof of," possible "cause." The analogy here is similar to the numerous government policies based on correlational linkages relating to seat belts, speed limits, intoxication levels, tobacco advertising, etc., where the exact "cause" may be argued but the suggestive correlational linkages are strong enough to allow significant changes in public policy.

FACTOR ANALYSIS

In an effort to facilitate understanding, a factor analysis (Kaiser Varimax Rotation) was performed on the attributes and behavior variables. The rotated factor matrix resulted in fifteen factors for Economic Development, Political Rights Development, and Civil Rights Development. Power Development has sixteen factors. The factor procedure produces dimensions that "optimally" fit the multidimensional space of the correlation matrix under the condition that each factor is orthogonal (or uncorrelated) with every other factor in the analysis. Thus, the raw correlations themselves can be thought of as a swarm of "points" in this space; the Kaiser calculation runs "axes" or dimensional lines through this space, and "rotates" the axes until an

"efficient" axis set is found where the factor loadings (the correlations of the variables with the factor scores) tend to be either large or small in order to facilitate interpretation.

Factors are most easily interpreted when each axis or factor has some high loadings, but the loadings are different between factors. This is accomplished by the Kaiser Varimax rotation. This differential pattern of loadings may permit the identification of a smaller subset of variables unique to each factor. In the present case, for instance, a fifteen- or sixteen-factor structure is now available, rather than the much larger collection of variables. In this connection, all scores from -.49 to .49 are recoded to 0 in order to simplify labeling and interpretation.

The whole idea is to present examples of opposite types, i.e., a state high on Factor 1 tends to be an economic development winner while a state low on this factor tends to be a nonwinner. A state high on Factor 2 tends to be an economic development nonwinner, while a state low on this factor tends to have the opposite characteristics, and so forth throughout, for Power Development, Political Rights Development and Civil Rights Development. Then, the states selected must have scores on the heavy loaders consistent with the model. They should tend to be above or below the "average" of the variables, consistent with the model, on the heaviest loaders. If they locate as predicted, then the research project has turned out well. The Spearman's *rho* taken on the fifteen and sixteen factors for attributes and behaviors is a two-tailed test set at .05. The *rho* will indicate if the theory works, since it is the best test. These indicators will apply for all three tests and analyses. The factor loadings and *rhos* are found in Appendix B, Parts One through Four, as Tables 3, 4, 5 and 6.

Since readers may have difficulty interpreting Tables 3, 4, 5 and 6, an example below is used to illustrate the way this researcher conducted the interpretation:

A. Scores high on factors means high on positive loaders and low on negative loaders.

B. Scores low on factors means low on positive loaders and high on negative loaders.

C. Scores high on Index (such as Economic Growth) indicates high scores reflect high growth.

D. Scores low on Index (such as Economic Growth) indicates low scores reflect low growth.

+*Rho* means A is linked to C and B is linked to D.
-*Rho* means A is linked to D and B is linked to C.

To further facilitate the interpretation of the findings, at the end of each analysis, (i.e., *ECONOMIC DEVELOPMENT ANALYSIS)* a summarization and discussion of specific variables is given. Since there are so many variables in the data set, only salient variables have been selected for discussion treatment.

ECONOMIC DEVELOPMENT ANALYSIS

In summary, specific variables associated with economic development in this study show them to be high GNP per capita, passenger cars and military expenditures. The linkage that emerges is that the economic driver is GNP/capita and the side products are passenger cars, etc., and power, with behavioral variables including high total cooperation and total conflict. To emphasize the character of economic growth one scholar argues, "GNP is a benchmark of growth," and I paraphrase, which is based on an agreed upon goal in an already established capitalist system in a democracy. (Johnson, 1982: 22) Economic growth indicates weak linkages to conflict and cooperation, which

co-vary. Economic development appears to dampen conflict but also appears to dampen cooperation.

A clarification of economic growth is seen on Factor 2 of the Economic Development Index. The *rho* is a highly negative correlate of -.819 . The linkage that surfaces is that the driver is GNP/capita and the side products are passenger cars, etc. Another *rho* significant on this Index is -.181 on Factor 5, which correlates negatively with population indices and military forces. The total R estimate for Economic Development is .84.

POWER DEVELOPMENT ANALYSIS

In summary, the Power Development Index's most salient attribute variables are GNP (Size), military expenditures, high population total and high urban population, forces under arms, fertility, birth rates, civil and political rights and power. The most salient behavioral variables are use of force along with seizing property. Regarding force, economic growth did not link with the factor dimension the force variable loaded heavily upon. Thus, economic growth neither dampens nor fosters the use of force (inconsistent with predictions). Economic growth may be unrelated to force, but it is linked to power development. Some nations defer power to other important national goals; a universal Japanese consensus was possible on one key domestic policy at the end of World War II: unlimited industrial growth. In the case of Iraq, the national goal has been to seek unlimited power. The model developed in this research project deals mainly with the *shifts* in the multivariate propositions of economic, power and democracy factors and not the absolutes. Since *absolute* power has been linked to the use of force (Cerven,

1999), if power shifting states move to the highest levels of power, they may use more force, and economic growth might be viewed as an enabling factor in this regard.

Predictive linkages can be seen in two factors on the Power Development Index. Factor 1 with the positive *rho* correlate of .327 with heavy loadings on passenger cars, military forces and GNP. Factor 5 has a positive *rho* correlate of .381 loading on armed forces and *shifts* in armed forces, seize and use of force. Economic growth, and therefore power development, is the link to use of force. The total R estimate for Power Development is .77.

POLITICAL RIGHTS DEVELOPMENT ANALYSIS

In summary, the Political Rights Development Index's most prominent attributes are GNP (Size), high population total, and forces under arms, arms imports, population density, fertility, infant mortality, birth rates and power. The most salient behavioral attributes are praise, ask for information, accuse, and expel from country. Political system indices indicate only minimal linkages for conflict and cooperation. As political and civil rights go up, conflict and the use of force goes down along with cooperation (inconsistent with predictions). Economic growth is essentially a feature of industrial nations and economic development facilitates power development, which may enhance lesser forms of conflict and cooperation in the international system such as verbal conflict versus actual use of force. Clearly, democratic shifts are a mixed bag. The world's leading democracy, the U.S., is also the chief force user although it uses force against nondemocratic regimes.

Predictive linkages for the Political Rights Development Index is Factor 15, which has a *rho* correlate of .528 loading on *shifts* low in civil rights meaning a shift

away from democracy toward autocracy. As nations grow democratically, they tend to use force less as can be seen in the *shift* for use of force and total conflict; however, it is important to have civil rights in place. Vincent's study suggests that as quality of life increases then increases in peace and freedom follow which differs from Rummel's model that as freedom increases then peace follows (1987: 395). The total R estimate for Political Rights Development is .64

CIVIL RIGHTS DEVELOPMENT ANALYSIS

The salient factors emerging from the Civil Rights Development Index also includes GNP (Size), forces under arms, population totals including urban population, fertility, life expectancy, birth and death rates and power as salient variables. Important behavioral variables are praise, ask for information, seizing property, use of force, deny, and expel from country. Democratic shift cannot predict force shifts because of minimal linkages for conflict and cooperation, but it is linked to selected other conflict and cooperation variables as seen above. There is some linkage to the peacefulness of democracies, (i.e., cooperation with other nations). There is also linkage to conflict and use of force. Although the linkage is very weak, economic growth does appear to dampen conflict (consistent with predictions) but also dampens cooperation (which is inconsistent with predictions).

Predictive linkages in Civil Rights Development can be seen in Factor 15, which has a *rho* correlate of .497 loading on *shifts* low in political rights meaning a shift away from democracy toward autocracy. Nations that grow in political rights tend to use less force, which is the link to the *shift* in use of force. However, political rights need to be a part of a nation's political system. That is, these nations are inclined toward

authoritarianism and not democracy. Again, the Vincent model suggests that as quality of life increases so does both peace and freedom and "management problems at home may lead to conflict abroad" (1987: 402). The total R for Civil Rights Development is .68.

Regarding the multiple R's, the attribute and behavior factors are orthogonal; therefore, the variance explained in the factors are unique, additive and estimates. That is, *rhos* are squared, then summed to get the total rank variance explained. R (for the rank data), then, is equal to the square root of the total rank variance explained.

CHAPTER 4

GROWTH-TO-WEALTH

What is significantly linked to economic growth and what are the ramifications? What variables are associated with economic development? Specific variables associated with economic development in this study show them to be high GNP per capita, passenger cars and military expenditures. The linkage that emerges is that the economic driver is GNP/capita and the side products are passenger cars, etc.

What produces economic development? The expectation is that there is a significant relationship (consistent with the model) between national attributes and national behavior. Therefore, it is necessary to turn to the *rhos*, the correlations, for explanatory support. The Economic Development index designates an R of .84; this is an estimate of multiple R by squaring and adding the significant *rho's*, since the variance explained on each of the significant factors is unique, by mathematical definition, and every factor is orthogonal to every other factor. In general, economic growth occurs for those nations that are already economically developed and tends to increase less for the economically undeveloped states. It appears that economically developed nations are more likely to have the resources, or attributes, to maintain and develop economic growth.

How does economic development compare to power base and political system in respect to the linkage with conflict and cooperation? Does economic growth dampen conflict and foster cooperation? Although the linkage is very weak, economic growth does appear to dampen conflict (consistent with predictions) but also dampens

cooperation (which is inconsistent with predictions). Regarding force, economic growth did not link with the factor dimension the force variable loaded heavily upon. Thus, it neither dampens nor fosters the use of force (inconsistent with predictions). Economic growth may be unrelated to force, but it is linked to power development. Since *absolute* power has been linked to the use of force (Cerven, 1999), if power shifting states move to the highest levels of power, they may use more force, and economic growth might be viewed as an enabling factor in this regard. However, those nations that grew the most in power increased the least in use of force. How is this reconcilable with the above Cerven finding? It is possible that in the initial shifting phase towards power, states are more cautious in respect to force usage. Once they achieve the highest levels of power, however, they may use more force consistent with Cerven's predictions.

For the Power Development index, the R indicator is .77; therefore, economic growth leads to power development, which in turn leads to conflict in the international system while political system indices indicate only minimal measures of predictions for conflict and cooperation. That is, the Political Rights Development R is .64 and the Civil Rights Development R correlate is .68. I could not find any evidence in this study that supports R. J. Rummel's notion that "...were the world to become wholly democratic, then to the best of our knowledge war would be completely eliminated for the human species..." (1996: 1). It may be possible that as political and civil rights go up, conflict and the use of force goes down along with cooperation (again, inconsistent with predictions). The world's leading democracy, the United States, is also the major force user.

Economic growth is essentially a feature of industrial nations, seemingly precluding the full economic development of other states. Economic growth leads to power development, which enhances conflict and violence in the international system. This research expectation is that economic growth suppresses conflict and promotes cooperation. It was also expected that democratic growth would suppress conflict and promote cooperation. The highly developed nations are democracies with high GNP and are the states that have heavy military expenditure and *power*, which may indicate to less developed states that they too must direct their resources to military buildup rather than toward economic goals and better quality of life. Surely, this is a disheartening use of valuable human talent and material resources: a sad outcome of this research project.

With respect to the Cerven (1999) argument that power leads to an increase in conflict in the international system, this research project may support his study. As states grow in power they may tend to use less force in order to conserve their resources, which may be an important development for future studies. The opposite may be true that as states decline they use less force. Great Britain reduced its nuclear arsenal as its status waned in the international system. In essence, *power* drives the international system and as states reach their power peak, the use of force increases.

A major portion of this dissertation was to develop a methodology to empirically test major infrastructure development propositions for the purpose of identifying and ranking such potentially important critical factors as economic growth, power development, and political and civil rights development and indicating their policy implications. In addition, testing was conducted on the effects of rising economic development on the tendency of states to cooperate and/or engage in conflict in the

international system. The testing of the working hypothesis, that correlation of attributes and behavior with economic growth, power development, political rights and civil rights development might help illuminate the factors that underlay both economic growth and political behavior, has been demonstrated. That is, in each case the examples chosen have either high or low scores on economic growth, power development, and political and civil rights development. The examples of nations chosen for each section are either above or below the average in the expected direction on that significant attribute factor dimension, or the cooperation and conflict factor dimension. The implication throughout is that there is a "tendency" to demonstrate the expected attributes and/or behaviors for the heavy loaders on the attribute dimensions. If "missing" has occurred on some heavy loaders, for some of the specific cases chosen, that in no way invalidates the predictive models since this dissertation is dealing with probabilities, not certainties.

From the above analysis, it can be seen that attribute and behavior factors have explanatory power for economic growth, power development, and political and civil rights development. Since each category is orthogonal, and the attribute and behavior factors are orthogonal, there is no variance overlap (or redundancy) in the variance explained in the category types.

THE PARADOX

The research project developed here is based on the notion that while economic development may be neutral, it also produces power, which is *not* neutral but can be the motivation for violence in the international system. A paradoxical effect of economic development, power and democratic enlargement is that one of the three infrastructure development issues has to trump the others in importance and influence. The findings

derived from this research project strongly indicate that power is the top contender or the most important. For example, Vincent argues that "between 1970 and 1989, WEIS records indicate that the U.S. used 57 times as much force as the USSR" (Cerven, Vincent et.al., 1999:2). The United States is highly developed economically, has well-defined, strong civil and political rights in place, and is the most powerful nation in the world today. It uses its power throughout the world in highly militaristic ways by acting as a global policeman; e.g., in Somalia, in the Gulf War, and more recently in Bosnia and Kosovo. It has been argued that the world system requires a controlling nation at the top like the United States to maintain world order and reduce the possibility of violent outbreaks between states. In effect, a unipolar world system is the most effective, which may be the "link" to use of force.

Clearly, the United States is the world's most industrially developed nation, which also exports economic development through the medium of world trade with other nations. The United States is one of the most democratic states in the world and also exports those democratic ideals to other nations via cultural, social and scientific exchanges. These infrastructural factors may be critical for future policy issues and policy implementation—the paradoxical effect of power, economic strength and political system.

It may be important to interject a caveat: in the nineteenth and early twentieth centuries, trade policies between the West and other countries were often facilitated by "gunboat diplomacy." Examples are the British control of Chinese ports by occasional naval threat or blockade. Around 1910, Asia became a recognized and permanent venue for commercial operations of the West. The Shanghai riverfront took on a European look

as banks and trading concerns built western-style offices (nearly all the buildings are still there). Thus, Shanghai's famous row of Western banks and trading houses looks very much like parts of London. Perhaps literally nobody, at that time, could conceive of the reduced circumstances that would befall the British Empire! Indeed, with the growth of Japanese wealth and power, we now have the reverse phenomenon: Japanese industry maintains hundreds of full-time people in Washington. In fact, some observers have noted that the Japanese presence in Washington may be the most remarkable instance in the world of the private interests of one country affecting the official operations of another (developed) country.

Ironically, the research results of this dissertation indicate that national prevalences are indeed significantly correlated to national attributes and national behavior. If there is a causal linkage between the attributes (viewed as the independent variable) and economic growth, power development, political and civil rights development then social, economic, and technological changes could lead to changes on the indicators, such as in the direction of less military expenditure and use of force.

In effect, then, economic growth influences power development. I could find in this study minimal evidence that political system effects power development. That is, states such as China and India now have nuclear weapons. One nation has a democratic political system, the other has an authoritarian system. China tends to export more conflict and is developing economically. Vincent's study argues that political system may *not* be relevant to power growth but "the most democratic states stood far above the most undemocratic states on most quality of life indicators"(1997: 77). However, another

Vincent study (1999) indicates that powerful democratic states tend to export violence toward other states, especially if they are nondemocratic.

As an example: Indonesia has the economic growth potential but is hampered by its patronage political system. Spain is becoming more industrialized, and more democratic. Chile is becoming economically strong, and has developed a democracy with less militarism. India is considered to be a democracy yet focuses on military capability using its valuable material resources to that end rather than economic growth. Surely a misguided effort by India's leaders whose focus on use of force rather than attempting to build a better quality of life for their people has hampered their democracy.

TECHNOLOGY AND THE THIRD INDUSTRIAL REVOLUTION

Thurow sees the matter of economic growth, technology and the third industrial revolution this way; that is, "old national economies are being supplanted by a global economy." Thurow argues that this third industrial revolution is changing old ways of operating and making familiar institutions outdated. What this means is that individual corporations and nations have to change. Thurow argues, "For individuals here are three words of advice: skills, skills, [and] skills. The economic prospects of those without skills are bleak.... In an age when brawn earns little and brains much, this part of the labor force simply has to be better educated...." It is the nation-state that can be a deciding factor in the third industrial revolution. Some countries in the world have not even begun the first industrial revolution. Nevertheless, "nations that are heavy investors in education, infrastructure, and R&D are going to tend to win..." (Thurow, 1999: 69).

Nations that are winners and losers in economic growth, power development, democratic political and civil rights development are defined here statistically and descriptively. Those winners are the nations that provide the basis for winning the economic battle, and remove the barriers to losing the economic struggle. Heretofore, no real suitable statistical tools have been developed that can test the theories that international relations experts have championed. Those theories can now be tested using the method utilized here, which may be an important development for future international relations studies.

AN ANNOTATED BIBLIOGRAPHY

Dunne, Paul. 1995 "Military Spending in Sub Saharan Africa: Some Evidence for 1967-85," *Journal of Peace Research,* Vol *32* (3): 331-343.

Reducing military spending in Third World countries is not straightforward; however, as this will clearly have important economic, political, and social effects, and there is considerable debate over exactly what impact military expenditure has on development, it represents an economic burden or plays a positive role....

Forrester, Jay. 1971 "Counterintuitive Behavior in Social Systems," *Theory and Decision, 2,* December 1971: 109-140.

In many instances it then emerges that the known policies describe a system which actually causes the trouble. In other words, the known and intended practices of the organization are fully sufficient to *create* the difficulty, regardless of what happens in the company or marketplace. In fact, a downward spiral develops in which the presumed solution makes the difficulty worse and thereby causes redoubling of the presumed solution.

Fuller, Graham. 1997 "Persian Gulf Myths," *Foreign Affairs,* Vol *76* (3): 42-52.

'Dual containment,' the strategic heart of U.S. policies toward Iran and Iraq, is unraveling.... Those basic principles require reexamination. Moreover, the continuing risk of terrorism against the large U.S. military presence in the region highlights the looming challenges to regional strategy.

Johnson, Chalmers. 1982 *MITI and the Japanese Miracle.* Stanford: Stanford University Press: 17.

From the enactment of the Foreign Capital Law in 1950 (it remained on the books for the next thirty years), the government was in charge of technology transfers. What it did and how it did it was not a matter of a 'free ride' but of an extremely complex process of public-private interaction

that has come to be known as 'industrial policy.' MITI is the primary government agency charged with the formulation and execution of industrial policy. Thus I come to the final school, in which I place myself, the school that stresses the role of the development states in the economic miracle....

In states that were late to industrialize, the state itself led the industrialization drive, that is, it took on *developmental* functions. These activities, the regulatory orientation and the developmental orientation, produced two different kinds of government-business relationships. The United States is a good example of a state in which the regulatory orientation dominates, whereas Japan is a good example of a state in which the developmental orientation predominates. A regulatory, or market-rational, state concerns itself with the forms and procedures—the rules if you will—of economic competition, but it does not concern itself with substantive matters.... The developmental, or plan-rational, state, by contrast has as its dominant feature precisely the setting of such substantive social and economic goals.

Hobson, J.A. 1965 *Imperialism.* Ann Arbor: The University of Michigan Press: xi, xiii, 81.

...theory of under consumption and over savings, probably the unwobbling pivot central to all this thought.... For Hobson, over savings on the part of capitalists resulted in under consumption by the workers, a wretched distribution of industrial gains, recurrent depressions, and crippling under unemployment.... Hobson was dealing here with the social consequences of capital formation—an area which he regarded throughout his life as central to the larger problem of establishing a just and humane social order.... Hobson sketched out part of the larger argument...that the great industrialists and banking houses fashioned imperialist adventures as a way of providing profitable high-interest-bearing investments for their surplus capital. The idea was taking shape in Hobson's publications that imperialism was not only a tool of particular capitalists but rather that imperialism in the form of military aggrandizement was the mode, par excellence, of capitalist expansion.... What Hobson had done was to define imperialism so that henceforth most users of the term would, willy-nilly, be talking about economic imperialism....

...Everywhere appear excessive powers of production, excessive capital in search of investment. It is admitted by all businessmen that the growth of the powers of production in their country exceeds the growth in consumption, that more goods can be produced than can be sold at a

profit, and that more capital exists than can find remunerative investment. It is this economic condition of affairs that forms the taproot of imperialism.

Lenin, V.I. 1989 *Imperialism. The Highest Form of Capitalism*. New York: International Publishers: 123.

> ...economic quintessence of imperialism is monopoly capitalism. This very fact determines its place in history, for monopoly that grew up on the basis of free competition, and precisely out of free competition, is the transition from the capitalist system to a higher social-economic order.... First, monopoly arose out of the concentration of production at a very advanced stage of development.... Secondly, monopolies have accelerated the capture of the most important sources of raw materials, especially for the coal and iron industries, which are the basic and most highly cartelised industries in capitalist society.... Thirdly, monopoly has sprung from the banks.... Fourthly, monopoly has grown out of colonial policy.... Monopolies, oligarchy, the striving for domination instead of the striving for liberty, the exploitation of an increasing number of small or weak nations by an extremely small group of the richest or most powerful nations—all these have given birth to those distinctive characteristics of imperialism which compel us to define it as parasitic or decaying capitalism. More and more prominently there emerges, as one of the tendencies of imperialism, the creation of the 'bondholding' (rentier) states, the usurer state, in which the bourgeoisie lives out the proceeds of capital exports and by 'clipping coupons'....

Richardson, Harry Ward. 1969 *Regional Differences*. New York: Praeger Publishers: 4.

> Concern with regional policy lagged behind other aspects of government intervention even after many economists had become disillusioned with the market economy.... Only when these problems had become more or less solved, did it become reasonable for policymakers to look at questions of *inter-regional* equity and of how to raise the economy production potential by absorbing resources underutilised in certain areas of the country. Thus, preoccupation with national issues delayed intervention in regional problems and made it certain that, for a time, they received low priority. It is also true, however, that regional problems are less noticeable. Statistical data deficiencies mask many inter-area changes in economic activity, and symptoms of distress may fail to attract much notice until they are very serious....

Snow, Edgar. 1968 *Red Star over China*. New York: Grove Press: 35-59.

The fact that there had been perhaps no greater mystery among nations, no more confused an epic, than the story of Red China. Fighting in the very heart of the most populous nation on earth, the Celestial Reds had for nine years been isolated by a news blockade as effective as a stone fortress. A wall of thousands of enemy troops constantly surrounded them; their territory was more inaccessible than Tibet. No one had voluntarily penetrated that wall and returned to write of his experiences since the first Chinese Soviet was established in southeastern Hunan, in November 1927.

Vincent, Jack E. 1978 "Status and International Relations: Empirical Tests of Galtung's Key Hypothesis," Boca Raton: Out of Florida Atlantic University Press: 7233-7365.

Relative status position, particularly *status disequilibrium*, helps predict the sources and nature of conflict. Since all social systems have a division of labor and must be stratified, each individual, group, or nation must occupy a status position depending upon how ranking occur on various status dimensions.

BIBLIOGRAPHY

Antonakis, Nicholas. 1997 "Military Expenditure and Economic Growth in Greece, 1960-1990," *Journal of Peace Research*, Vol *34* (1) February: 89-100.

Auvinen, Juha. 1997 "Political Conflict in Less-developed Countries," *Journal of Peace Research*, Vol *34* (2) May: 177-196.

Bender, Jonathan et.al. 1997 "The Evolutionary Stability of Cooperation," *American Political Science Review*, Vol *91* (2) June: 290-307.

Bennett, D. Scott et.al. 1996 "The Duration of Interstate Wars, 1816-1985," *American Political Science Review*, Vol *90* (2) June:239-257.

Benoit, Kenneth. 1996, "Democracies Really Are More Pacific(in General)," *Journal of Conflict Resolution*, Vol *40*, (4): 636-657.

Bloomfield, David. 1995 "Towards Complementarity in Conflict Management: Resolution and Settlement in Northern Ireland," *Journal of Peace Research*, Vol *32* (2) May:151-164.

Bowman, Kirk S. 1996 "Taming the Tiger: Militarization and Democracy in Latin America," *Journal of Peace Research*, Vol *33* (3) August: 289-308.

Braumoeller, Bear F. 1997 "Deadly Doves: Liberal Nationalism and the Democratic Peace in the Soviet Successor States," *International Studies Quarterly, 41*: 375-402.

Cerven, James et.al. 1999 "Attributes, Behaviors, and Conflict: A Statistical Analysis of the Use of Force," Martin Institute, University of Idaho.

Chilcote, Ronald W. 1981 *Theories of Comparative Politics*. Boulder: Westview Press.

Crumm, Eileen M. 1995 "The Value of Economic Incentives in International Politics," *Journal of Peace Research*, Vol *32* (3) August: 313-330.

Drezner, Daniel W. 1998 "Conflict Expectations and the Paradox of Economic Coercion," *International Studies Quarterly, 42*: 709-731.

Dunne, Paul. 1995 "Military Spending in Sub Saharan Africa: Some Evidence for 1967-85," *Journal of Peace Research*, Vol *32* (3): 331-343.

Enders, Walter et.al. 1993 "The Effectiveness of Antiterrorism Policies: A Vector Autoregression Intervention Analysis," *American Political Science Review*, Vol *87* (4) December: 829-844.

Fordham, Benjamin. 1998 "The Politics of Threat Perception and the Use of Force: A Political Economy Model of U.S. Uses of Force, 1949-1994," *International Studies Quarterly*, *42*: 567-590.

Forrester, J.W. "Counterintuitive Behavior of Social Systems," in *Theory and Decision*, Vol *2*, December 1971.

Fuller, Graham. 1997 "Persian Gulf Myths," *Foreign Affairs*, Vol *76* (3): 42-52.

Gartner, Scott Sigmund. 1996 "Threat and Repression: The Nonlinear Relationship Between Government and Opposition Violence," *Journal of Peace Research*, Vol *33* (3) August: 273-287.

Goose, Stephen D. et.al. 1994 "Arming Genocide in Rwanda," *Foreign Affairs*, Vol *73* (5) September/October: 82-96.

Hammarstrom, Mats. 1994 "The Diffusion of Military Conflict: Central and Southeast Europe in 1919-20 and 1991-92," *Journal of Peace Research*, Vol *31*(3) August: 263-280.

Hewitt, J. Joseph and Wilkenfeld, Jonathan. 1996 "Democracies in International Crisis," *International Interactions*, Vol *22* (2): 123-142.

Hobson, J.A. 1965 *Imperialism.* Ann Arbor: The University of Michigan Press.

Johnson, Chalmers. 1982 *MITI and the Japanese Miracle.* Stanford: Stanford University Press.

Kegley, Charles W., Jr. 1996 "How Democracies Use Intervention: A Neglected Dimension in Studies of the Democratic Peace," *Journal of Peace Research*, Vol *33* (3): 289-308.

Kinsella, David and Herbert K. Tillema. 1995 "Arms and Aggression in the Middle East," *Journal of Conflict Resolution*, Vol *39* (2): 306-329.

Korhonen, Pekka. 1994 "The Theory of the Flying Geese Pattern of Development and Its Interpretation," *Journal of Peace Research*, Vol *31*(1) February: 93-108.

Lenin, V.I. 1989 *Imperialism. The Highest Form of Capitalism*. New York: International Publishers.

Linn, Ruth. 1996 "When the Individual Soldier Says 'No' to War: A Look at Selective Refusal During the Intifada," *Journal of Peace Research*, Vol *33* (4) November: 421- 431.

Maoz, Zeev et.al. 1993 "Normative and Structural Causes of Democratic Peace, 1946-1986," *American Political Science Review*, Vol *87* (3) September: 634-638.

Norusis, Marija J., Editor 1994 *SPSS 6.1* Chicago: SPSS Inc., Publishers.

O'Neal, John R. and Russett, Bruce M. 1997 "The Classic Liberals Were Right: Democracy, Interdependence, and Conflict, 1950-1985," *International Studies Quarterly*, *41*: 267-294.

Pacek, Alexander et.al., 1995 "The Political Economy of Competitive Elections in the Developing World," *American Journal of Political Science*, Vol *39* (3) August: 745-759.

Papayoanou, Paul A. 1997 "Economic Interdependence and the Balance of Power," *International Studies Quarterly*, *41*: 113-140.

Park, Kun Y. 1993 " 'Pouring New Wine into Fresh Wineskins:' Defense Spending and Economic Growth in LDCs with Application to South Korea," *Journal of Peace Research*, Vol *30* (1) February: 79-93.

Remmer, Karen L. 1998 "Does Democracy Promote Interstate Cooperation? Lessons From the Mercosur Region," *International Studies Quarterly*, *42*: 25-32.

Richardson, Harry Ward. 1969 *Regional Differences*. New York: Praeger Publishers.

Ross, Jeffrey Ian. 1993 "Structural Causes of Oppositional Political Terrorism: Towards A Causal Model," *Journal of Peace Research*, Vol *30* (3) August: 317-329.

Rummel, R. J. 1996 "The Miracle of Freedom," *Martin Monograph Series* (1) Martin Institute for Peace Studies and Conflict Resolution, University of Idaho.

Russett, Bruce, and Starr, Harvey. 1996 *World Politics*. New York: W.H. Freeman and Company.

Sederberg, Peter C. 1995 "Conciliation as Counter-Terror Strategy," *Journal of Peace Research*, Vol *32* (3) August: 295-312.

Skauge, Tom. 1994 "Contraction and Detraction: Nonequilibrium Studies of Civil-Military Relations," *Journal of Peace Research*, Vol *31* (2) May: 189-203.

Snow, Edgar. 1968 *Red Star Over China*. New York: Grove Press: 35-59.

Sterling-Folker, Jennifer. 1997 "Realist Environment, Liberal Process, and Domestic-Level Variables," *International Studies Quarterly, 41*:1-25.

Sullivan, Michael P. 1976 *International Relations: Theories and Evidence*. Englewood Cliffs: Prentice Hall, Inc

Thurow. Lester C. 1999 "Building Wealth," *The Atlantic Monthly*, June: 57-69.

Turner, John. 1985 *Arms in the '80s*. Stockholm International Peace Research Institute. London: Taylor and Francis: 89-94.

Vincent, Jack E. 1977 "Attribute and Attribute Distance Theories of International Behavior: An Overview and the Development of Some Overarching Frameworks," *Political Methodology*: 461-491.

_____. 1977 "Analyzing International Conflict and Cooperation Flows: An Application of Attribute Theory," *Social Science Quarterly, 58*: 111-120.

_____. 1978 "Status and International Relations: Empirical Tests of Galtung's Key Hypothesis," Boca Raton: Out of Florida Atlantic University Press: 7233-7365.

_____. 1979 *Project Theory: Interpretations and Policy Relevance*. Washington, D.C.: University Press of America.

_____. 1983 *International Relations*, Volume *4*, Theory. Boca Raton: University Press of America.

_____. 1987 "Analyzing Shifts in International Conflict from Quality of Life Indicators," *Journal of Peace Research*, Vol *24* (4): 393-405.

_____. 1996 "The Relative Importance of Power, Economic Development, and Political System During the Middle of the Cold War," *Martin Journal Of Peace Research* (2): 1-13.

_____, McCluskie, Sean. 1997 "Promoting Political Liberties Through Quality of Life," *International Journal on World Peace.* Vol *XIV* (2) June: 77-100.

Weart, Spencer R. 1994 "Peace among Democratic and Oligarchic Republics," *Journal of Peace Research*, Vol *31* (3) August: 299-316.

Weede, Erich. 1995 "Why Nations Arm: A Reconsideration," *Journal of Peace Research*, Vol *32* (2) May: 229-232.

WEIS Event Codes Manual, Charles A. McClelland, Editor. 1972 University of Southern California, Los Angeles, California.

White, Robert and Terry Falkenberg White. 1995 "Repression and the Liberal State," *Journal of Conflict Resolution*, Vol *39*, (2): 330-352.

World Armaments and Disarmament. 1973 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: 268.

World Armaments and Disarmament. 1975 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: 416-423.

World Armaments and Disarmament. 1980 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: xxvii-xxviii, xxiv, xliii

World Armaments and Disarmament. 1985 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: 44-68.

World Armaments and Disarmament. 1989 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: 13-20.

World Armaments and Disarmament. 1993 SIPRI Yearbook. Stockholm: Stockholm International Peace Research Institute: 234-239.

APPENDIX A

COOPERATION AND CONFLICT INDEX

Cooperation (COP) and Conflict (CON) Variables Index

COP1	Yield
COP2	Praise
COP3	Promise
COP4	Express Regret
COP5	Extend Economic Aid
COP6	Make Agreements
COP7	Ask for Information
COP8	Offer Proposals
COP9	Total Cooperation (Vincent Scale)
CON1	Reject
CON2	Accuse
CON3	Protest
CON4	Deny
CON5	Demand
CON6	Warn
CON7	Threaten
CON8	Demonstration
CON9	Reduce Diplomatic Relations
CON10	Expel from Country
CON11	Seize Possessions
CON12	Use Force
CON13	Total Conflict (Vincent Scale)

APPENDIX B

PART ONE

TABLE 3. ECONOMIC SHIFT VARIABLES

FACTOR LOADINGS AND *RHO'S* FOR ECONOMIC GROWTH

	F1	F2	F3
D_V1 Gross national product per capita	0.24	-0.7	0.03
D_V2 Population total	0.21	0.01	-0.08
D_V3 Population urban percent	0.13	-0.82	-0.05
D_V4 Fertility	-0.1	0.92	0.06
D_V5 Life expectancy	0.11	-0.91	-0.01
D_V6 Infant mortality per 1000 deaths	-0.11	0.9	0.02
D_V7 Population per physician	-0.06	0.49	0.07
D_V8 Passenger cars	0.9	-0.17	0.19
D_V9 Population urban total	0.54	-0.1	-0.36
D_V10 Urban population percent of total	0.14	-0.82	-0.08
D_V11 Population growth rate annual percent	-0.08	0.83	0.03
D_V12 Population growth rate urban annual percent	-0.11	0.88	0.05
D_V13 Population density sq. kil	-0.05	-0.21	0.02
D_V14 Birth rate crude per 1000	-0.11	0.94	0.05
D_V15 Death rate crude per 1000	-0.06	0.61	0.01
D_V16 Arms exports in millions	0.74	-0.11	-0.52
D_V17 Armed forces in thousands	0.55	-0.08	-0.39
D_V18 Armed forces per 1000 population	0.11	-0.22	-0.11
D_V19 Arms imports in millions	0.27	-0.03	-0.07
D_V20 Civil rights, 1 equals the most to 7 the least	-0.09	0.65	-0.08
D_V21 Military expenditures in millions	0.88	-0.1	-0.35
D_V22 Political rights, 1 equals the most 7 the least	-0.07	0.61	-0.11
D_V23 GNP (size)	0.89	-0.18	0.04
VDIFF2 Population Total	0.11	0.08	-0.02
VDIFF3 Population urban percent	-0.13	0.18	0.11
VDIFF4 Fertility	0.06	0.23	-0.02
VDIFF5 Life expectancy	-0.09	0.53	0.03

VDIFF6 Infant mortality per 1000 deaths	0.11	-0.64	0.05
VDIFF7 Population per physician	0.04	-0.31	-0.02
VDIFF8 Passenger cars	0.82	-0.23	0.17
VDIFF9 Population urban total	0.31	-0.02	-0.36
VDIFF10 Urban population percent of total	-0.08	0.18	0.02
VDIFF11 Population growth rate annual percent	0	0.54	-0.12
VDIFF12 Population growth rate urban annual percent	0.03	0.08	-0.08
VDIFF13 Population density sq. kil	-0.04	-0.07	0.02
VDIFF14 Birth rate crude per 1000	0.08	0.21	-0.04
VDIFF15 Death rate crude per 1000	0.1	-0.79	-0.01
VDIFF16 Arms exports in millions	0.67	-0.12	-0.58
VDIFF17 Armed forces in thousands	-0.21	0.04	0.06
VDIFF18 Armed forces per 1000 population	0	0.06	0.04
VDIFF19 Arms imports in millions	0.25	0	-0.04
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.01	0.24	0.05
VDIFF21 Military expenditures in millions	0.9	-0.1	-0.33
VDIFF22 Political rights, 1 equals the most 7 the least	0.04	0.11	-0.01
VDIFF23 GNP (size)	0.88	-0.18	-0.02
D_COP1 Surrender, yield to order	0.97	-0.07	-0.03
D_COP2 Praise, hail	0.97	-0.06	0.15
D_COP3 Promise own policy support	0.98	-0.06	0.1
D_COP4 Express regret	0.95	-0.11	-0.09
D_COP5 Extend economic aid (gift or loan)	0.97	-0.06	0.12
D_COP6 Make substantive agreement	0.95	-0.09	-0.17
D_COP7 Ask for information, policy or material	0.98	-0.06	0.07
D_COP8 Offer proposal	0.98	-0.04	-0.1
D_COP9 Total of all Cooperation	0.99	-0.07	0.02
D_CON1 Reject	0.96	-0.08	0.11
D_CON2 Accuse	0.98	-0.02	-0.03
D_CON3 Protest	0.98	-0.06	0.09
D_CON4 Deny	0.95	0	-0.03
D_CON5 Demand	0.97	-0.04	-0.01
D_CON6 Warn	0.95	-0.03	0.09
D_CON7 Threat	0.89	-0.01	0.1
D_CON8 Demonstrations	0.96	-0.06	0.16
D_CON9 Reduce diplomacy	0.96	-0.1	0.13
D_CON10 Expel	0.67	-0.07	0.15

D_CON11 Seize	0.36	-0.06	-0.09
D_CON12 Force	0.1	0.06	0.06
D_CON13 Total Conflict	0.84	-0.01	0.05
COPDIF1 Copdif1- Surrender, Yield to	0.66	-0.15	-0.01
COPDIF2 Praise, hail	0.38	0.05	0.8
COPDIF3 Promise own policy support	-0.7	0.03	0.24
COPDIF4 Express regret	-0.23	0.08	-0.13
COPDIF5 Extend economic aid (gift or loan)	-0.95	0.06	-0.14
COPDIF6 Make substantive agreement	-0.86	0.14	0.35
COPDIF7 Ask for information, policy or material	0.08	0.04	0.71
COPDIF8 Offer proposal	0.72	0.07	0.46
COPDIF9 Total of all Cooperation	-0.74	0.14	0.41
CONDIF1 Condif1- Reject	0.64	0.04	0.53
CONDIF2 Accuse	0.34	0.03	0.7
CONDIF3 Protest	0.95	-0.01	0.23
CONDIF4 Deny	-0.14	0.07	-0.03
CONDIF5 Demand	0.68	-0.01	0.48
CONDIF6 Warn	0.32	0.02	0.55
CONDIF7 Threat	-0.16	0.02	0.1
CONDIF8 Demonstrations	-0.22	0.33	0.13
CONDIF9 Reduce diplomacy	0.8	-0.09	0.32
CONDIF10 Expel	-0.07	-0.05	0.14
CONDIF11 Seize	-0.28	0.14	0.1
CONDIF12 Force	-0.75	-0.04	-0.06
CONDIF13 Total of all Conflict	-0.58	-0.02	0.17
POWER89	0.84	-0.13	-0.27
POWSH89	-0.1	0.06	-0.45

Table 3. ECONOMIC SHIFT VARIABLES (Continued)

	F4	F5	F6
D_V1 Gross national product per capita	-0.02	-0.11	-0.07
D_V2 Population total	0.01	0.95	-0.09
D_V3 Population urban percent	0.15	-0.14	-0.02
D_V4 Fertility	0.08	-0.09	0.03
D_V5 Life expectancy	0.05	-0.01	-0.01
D_V6 Infant mortality per 1000 deaths	-0.01	0.02	-0.01
D_V7 Population per physician	-0.08	-0.02	-0.01
D_V8 Passenger cars	-0.09	-0.01	-0.08
D_V9 Population urban total	-0.04	0.72	0.08
D_V10 Urban population percent of total	0.14	-0.14	-0.01

D_V11 Population growth rate annual percent	0.15	-0.09	0.01
D_V12 Population growth rate urban annual percent	0.03	0	0.03
D_V13 Population density sq. kil	0	0	-0.01
D_V14 Birth rate crude per 1000	0.09	-0.08	0.02
D_V15 Death rate crude per 1000	-0.14	-0.03	-0.03
D_V16 Arms exports in millions	-0.08	0.15	0.2
D_V17 Armed forces in thousands	0.11	0.67	0.11
D_V18 Armed forces per 1000 population	0.58	-0.15	-0.14
D_V19 Arms imports in millions	0.42	0.17	-0.01
D_V20 Civil rights, 1 equals the most to 7 the least	0.08	0.07	0.15
D_V21 Military expenditures in millions	-0.08	0.15	0.16
D_V22 Political rights, 1 equals the most 7 the least	0.07	0.05	0.12
D_V23 GNP (size)	-0.08	0.09	-0.03
VDIFF2 Population Total	0.03	0.94	-0.13
VDIFF3 Population urban percent	0.06	-0.02	0.07
VDIFF4 Fertility	-0.08	-0.17	0.03
VDIFF5 Life expectancy	0.04	-0.06	-0.01
VDIFF6 Infant mortality per 1000 deaths	0.01	0.07	-0.03
VDIFF7 Population per physician	0.07	0.01	-0.03
VDIFF8 Passenger cars	-0.1	0.02	-0.07
VDIFF9 Population urban total	-0.01	0.85	0.09
VDIFF10 Urban population percent of total	0.05	0	0.11
VDIFF11 Population growth rate annual percent	-0.06	-0.15	0.14
VDIFF12 Population growth rate urban annual percent	0	0.13	0.05
VDIFF13 Population density sq. kil	0.03	0.01	-0.03
VDIFF14 Birth rate crude per 1000	-0.01	-0.14	0.01
VDIFF15 Death rate crude per 1000	-0.07	0.1	0
VDIFF16 Arms exports in millions	-0.08	0.16	0.22
VDIFF17 Armed forces in thousands	0.68	0.15	0.11
VDIFF18 Armed forces per 1000 population	0.7	-0.12	0.14
VDIFF19 Arms imports in millions	0.39	0.17	0.02
VDIFF20 Civil rights, 1 equals the most to 7 the least	-0.01	-0.06	0.1
VDIFF21 Military expenditures in millions	-0.08	0.12	0.15
VDIFF22 Political rights, 1 equals the most 7 the least	0.06	-0.02	-0.01
VDIFF23 GNP (size)	-0.08	0.09	0
D_COP1 Surrender, yield to order	0.05	0.03	-0.08

D_COP2 Praise, hail	-0.04	0.02	-0.15
D_COP3 Promise own policy support	-0.02	0.02	-0.14
D_COP4 Express regret	0.12	0.06	-0.08
D_COP5 Extend economic aid (gift or loan)	-0.05	0.05	-0.11
D_COP6 Make substantive agreement	-0.01	0.19	-0.05
D_COP7 Ask for information, policy or material	-0.01	0.01	-0.12
D_COP8 Offer proposal	-0.02	0.05	-0.01
D_COP9 Total of all Cooperation	-0.01	0.06	-0.1
D_CON1 Reject	0.07	0.01	-0.2
D_CON2 Accuse	0.08	0.05	0.07
D_CON3 Protest	-0.03	0.06	-0.09
D_CON4 Deny	0.21	0.07	0.02
D_CON5 Demand	0.03	0.05	-0.02
D_CON6 Warn	0.18	0.03	0
D_CON7 Threat	0.31	0.03	0.07
D_CON8 Demonstrations	0.06	0.03	-0.1
D_CON9 Reduce diplomacy	0.01	0.06	-0.09
D_CON10 Expel	0.47	0.03	-0.13
D_CON11 Seize	0.84	0.03	0.02
D_CON12 Force	0.86	0.03	0.22
D_CON13 Total Conflict	0.47	0.05	0.08
COPDIF1 Copdif1- Surrender, Yield to	0	0.17	0.3
COPDIF2 Praise, hail	-0.07	-0.33	-0.07
COPDIF3 Promise own policy support	0.17	-0.28	-0.26
COPDIF4 Express regret	0.16	-0.47	0.38
COPDIF5 Extend economic aid (gift or loan)	0.08	-0.05	0.03
COPDIF6 Make substantive agreement	0.05	-0.21	-0.05
COPDIF7 Ask for information, policy or material	0.04	-0.07	0.28
COPDIF8 Offer proposal	-0.07	-0.05	0.17
COPDIF9 Total of all Cooperation	0.08	-0.32	0.11
CONDIF1 Condif1- Reject	0.11	-0.22	0.05
CONDIF2 Accuse	-0.03	-0.36	0.37
CONDIF3 Protest	-0.05	-0.03	0
CONDIF4 Deny	0.2	-0.02	0.88
CONDIF5 Demand	-0.07	-0.31	0.19
CONDIF6 Warn	0.15	-0.11	0.63
CONDIF7 Threat	0.32	0.03	0.74
CONDIF8 Demonstrations	-0.07	-0.21	0.59
CONDIF9 Reduce diplomacy	0.07	0.11	-0.01
CONDIF10 Expel	0.05	-0.1	0.19

CONDIF11 Seize	0.74	-0.01	0.3
CONDIF12 Force	0.22	0.1	0.48
CONDIF13 Total of all Conflict	0.26	0	0.64
POWER89	0.08	0.4	0.04
POWSH89	0.55	-0.03	0.33

Table 3. ECONOMIC SHIFT VARIABLES (Continued)

	F7	F8	F9
D_V1 Gross national product per capita	0.15	-0.02	0.03
D_V2 Population total	-0.08	-0.04	0
D_V3 Population urban percent	-0.08	0.28	0.14
D_V4 Fertility	0.14	0.1	-0.04
D_V5 Life expectancy	-0.31	-0.02	0.03
D_V6 Infant mortality per 1000 deaths	0.3	0.02	-0.05
D_V7 Population per physician	0.31	-0.08	0.01
D_V8 Passenger cars	0.04	-0.07	-0.02
D_V9 Population urban total	-0.03	0	0
D_V10 Urban population percent of total	-0.07	0.28	0.14
D_V11 Population growth rate annual percent	-0.15	0.2	0.04
D_V12 Population growth rate urban annual percent	-0.07	0.28	0
D_V13 Population density sq. kil	0.01	-0.07	0.96
D_V14 Birth rate crude per 1000	0.11	0.07	-0.04
D_V15 Death rate crude per 1000	0.68	-0.06	-0.08
D_V16 Arms exports in millions	0.11	-0.01	0
D_V17 Armed forces in thousands	-0.04	-0.01	-0.01
D_V18 Armed forces per 1000 population	-0.11	0.12	0.1
D_V19 Arms imports in millions	-0.05	0.11	-0.02
D_V20 Civil rights, 1 equals the most to 7 the least	0.11	0.14	0.04
D_V21 Military expenditures in millions	0.07	-0.01	0
D_V22 Political rights, 1 equals the most 7 the least	0.19	0.12	0
D_V23 GNP (size)	0.04	-0.07	-0.01
VDIFF2 Population Total	-0.11	-0.02	0.02
VDIFF3 Population urban percent	-0.12	0.92	-0.07
VDIFF4 Fertility	0.85	-0.03	-0.01
VDIFF5 Life expectancy	-0.62	0.14	0.05
VDIFF6 Infant mortality per 1000 deaths	0.5	-0.09	0.03
VDIFF7 Population per physician	-0.09	0.07	-0.03
VDIFF8 Passenger cars	0.03	-0.06	-0.03

VDIFF9 Population urban total	-0.08	0.05	0
VDIFF10 Urban population percent of total	-0.11	0.93	-0.07
VDIFF11 Population growth rate annual percent	0.37	-0.15	0.08
VDIFF12 Population growth rate urban annual percent	0.05	-0.48	0.02
VDIFF13 Population density sq. kil	-0.05	-0.05	0.98
VDIFF14 Birth rate crude per 1000	0.83	-0.1	0
VDIFF15 Death rate crude per 1000	0.34	-0.15	0.01
VDIFF16 Arms exports in millions	0.11	-0.01	0
VDIFF17 Armed forces in thousands	-0.17	-0.06	-0.04
VDIFF18 Armed forces per 1000 population	-0.12	-0.01	0.15
VDIFF19 Arms imports in millions	-0.06	0.11	-0.01
VDIFF20 Civil rights, 1 equals the most to 7 the least	-0.06	0	0.06
VDIFF21 Military expenditures in millions	0.07	-0.01	0
VDIFF22 Political rights, 1 equals the most 7 the least	0.19	-0.03	-0.01
VDIFF23 GNP (size)	0.04	-0.07	-0.01
D_COP1 Surrender, yield to order	0.01	-0.03	0
D_COP2 Praise, hail	0.02	-0.03	0.01
D_COP3 Promise own policy support	0	-0.04	0
D_COP4 Express regret	0.03	0.07	-0.01
D_COP5 Extend economic aid (gift or loan)	0.01	-0.03	0.01
D_COP6 Make substantive agreement	0.01	-0.03	0
D_COP7 Ask for information, policy or material	0	-0.01	0
D_COP8 Offer proposal	0.01	-0.01	0.01
D_COP9 Total of all Cooperation	0.01	-0.02	0
D_CON1 Reject	-0.02	-0.03	-0.01
D_CON2 Accuse	0.01	0.01	0
D_CON3 Protest	0	-0.02	0
D_CON4 Deny	-0.02	0.01	-0.01
D_CON5 Demand	-0.01	-0.03	-0.01
D_CON6 Warn	0.01	0.04	0
D_CON7 Threat	0.01	0.14	0
D_CON8 Demonstrations	-0.02	0	0
D_CON9 Reduce diplomacy	0.01	-0.03	-0.02
D_CON10 Expel	-0.03	0.02	-0.04
D_CON11 Seize	0	0.06	-0.04
D_CON12 Force	0.02	0.04	-0.03
D_CON13 Total Conflict	0.01	0.03	-0.02
COPDIF1 Copdif1 - Surrender, Yield to	-0.04	0.03	0.01

COPDIF2 Praise, hail	-0.01	0.02	0.04
COPDIF3 Promise own policy support	-0.02	0.04	0.01
COPDIF4 Express regret	0.09	0.22	0
COPDIF5 Extend economic aid (gift or loan)	-0.01	0.04	0.02
COPDIF6 Make substantive agreement	-0.06	0.02	0.01
COPDIF7 Ask for information, policy or material	-0.06	0.12	0.02
COPDIF8 Offer proposal	0.03	-0.01	-0.02
COPDIF9 Total of all Cooperation	-0.03	0.1	0.03
CONDIF1 Condifl - Reject	-0.01	-0.02	0.01
CONDIF2 Accuse	0.01	0.06	0.01
CONDIF3 Protest	-0.03	0.01	0.01
CONDIF4 Deny	-0.01	0	-0.05
CONDIF5 Demand	0.04	-0.04	0
CONDIF6 Warn	0.05	0.11	0.01
CONDIF7 Threat	0.1	0.22	0.03
CONDIF8 Demonstrations	-0.1	-0.1	-0.02
CONDIF9 Reduce diplomacy	-0.04	-0.02	-0.03
CONDIF10 Expel	0.04	-0.19	0.02
CONDIF11 Seize	-0.01	0.05	0.01
CONDIF12 Force	0.03	0.09	-0.02
CONDIF13 Total of all Conflict	0.03	0.11	-0.02
POWER89	-0.01	-0.01	0.02
POWSH89	-0.09	0	0.1

Table 3. ECONOMIC SHIFT VARIABLES (Continued)

	F10	F11	F12
D_V1 Gross national product per capita	-0.07	0.18	0.1
D_V2 Population total	-0.08	0.06	-0.01
D_V3 Population urban percent	-0.02	0.14	-0.03
D_V4 Fertility	0.02	0.06	0.06
D_V5 Life expectancy	0.02	0.07	-0.01
D_V6 Infant mortality per 1000 deaths	-0.04	-0.03	0.01
D_V7 Population per physician	0.03	-0.01	0.12
D_V8 Passenger cars	-0.13	0.08	0.01
D_V9 Population urban total	0.01	0.05	-0.03
D_V10 Urban population percent of total	-0.01	0.14	-0.03
D_V11 Population growth rate annual percent	0.02	0.09	0.1
D_V12 Population growth rate urban annual percent	-0.02	-0.02	0.06
D_V13 Population density sq. kil	0	0	0.02

D_V14 Birth rate crude per 1000	0	-0.03	0.07
D_V15 Death rate crude per 1000	-0.02	-0.03	-0.03
D_V16 Arms exports in millions	0.13	-0.06	0.01
D_V17 Armed forces in thousands	-0.05	0	-0.04
D_V18 Armed forces per 1000 population	-0.08	0.16	-0.09
D_V19 Arms imports in millions	0.03	0.8	-0.01
D_V20 Civil rights, 1 equals the most to 7 the least	0	0.09	0.24
D_V21 Military expenditures in millions	0.05	0	0.01
D_V22 Political rights, 1 equals the most 7 the least	-0.02	0.07	0.26
D_V23 GNP (size)	-0.13	0.12	0.03
VDIFF2 Population Total	-0.04	0.11	-0.01
VDIFF3 Population urban percent	-0.09	0.08	-0.03
VDIFF4 Fertility	0.03	0.14	0.05
VDIFF5 Life expectancy	-0.08	0.22	0
VDIFF6 Infant mortality per 1000 deaths	0.06	-0.14	0.07
VDIFF7 Population per physician	-0.01	-0.02	0.04
VDIFF8 Passenger cars	-0.15	0.11	-0.02
VDIFF9 Population urban total	0.02	0.03	-0.04
VDIFF10 Urban population percent of total	-0.05	0.06	-0.02
VDIFF11 Population growth rate annual percent	0.04	0.12	0.04
VDIFF12 Population growth rate urban annual percent	0	-0.09	-0.14
VDIFF13 Population density sq. kil	0.01	-0.01	0.03
VDIFF14 Birth rate crude per 1000	0.01	-0.09	0.08
VDIFF15 Death rate crude per 1000	0.06	-0.21	-0.06
VDIFF16 Arms exports in millions	0.15	-0.07	0.01
VDIFF17 Armed forces in thousands	-0.37	0.07	-0.03
VDIFF18 Armed forces per 1000 population	-0.36	0.1	0
VDIFF19 Arms imports in millions	0	0.82	0.01
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.01	-0.02	0.88
VDIFF21 Military expenditures in millions	0.03	0.03	0.01
VDIFF22 Political rights, 1 equals the most 7 the least	0.07	0.02	0.88
VDIFF23 GNP (size)	-0.12	0.12	0.03
D_COP1 Surrender, yield to order	0	0.03	-0.01
D_COP2 Praise, hail	-0.06	0.02	-0.01
D_COP3 Promise own policy support	-0.05	0.01	0
D_COP4 Express regret	0.09	0.01	0.06
D_COP5 Extend economic aid (gift or loan)	-0.06	0.02	0

D_COP6 Make substantive agreement	0	0.02	-0.01
D_COP7 Ask for information, policy or material	-0.02	0	0.02
D_COP8 Offer proposal	0.04	0	0
D_COP9 Total of all Cooperation	-0.02	0.01	0
D_CON1 Reject	0.05	0.02	-0.02
D_CON2 Accuse	0.06	0.02	0
D_CON3 Protest	-0.05	-0.01	0
D_CON4 Deny	0.02	0.07	-0.04
D_CON5 Demand	0.08	0.03	-0.05
D_CON6 Warn	0.13	0.03	-0.01
D_CON7 Threat	0.1	-0.01	0.02
D_CON8 Demonstrations	0.02	0.05	-0.02
D_CON9 Reduce diplomacy	-0.04	0.03	0.01
D_CON10 Expel	0.3	0.07	-0.05
D_CON11 Seize	0.17	0.1	0.03
D_CON12 Force	0.2	0.2	-0.04
D_CON13 Total Conflict	0.13	0.11	-0.02
COPDIF1 Copdif1- Surrender, Yield to	0.13	0.12	-0.02
COPDIF2 Praise, hail	-0.08	0.01	0
COPDIF3 Promise own policy support	0.26	-0.08	0
COPDIF4 Express regret	0.44	-0.11	0.15
COPDIF5 Extend economic aid (gift or loan)	0.15	-0.03	-0.01
COPDIF6 Make substantive agreement	0.03	-0.09	-0.02
COPDIF7 Ask for information, policy or material	0.21	-0.12	0.01
COPDIF8 Offer proposal	0.04	-0.17	-0.01
COPDIF9 Total of all Cooperation	0.23	-0.11	0.01
CONDIF1 Condif1- Reject	0.29	-0.07	0
CONDIF2 Accuse	-0.02	0.09	0.05
CONDIF3 Protest	-0.04	-0.04	0
CONDIF4 Deny	-0.11	0.07	-0.01
CONDIF5 Demand	0.17	0.06	-0.01
CONDIF6 Warn	0.08	-0.09	0.06
CONDIF7 Threat	0.22	-0.18	0.18
CONDIF8 Demonstrations	0.17	0.03	-0.07
CONDIF9 Reduce diplomacy	0.1	-0.06	0.02
CONDIF10 Expel	0.76	0.05	0.07
CONDIF11 Seize	0.13	0.08	0.18
CONDIF12 Force	0.19	0.08	0.01
CONDIF13 Total of all Conflict	0.21	0.1	0.03
POWER89	-0.05	0.06	-0.02

POWSH89	-0.18	0.12

Table 3. ECONOMIC SHIFT VARIABLES (Continued)

	F13	F14	F15
D_V1 Gross national product per capita	-0.34	-0.01	-0.01
D_V2 Population total	-0.02	-0.03	0.01
D_V3 Population urban percent	-0.03	0	0.04
D_V4 Fertility	0.03	0.08	-0.02
D_V5 Life expectancy	-0.01	-0.04	0.03
D_V6 Infant mortality per 1000 deaths	-0.03	0.01	-0.01
D_V7 Population per physician	-0.05	0.08	0.65
D_V8 Passenger cars	-0.15	-0.05	-0.01
D_V9 Population urban total	-0.05	0.08	0.01
D_V10 Urban population percent of total	-0.03	0.01	0.04
D_V11 Population growth rate annual percent	0.01	-0.02	-0.03
D_V12 Population growth rate urban annual percent	-0.05	-0.02	0.11
D_V13 Population density sq. kil	0	-0.01	-0.01
D_V14 Birth rate crude per 1000	0.03	0.06	-0.02
D_V15 Death rate crude per 1000	-0.06	0.01	-0.04
D_V16 Arms exports in millions	0.02	0.18	0.01
D_V17 Armed forces in thousands	0.15	0.06	0.03
D_V18 Armed forces per 1000 population	0.51	0.16	0
D_V19 Arms imports in millions	0.07	0.01	-0.03
D_V20 Civil rights, 1 equals the most to 7 the least	0.57	0	-0.1
D_V21 Military expenditures in millions	0.02	0.11	0.01
D_V22 Political rights, 1 equals the most 7 the least	0.59	-0.02	-0.04
D_V23 GNP (size)	-0.2	-0.01	-0.01
VDIFF2 Population Total	-0.05	-0.03	-0.01
VDIFF3 Population urban percent	0.05	0	0.01
VDIFF4 Fertility	-0.07	-0.04	0.02
VDIFF5 Life expectancy	-0.16	-0.13	-0.04
VDIFF6 Infant mortality per 1000 deaths	0.04	0.22	0.02
VDIFF7 Population per physician	-0.01	0.01	0.84
VDIFF8 Passenger cars	-0.21	-0.02	-0.01
VDIFF9 Population urban total	0.01	0.06	0.02
VDIFF10 Urban population percent of total	0.04	0.04	0.01
VDIFF11 Population growth rate annual percent	-0.07	-0.46	0
VDIFF12 Population growth rate urban annual	0.01	-0.48	0.5

percent			
VDIFF13 Population density sq. kil	0.03	0.02	-0.02
VDIFF14 Birth rate crude per 1000	0.05	-0.14	0.02
VDIFF15 Death rate crude per 1000	0.17	0.17	0.02
VDIFF16 Arms exports in millions	0.02	0.2	0.01
VDIFF17 Armed forces in thousands	0.31	0	0.08
VDIFF18 Armed forces per 1000 population	0.16	0.35	0.11
VDIFF19 Arms imports in millions	0.04	0.03	-0.03
VDIFF20 Civil rights, 1 equals the most to 7 the least	-0.05	0.05	-0.07
VDIFF21 Military expenditures in millions	0	0.12	0.01
VDIFF22 Political rights, 1 equals the most 7 the least	0.13	-0.03	0.14
VDIFF23 GNP (size)	-0.2	0.02	-0.02
D_COP1 Surrender, yield to order	0.02	0.08	0.02
D_COP2 Praise, hail	0	-0.04	0
D_COP3 Promise own policy support	-0.01	0.01	0
D_COP4 Express regret	-0.01	-0.03	0.01
D_COP5 Extend economic aid (gift or loan)	-0.03	-0.03	0
D_COP6 Make substantive agreement	0.01	0.05	0
D_COP7 Ask for information, policy or material	-0.01	0.02	0
D_COP8 Offer proposal	0.05	0.05	0
D_COP9 Total of all Cooperation	0	0.01	0
D_CON1 Reject	0.03	0	0
D_CON2 Accuse	0.06	0.03	0.01
D_CON3 Protest	0	-0.01	0.01
D_CON4 Deny	0.09	0.03	0.01
D_CON5 Demand	0.07	0.02	0.01
D_CON6 Warn	0.01	-0.08	0
D_CON7 Threat	0	-0.11	-0.02
D_CON8 Demonstrations	-0.01	-0.05	0
D_CON9 Reduce diplomacy	-0.02	-0.03	-0.01
D_CON10 Expel	0.03	-0.16	-0.01
D_CON11 Seize	-0.11	-0.02	-0.02
D_CON12 Force	-0.03	-0.16	-0.01
D_CON13 Total Conflict	0.01	-0.07	0
COPDIF1 Copdif1- Surrender, Yield to	0	0.46	0.1
COPDIF2 Praise, hail	-0.04	-0.07	-0.01
COPDIF3 Promise own policy support	-0.03	0.08	-0.01
COPDIF4 Express regret	-0.18	0.2	-0.04
COPDIF5 Extend economic aid (gift or loan)	0.02	0.06	0

COPDIF6 Make substantive agreement	0.04	0	0
COPDIF7 Ask for information, policy or material	0.05	0.3	0.05
COPDIF8 Offer proposal	0	0.15	0.01
COPDIF9 Total of all Cooperation	0.02	0.15	0.01
CONDIF1 Condifl - Reject	0.1	0.06	-0.01
CONDIF2 Accuse	-0.14	-0.05	-0.03
CONDIF3 Protest	0.05	0	0.01
CONDIF4 Deny	0.12	0.01	0.01
CONDIF5 Demand	-0.12	0.1	0
CONDIF6 Warn	-0.06	-0.16	-0.04
CONDIF7 Threat	-0.14	-0.04	-0.07
CONDIF8 Demonstrations	0.29	0.06	0.02
CONDIF9 Reduce diplomacy	-0.03	-0.03	-0.03
CONDIF10 Expel	0.03	-0.02	0.02
CONDIF11 Seize	-0.12	-0.02	-0.05
CONDIF12 Force	-0.07	0.17	0.01
CONDIF13 Total of all Conflict	-0.1	0.15	0
POWER89	0.11	0.09	0.01
POWSH89			

Rhos for Economic Development

ECONOMIC SHIFT R estimate = .84
RHOS

Factor 1	Correlation Coefficient	-0.068
	Sig. (2-tailed)	0.452
	N	126
Factor 2	Correlation Coefficient	-.819(**)
	Sig. (2-tailed)	0
	N	126
Factor 3	Correlation Coefficient	-0.077
	Sig. (2-tailed)	0.391
	N	126
Factor 4	Correlation Coefficient	0.025
	Sig. (2-tailed)	0.784

	N	126
Factor 5	Correlation Coefficient	-.181(*)
	Sig. (2-tailed)	0.043
	N	126
Factor 6	Correlation Coefficient	0.089
	Sig. (2-tailed)	0.324
	N	126
Factor 7	Correlation Coefficient	-0.073
	Sig. (2-tailed)	0.416
	N	126
Factor 8	Correlation Coefficient	0.089
	Sig. (2-tailed)	0.324
	N	126
Factor 9	Correlation Coefficient	-.225(*)
	Sig. (2-tailed)	0.011
	N	126
Factor 10	Correlation Coefficient	-0.064
	Sig. (2-tailed)	0.477
	N	126
Factor 11	Correlation Coefficient	.256(**)
	Sig. (2-tailed)	0.004
	N	126
Factor 12	Correlation Coefficient	-0.018
	Sig. (2-tailed)	0.844
	N	126
Factor 13	Correlation Coefficient	-.198(*)
	Sig. (2-tailed)	0.026
	N	126

Factor 14	Correlation Coefficient	-0.099
	Sig. (2-tailed)	0.268
	N	126
Factor 15	Correlation Coefficient	.178(*)
	Sig. (2-tailed)	0.046
	N	126

PART TWO

TABLE 4. POWER SHIFT VARIABLES

FACTOR LOADINGS AND *RHOS* FOR POWER GROWTH

	F1	F2	F3
D_V1 Gross national product per capita	0.24	-0.73	0.02
D_V2 Population total	0.22	0.01	-0.09
D_V3 Population urban percent	0.13	-0.81	-0.05
D_V4 Fertility	-0.1	0.91	0.06
D_V5 Life expectancy	0.11	-0.9	-0.01
D_V6 Infant mortality per 1000 deaths	-0.11	0.89	0.02
D_V7 Population per physician	-0.06	0.48	0.07
D_V8 Passenger cars	0.9	-0.18	0.19
D_V9 Population urban total	0.54	-0.1	-0.38
D_V10 Urban population percent of total	0.14	-0.81	-0.07
D_V11 Population growth rate annual percent	-0.08	0.82	0.04
D_V12 Population growth rate urban annual percent	-0.11	0.88	0.05
D_V13 Population density sq. kil	-0.05	-0.2	0.02
D_V14 Birth rate crude per 1000	-0.11	0.93	0.06
D_V15 Death rate crude per 1000	-0.06	0.59	0
D_V16 Arms exports in millions	0.74	-0.12	-0.52
D_V17 Armed forces in thousands	0.56	-0.07	-0.41
D_V18 Armed forces per 1000 population	0.1	-0.2	-0.12
D_V19 Arms imports in millions	0.27	-0.02	-0.07
D_V20 Civil rights, 1 equals the most to 7 the least	-0.09	0.68	-0.08
D_V21 Military expenditures in millions	0.89	-0.1	-0.36
D_V22 Political rights, 1 equals the most 7 the least	-0.07	0.63	-0.11
D_V23 GNP (size)	0.89	-0.2	0.04
VDIFF1 GNP Per Capita	0.22	-0.72	0
VDIFF2 Population Total	0.12	0.08	-0.03
VDIFF3 Population urban percent	-0.13	0.19	0.11
VDIFF4 Fertility	0.06	0.2	-0.01
VDIFF5 Life expectancy	-0.09	0.54	0.04
VDIFF6 Infant mortality per 1000 deaths	0.11	-0.65	0.04
VDIFF7 Population per physician	0.04	-0.3	-0.02

VDIFF8 Passenger cars	0.82	-0.24	0.17
VDIFF9 Population urban total	0.32	-0.01	-0.38
VDIFF10 Urban population percent of total	-0.08	0.2	0.02
VDIFF11 Population growth rate annual percent	-0.01	0.54	-0.09
VDIFF12 Population growth rate urban annual percent	0.03	0.1	-0.07
VDIFF13 Population density sq. kil	-0.04	-0.06	0.02
VDIFF14 Birth rate crude per 1000	0.08	0.18	-0.02
VDIFF15 Death rate crude per 1000	0.1	-0.79	-0.02
VDIFF16 Arms exports in millions	0.67	-0.13	-0.59
VDIFF17 Armed forces in thousands	-0.21	0.06	0.05
VDIFF18 Armed forces per 1000 population	0	0.06	0.05
VDIFF19 Arms imports in millions	0.25	-0.01	-0.04
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.01	0.22	0.06
VDIFF21 Military expenditures in millions	0.9	-0.1	-0.33
VDIFF22 Political rights, 1 equals the most 7 the least	0.03	0.11	-0.01
VDIFF23 GNP (size)	0.88	-0.19	-0.01
D_COP1 Surrender, yield to order	0.97	-0.07	-0.03
D_COP2 Praise, hail	0.96	-0.06	0.15
D_COP3 Promise own policy support	0.98	-0.06	0.1
D_COP4 Express regret	0.95	-0.11	-0.09
D_COP5 Extend economic aid (gift or loan)	0.97	-0.06	0.12
D_COP6 Make substantive agreement	0.96	-0.09	-0.18
D_COP7 Ask for information, policy or material	0.98	-0.06	0.07
D_COP8 Offer proposal	0.98	-0.04	-0.1
D_COP9 Total of all Cooperation	0.99	-0.07	0.02
D_CON1 Reject	0.96	-0.08	0.11
D_CON2 Accuse	0.98	-0.02	-0.03
D_CON3 Protest	0.98	-0.06	0.09
D_CON4 Deny	0.95	0	-0.04
D_CON5 Demand	0.97	-0.03	-0.01
D_CON6 Warn	0.95	-0.03	0.09
D_CON7 Threat	0.89	-0.01	0.1
D_CON8 Demonstrations	0.96	-0.06	0.16
D_CON9 Reduce diplomacy	0.96	-0.11	0.13
D_CON10 Expel	0.67	-0.06	0.15
D_CON11 Seize	0.36	-0.06	-0.1
D_CON12 Force	0.1	0.07	0.05
D_CON13 Total Conflict	0.84	0	0.05

COPDIF1 Copdif1- Surrender, Yield to	0.66	-0.16	-0.02
COPDIF2 Praise, hail	0.38	0.05	0.81
COPDIF3 Promise own policy support	-0.7	0.01	0.25
COPDIF4 Express regret	-0.23	0.06	-0.13
COPDIF5 Extend economic aid (gift or loan)	-0.95	0.06	-0.14
COPDIF6 Make substantive agreement	-0.86	0.13	0.36
COPDIF7 Ask for information, policy or material	0.08	0.05	0.68
COPDIF8 Offer proposal	0.72	0.06	0.47
COPDIF9 Total of all Cooperation	-0.74	0.13	0.41
CONDIF1 Condif1- Reject	0.63	0.04	0.53
CONDIF2 Accuse	0.34	0.03	0.72
CONDIF3 Protest	0.94	-0.01	0.23
CONDIF4 Deny	-0.14	0.09	-0.02
CONDIF5 Demand	0.68	-0.02	0.49
CONDIF6 Warn	0.32	0.03	0.57
CONDIF7 Threat	-0.16	0.02	0.11
CONDIF8 Demonstrations	-0.23	0.34	0.16
CONDIF9 Reduce diplomacy	0.8	-0.09	0.31
CONDIF10 Expel	-0.07	-0.05	0.14
CONDIF11 Seize	-0.28	0.14	0.09
CONDIF12 Force	-0.75	-0.03	-0.08
CONDIF13 Total of all Conflict	-0.58	-0.01	0.16
POWER89	0.84	-0.13	-0.28

Table 4. POWER SHIFT VARIABLES (Continued)

	F4	F5	F6
D_V1 Gross national product per capita	-0.1	-0.02	-0.04
D_V2 Population total	0.95	0.01	-0.09
D_V3 Population urban percent	-0.13	0.15	-0.03
D_V4 Fertility	-0.09	0.08	0.04
D_V5 Life expectancy	0	0.05	-0.01
D_V6 Infant mortality per 1000 deaths	0.02	-0.01	-0.01
D_V7 Population per physician	-0.02	-0.09	0
D_V8 Passenger cars	-0.01	-0.09	-0.08
D_V9 Population urban total	0.72	-0.05	0.09
D_V10 Urban population percent of total	-0.13	0.14	-0.02
D_V11 Population growth rate annual percent	-0.08	0.14	0.01
D_V12 Population growth rate urban annual percent	0	0.03	0.03
D_V13 Population density sq. kil	0	0.01	-0.02

D_V14 Birth rate crude per 1000	-0.08	0.08	0.02
D_V15 Death rate crude per 1000	-0.04	-0.13	-0.02
D_V16 Arms exports in millions	0.13	-0.1	0.22
D_V17 Armed forces in thousands	0.65	0.11	0.11
D_V18 Armed forces per 1000 population	-0.17	0.58	-0.15
D_V19 Arms imports in millions	0.17	0.41	-0.01
D_V20 Civil rights, 1 equals the most to 7 the least	0.05	0.1	0.13
D_V21 Military expenditures in millions	0.13	-0.09	0.17
D_V22 Political rights, 1 equals the most 7 the least	0.02	0.09	0.1
D_V23 GNP (size)	0.09	-0.08	-0.01
VDIFF1 GNP Per Capita	-0.1	-0.04	-0.03
VDIFF2 Population Total	0.94	0.03	-0.13
VDIFF3 Population urban percent	-0.01	0.07	0.05
VDIFF4 Fertility	-0.16	-0.08	0.04
VDIFF5 Life expectancy	-0.05	0.03	-0.02
VDIFF6 Infant mortality per 1000 deaths	0.07	0.01	0
VDIFF7 Population per physician	0	0.07	-0.03
VDIFF8 Passenger cars	0.02	-0.1	-0.06
VDIFF9 Population urban total	0.84	-0.02	0.09
VDIFF10 Urban population percent of total	0	0.05	0.1
VDIFF11 Population growth rate annual percent	-0.14	-0.06	0.11
VDIFF12 Population growth rate urban annual percent	0.14	0	-0.01
VDIFF13 Population density sq. kil	0.01	0.03	-0.03
VDIFF14 Birth rate crude per 1000	-0.13	-0.01	0
VDIFF15 Death rate crude per 1000	0.09	-0.05	0.01
VDIFF16 Arms exports in millions	0.14	-0.09	0.24
VDIFF17 Armed forces in thousands	0.14	0.69	0.09
VDIFF18 Armed forces per 1000 population	-0.12	0.67	0.15
VDIFF19 Arms imports in millions	0.17	0.38	0.03
VDIFF20 Civil rights, 1 equals the most to 7 the least	-0.05	-0.02	0.15
VDIFF21 Military expenditures in millions	0.1	-0.09	0.16
VDIFF22 Political rights, 1 equals the most 7 the least	-0.02	0.05	-0.01
VDIFF23 GNP (size)	0.09	-0.09	0.02
D_COP1 Surrender, yield to order	0.03	0.05	-0.07
D_COP2 Praise, hail	0.02	-0.03	-0.16
D_COP3 Promise own policy support	0.02	-0.02	-0.14
D_COP4 Express regret	0.05	0.13	-0.08

D_COP5 Extend economic aid (gift or loan)	0.05	-0.05	-0.11
D_COP6 Make substantive agreement	0.18	-0.01	-0.04
D_COP7 Ask for information, policy or material	0.01	0	-0.12
D_COP8 Offer proposal	0.04	-0.02	-0.01
D_COP9 Total of all Cooperation	0.05	-0.01	-0.1
D_CON1 Reject	0.01	0.08	-0.2
D_CON2 Accuse	0.04	0.08	0.06
D_CON3 Protest	0.06	-0.03	-0.09
D_CON4 Deny	0.06	0.21	0.02
D_CON5 Demand	0.04	0.03	-0.03
D_CON6 Warn	0.03	0.19	-0.01
D_CON7 Threat	0.02	0.31	0.06
D_CON8 Demonstrations	0.02	0.07	-0.11
D_CON9 Reduce diplomacy	0.06	0.02	-0.09
D_CON10 Expel	0.03	0.48	-0.16
D_CON11 Seize	0.03	0.83	0.05
D_CON12 Force	0.02	0.86	0.21
D_CON13 Total Conflict	0.04	0.47	0.08
COPDIF1 Copdif1 - Surrender, Yield to	0.16	-0.02	0.33
COPDIF2 Praise, hail	-0.32	-0.06	-0.09
COPDIF3 Promise own policy support	-0.25	0.15	-0.25
COPDIF4 Express regret	-0.48	0.14	0.42
COPDIF5 Extend economic aid (gift or loan)	-0.04	0.07	0.04
COPDIF6 Make substantive agreement	-0.19	0.05	-0.05
COPDIF7 Ask for information, policy or material	-0.06	0.05	0.28
COPDIF8 Offer proposal	-0.04	-0.09	0.17
COPDIF9 Total of all Cooperation	-0.3	0.07	0.11
CONDIF1 Condif1 - Reject	-0.22	0.12	0.04
CONDIF2 Accuse	-0.34	-0.03	0.36
CONDIF3 Protest	-0.03	-0.05	-0.01
CONDIF4 Deny	-0.02	0.2	0.86
CONDIF5 Demand	-0.3	-0.09	0.19
CONDIF6 Warn	-0.1	0.15	0.6
CONDIF7 Threat	0.03	0.3	0.74
CONDIF8 Demonstrations	-0.2	-0.08	0.56
CONDIF9 Reduce diplomacy	0.12	0.07	-0.01
CONDIF10 Expel	-0.09	0.06	0.17
CONDIF11 Seize	-0.01	0.74	0.33
CONDIF12 Force	0.1	0.22	0.5
CONDIF13 Total of all Conflict	0	0.25	0.65

POWER89	0.38	0.08	0.05

Table 4. POWER SHIFT VARIABLES (Continued)

	F7	F8	F9
D_V1 Gross national product per capita	0.02	0.15	-0.01
D_V2 Population total	0.04	-0.08	-0.04
D_V3 Population urban percent	-0.17	-0.09	0.27
D_V4 Fertility	0	0.16	0.1
D_V5 Life expectancy	-0.04	-0.32	-0.02
D_V6 Infant mortality per 1000 deaths	0.03	0.32	0.02
D_V7 Population per physician	-0.02	0.31	-0.1
D_V8 Passenger cars	0.04	0.04	-0.06
D_V9 Population urban total	0.03	-0.03	0.01
D_V10 Urban population percent of total	-0.16	-0.08	0.27
D_V11 Population growth rate annual percent	-0.06	-0.12	0.19
D_V12 Population growth rate urban annual percent	0	-0.05	0.27
D_V13 Population density sq. kil	-0.01	0	-0.08
D_V14 Birth rate crude per 1000	0.01	0.13	0.08
D_V15 Death rate crude per 1000	0.03	0.69	-0.06
D_V16 Arms exports in millions	0.01	0.09	0.01
D_V17 Armed forces in thousands	-0.02	-0.05	-0.02
D_V18 Armed forces per 1000 population	-0.08	-0.12	0.12
D_V19 Arms imports in millions	-0.06	-0.05	0.12
D_V20 Civil rights, 1 equals the most to 7 the least	0.02	0.11	0.11
D_V21 Military expenditures in millions	0.02	0.06	0
D_V22 Political rights, 1 equals the most 7 the least	0	0.19	0.09
D_V23 GNP (size)	0.08	0.04	-0.06
VDIFF1 GNP Per Capita	0.03	0.15	-0.01
VDIFF2 Population Total	0.05	-0.1	-0.02
VDIFF3 Population urban percent	-0.11	-0.11	0.9
VDIFF4 Fertility	0.08	0.87	-0.02
VDIFF5 Life expectancy	-0.02	-0.59	0.14
VDIFF6 Infant mortality per 1000 deaths	0.07	0.47	-0.07
VDIFF7 Population per physician	-0.01	-0.11	0.05
VDIFF8 Passenger cars	0.04	0.03	-0.05
VDIFF9 Population urban total	0	-0.08	0.05
VDIFF10 Urban population percent of total	-0.11	-0.1	0.92
VDIFF11 Population growth rate annual percent	-0.07	0.41	-0.19

VDIFF12 Population growth rate urban annual percent	-0.23	0.07	-0.56
VDIFF13 Population density sq. kil	0	-0.05	-0.05
VDIFF14 Birth rate crude per 1000	0.01	0.85	-0.1
VDIFF15 Death rate crude per 1000	0.06	0.3	-0.13
VDIFF16 Arms exports in millions	0.01	0.1	0.01
VDIFF17 Armed forces in thousands	-0.11	-0.17	-0.09
VDIFF18 Armed forces per 1000 population	-0.03	-0.13	0.04
VDIFF19 Arms imports in millions	-0.05	-0.05	0.12
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.18	-0.05	0.04
VDIFF21 Military expenditures in millions	0.03	0.06	0
VDIFF22 Political rights, 1 equals the most 7 the least	-0.01	0.2	-0.03
VDIFF23 GNP (size)	0.08	0.03	-0.06
D_COP1 Surrender, yield to order	0.03	0.01	-0.01
D_COP2 Praise, hail	0.02	0.02	-0.03
D_COP3 Promise own policy support	0.02	0.01	-0.03
D_COP4 Express regret	-0.01	0.03	0.06
D_COP5 Extend economic aid (gift or loan)	0.02	0.01	-0.03
D_COP6 Make substantive agreement	0.03	0	-0.03
D_COP7 Ask for information, policy or material	0.02	0	0
D_COP8 Offer proposal	0.02	0.01	0
D_COP9 Total of all Cooperation	0.02	0.01	-0.02
D_CON1 Reject	0.03	-0.02	-0.03
D_CON2 Accuse	-0.02	0.01	0.01
D_CON3 Protest	0.01	0	-0.02
D_CON4 Deny	-0.04	-0.02	0.01
D_CON5 Demand	-0.01	-0.01	-0.04
D_CON6 Warn	-0.03	0.02	0.03
D_CON7 Threat	-0.05	0.02	0.13
D_CON8 Demonstrations	0.01	-0.02	-0.01
D_CON9 Reduce diplomacy	0	0.01	-0.03
D_CON10 Expel	-0.11	-0.03	-0.02
D_CON11 Seize	-0.06	0	0.07
D_CON12 Force	-0.06	0.03	0.02
D_CON13 Total Conflict	-0.04	0.01	0.01
COPDIF1 Copdif1- Surrender, Yield to	-0.06	-0.06	0.06
COPDIF2 Praise, hail	0.01	0	0.02
COPDIF3 Promise own policy support	-0.06	-0.01	0.07

COPDIF4 Express regret	0.01	0.08	0.25
COPDIF5 Extend economic aid (gift or loan)	-0.03	-0.01	0.04
COPDIF6 Make substantive agreement	-0.01	-0.05	0.03
COPDIF7 Ask for information, policy or material	-0.12	-0.07	0.13
COPDIF8 Offer proposal	-0.06	0.04	0.01
COPDIF9 Total of all Cooperation	-0.04	-0.03	0.12
CONDIF1 Condifl - Reject	0.01	-0.01	-0.01
CONDIF2 Accuse	0.01	0.01	0.07
CONDIF3 Protest	-0.02	-0.03	0.01
CONDIF4 Deny	-0.16	-0.01	-0.02
CONDIF5 Demand	-0.02	0.04	-0.01
CONDIF6 Warn	-0.05	0.05	0.1
CONDIF7 Threat	-0.07	0.09	0.22
CONDIF8 Demonstrations	-0.17	-0.08	-0.11
CONDIF9 Reduce diplomacy	-0.03	-0.03	-0.02
CONDIF10 Expel	-0.03	0.04	-0.22
CONDIF11 Seize	-0.01	-0.01	0.06
CONDIF12 Force	-0.07	0.01	0.09
CONDIF13 Total of all Conflict	-0.08	0.02	0.11
POWER89	0.02	-0.02	0

Table 4. POWER SHIFT VARIABLES (Continued)

	F10	F11	F12
D_V1 Gross national product per capita	0.04	0.1	0.15
D_V2 Population total	0	0	0.06
D_V3 Population urban percent	0.14	-0.01	0.12
D_V4 Fertility	-0.03	0.07	0.05
D_V5 Life expectancy	0.03	-0.01	0.07
D_V6 Infant mortality per 1000 deaths	-0.05	0.01	-0.04
D_V7 Population per physician	0.02	0.11	-0.02
D_V8 Passenger cars	-0.02	-0.01	0.05
D_V9 Population urban total	0	-0.04	0.05
D_V10 Urban population percent of total	0.14	-0.01	0.12
D_V11 Population growth rate annual percent	0.04	0.12	0.09
D_V12 Population growth rate urban annual percent	0	0.07	-0.02
D_V13 Population density sq. kil	0.95	0.03	0
D_V14 Birth rate crude per 1000	-0.03	0.07	-0.04
D_V15 Death rate crude per 1000	-0.08	-0.03	-0.04

D_V16 Arms exports in millions	0.01	0	-0.06
D_V17 Armed forces in thousands	-0.01	-0.02	0.02
D_V18 Armed forces per 1000 population	0.1	-0.05	0.2
D_V19 Arms imports in millions	-0.02	-0.01	0.81
D_V20 Civil rights, 1 equals the most to 7 the least	0.03	0.28	0.14
D_V21 Military expenditures in millions	0.01	0	0.01
D_V22 Political rights, 1 equals the most 7 the least	-0.01	0.31	0.12
D_V23 GNP (size)	-0.01	0.01	0.09
VDIFF1 GNP Per Capita	0.06	0.09	0.17
VDIFF2 Population Total	0.01	-0.01	0.11
VDIFF3 Population urban percent	-0.08	0	0.08
VDIFF4 Fertility	0	0.05	0.12
VDIFF5 Life expectancy	0.05	0.01	0.22
VDIFF6 Infant mortality per 1000 deaths	0.04	0.05	-0.15
VDIFF7 Population per physician	-0.03	0.03	-0.01
VDIFF8 Passenger cars	-0.03	-0.05	0.08
VDIFF9 Population urban total	0	-0.04	0.03
VDIFF10 Urban population percent of total	-0.08	-0.01	0.07
VDIFF11 Population growth rate annual percent	0.06	0.07	0.12
VDIFF12 Population growth rate urban annual percent	-0.01	-0.07	-0.07
VDIFF13 Population density sq. kil	0.97	0.03	-0.01
VDIFF14 Birth rate crude per 1000	-0.01	0.11	-0.09
VDIFF15 Death rate crude per 1000	0.01	-0.06	-0.2
VDIFF16 Arms exports in millions	0.01	-0.01	-0.06
VDIFF17 Armed forces in thousands	-0.04	0.02	0.07
VDIFF18 Armed forces per 1000 population	0.17	-0.01	0.1
VDIFF19 Arms imports in millions	-0.01	0	0.82
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.08	0.83	-0.04
VDIFF21 Military expenditures in millions	0.01	-0.01	0.04
VDIFF22 Political rights, 1 equals the most 7 the least	-0.01	0.9	0.02
VDIFF23 GNP (size)	0	0	0.1
D_COP1 Surrender, yield to order	0.01	-0.02	0.03
D_COP2 Praise, hail	0	-0.01	0.02
D_COP3 Promise own policy support	0	0	0
D_COP4 Express regret	-0.02	0.06	0.02
D_COP5 Extend economic aid (gift or loan)	0.01	0	0.02
D_COP6 Make substantive agreement	0	-0.01	0.02

D_COP7 Ask for information, policy or material	0	0.01	-0.01
D_COP8 Offer proposal	0.01	0.01	0.01
D_COP9 Total of all Cooperation	0	0	0.01
D_CON1 Reject	-0.01	-0.02	0.03
D_CON2 Accuse	0	0.01	0.03
D_CON3 Protest	0	0.01	-0.01
D_CON4 Deny	-0.01	-0.03	0.08
D_CON5 Demand	-0.01	-0.03	0.04
D_CON6 Warn	-0.01	0.01	0.04
D_CON7 Threat	-0.01	0.04	0.01
D_CON8 Demonstrations	-0.01	-0.01	0.05
D_CON9 Reduce diplomacy	-0.01	0.01	0.02
D_CON10 Expel	-0.05	0	0.08
D_CON11 Seize	-0.03	0.01	0.09
D_CON12 Force	-0.04	-0.03	0.22
D_CON13 Total Conflict	-0.03	-0.01	0.12
COPDIF1 Copdifl- Surrender, Yield to	0.04	-0.05	0.09
COPDIF2 Praise, hail	0.03	0	0
COPDIF3 Promise own policy support	0.01	0	-0.07
COPDIF4 Express regret	0.01	0.1	-0.1
COPDIF5 Extend economic aid (gift or loan)	0.02	-0.02	-0.02
COPDIF6 Make substantive agreement	0.01	-0.01	-0.08
COPDIF7 Ask for information, policy or material	0.04	0.01	-0.16
COPDIF8 Offer proposal	-0.01	-0.01	-0.18
COPDIF9 Total of all Cooperation	0.04	0	-0.1
CONDIF1 Condifl- Reject	0.01	0.01	-0.06
CONDIF2 Accuse	0	0.03	0.09
CONDIF3 Protest	0.01	0.01	-0.04
CONDIF4 Deny	-0.05	0.01	0.08
CONDIF5 Demand	0	-0.03	0.05
CONDIF6 Warn	-0.01	0.07	-0.07
CONDIF7 Threat	0.01	0.17	-0.17
CONDIF8 Demonstrations	-0.02	-0.02	0.06
CONDIF9 Reduce diplomacy	-0.03	0.02	-0.07
CONDIF10 Expel	0.01	0.09	0.05
CONDIF11 Seize	0.02	0.15	0.07
CONDIF12 Force	-0.01	-0.01	0.06
CONDIF13 Total of all Conflict	-0.01	0.01	0.08
POWER89	0.03	-0.02	0.07

Table 4. POWER SHIFT VARIABLES (Continued)

	F13	F14	F15	F16
D_V1 Gross national product per capita	-0.07	0.42	0.06	-0.03
D_V2 Population total	-0.08	0.02	-0.02	0
D_V3 Population urban percent	-0.03	0.05	0	0.01
D_V4 Fertility	0.02	0.02	0.09	-0.03
D_V5 Life expectancy	0.01	-0.01	-0.05	0.03
D_V6 Infant mortality per 1000 deaths	-0.03	0.06	0.03	0
D_V7 Population per physician	0.02	0.07	0.13	0.65
D_V8 Passenger cars	-0.12	0.16	-0.02	-0.01
D_V9 Population urban total	0.01	0.01	0.03	0.01
D_V10 Urban population percent of total	-0.02	0.04	0	0.02
D_V11 Population growth rate annual percent	0.01	0.06	-0.01	-0.05
D_V12 Population growth rate urban annual percent	-0.03	0.1	-0.01	0.11
D_V13 Population density sq. kil	0	0	-0.02	-0.01
D_V14 Birth rate crude per 1000	0.01	0	0.06	-0.03
D_V15 Death rate crude per 1000	-0.02	0.09	0.08	-0.04
D_V16 Arms exports in millions	0.13	-0.08	0.1	0.01
D_V17 Armed forces in thousands	-0.08	-0.14	0.08	0.02
D_V18 Armed forces per 1000 population	-0.12	-0.47	0.16	-0.01
D_V19 Arms imports in millions	0.02	-0.03	0.01	-0.02
D_V20 Civil rights, 1 equals the most to 7 the least	-0.06	-0.5	0.05	-0.09
D_V21 Military expenditures in millions	0.05	-0.05	0.07	0.02
D_V22 Political rights, 1 equals the most 7 the least	-0.08	-0.5	0.05	-0.04
D_V23 GNP (size)	-0.11	0.19	-0.01	-0.01
VDIFF1 GNP Per Capita	-0.07	0.42	0.05	-0.03
VDIFF2 Population Total	-0.03	0.04	-0.04	0
VDIFF3 Population urban percent	-0.11	-0.02	-0.02	0.02
VDIFF4 Fertility	0.04	0.08	-0.04	0.02
VDIFF5 Life expectancy	-0.08	0.24	-0.13	-0.06
VDIFF6 Infant mortality per 1000 deaths	0.07	-0.1	0.2	0.03
VDIFF7 Population per physician	-0.02	-0.03	-0.01	0.86
VDIFF8 Passenger cars	-0.13	0.2	-0.02	-0.01
VDIFF9 Population urban total	0.02	-0.04	0.03	0.02

VDIFF10 Urban population percent of total	-0.06	-0.02	0	0.02
VDIFF11 Population growth rate annual percent	0.01	0.1	-0.42	-0.01
VDIFF12 Population growth rate urban annual percent	-0.05	0.03	-0.37	0.46
VDIFF13 Population density sq. kil	0.01	-0.02	0.01	-0.02
VDIFF14 Birth rate crude per 1000	0.01	-0.04	-0.12	0
VDIFF15 Death rate crude per 1000	0.06	-0.24	0.16	0.04
VDIFF16 Arms exports in millions	0.16	-0.09	0.11	0.01
VDIFF17 Armed forces in thousands	-0.42	-0.18	0.13	0.03
VDIFF18 Armed forces per 1000 population	-0.32	-0.15	0.29	0.08
VDIFF19 Arms imports in millions	0	-0.01	0.01	-0.02
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.04	0.05	-0.01	-0.06
VDIFF21 Military expenditures in millions	0.03	-0.04	0.07	0.01
VDIFF22 Political rights, 1 equals the most 7 the least	0.07	-0.07	0.01	0.13
VDIFF23 GNP (size)	-0.1	0.18	-0.01	-0.01
D_COP1 Surrender, yield to order	0.01	-0.04	0.05	0.03
D_COP2 Praise, hail	-0.06	0.02	-0.01	0
D_COP3 Promise own policy support	-0.05	0.01	0.01	0
D_COP4 Express regret	0.08	0.02	-0.01	0.01
D_COP5 Extend economic aid (gift or loan)	-0.06	0.04	-0.02	0
D_COP6 Make substantive agreement	0	-0.02	0.03	0
D_COP7 Ask for information, policy or material	-0.02	0.01	0.02	0
D_COP8 Offer proposal	0.04	-0.06	0.03	0.01
D_COP9 Total of all Cooperation	-0.02	0	0.01	0
D_CON1 Reject	0.05	-0.02	0	0
D_CON2 Accuse	0.06	-0.06	0.02	0.01
D_CON3 Protest	-0.05	0	-0.01	0.01
D_CON4 Deny	0.01	-0.08	0.03	0
D_CON5 Demand	0.07	-0.07	0.03	0.01
D_CON6 Warn	0.12	0.01	-0.06	0
D_CON7 Threat	0.09	0.01	-0.09	-0.01
D_CON8 Demonstrations	0.02	0.02	-0.03	0
D_CON9 Reduce diplomacy	-0.04	0.04	-0.01	-0.01
D_CON10 Expel	0.27	0.03	-0.09	-0.03

D_CON11 Seize	0.18	0.07	-0.06	0
D_CON12 Force	0.18	0.07	-0.12	0
D_CON13 Total Conflict	0.12	0.01	-0.06	0
COPDIF1 Copdifl - Surrender, Yield to	0.15	-0.04	0.43	0.08
COPDIF2 Praise, hail	-0.07	0.05	-0.03	0
COPDIF3 Promise own policy support	0.29	-0.02	-0.01	-0.02
COPDIF4 Express regret	0.48	0.09	0.07	0
COPDIF5 Extend economic aid (gift or loan)	0.16	-0.05	0.02	0
COPDIF6 Make substantive agreement	0.04	-0.05	-0.02	0
COPDIF7 Ask for information, policy or material	0.21	-0.06	0.34	0.03
COPDIF8 Offer proposal	0.06	-0.03	0.1	-0.01
COPDIF9 Total of all Cooperation	0.26	-0.07	0.08	0.01
CONDIF1 Condifl - Reject	0.28	-0.12	0.05	0
CONDIF2 Accuse	0.01	0.12	-0.07	0
CONDIF3 Protest	-0.05	-0.05	-0.01	0.01
CONDIF4 Deny	-0.14	-0.08	0.05	-0.01
CONDIF5 Demand	0.21	0.06	0.03	0
CONDIF6 Warn	0.08	0.05	-0.17	-0.02
CONDIF7 Threat	0.24	0.07	-0.13	-0.04
CONDIF8 Demonstrations	0.13	-0.27	0.04	-0.02
CONDIF9 Reduce diplomacy	0.09	0.02	-0.04	-0.04
CONDIF10 Expel	0.73	-0.02	0.04	0
CONDIF11 Seize	0.14	0.09	-0.05	-0.03
CONDIF12 Force	0.19	0.05	0.18	0.01
CONDIF13 Total of all Conflict	0.22	0.08	0.16	0.01
POWER89	-0.06	-0.12	0.07	0.01

Rhos for Power Development

POWER SHIFT *RHOS*	R estimate = .77	
Factor 1	Correlation Coefficient	.327(**)
	Sig. (2-tailed)	0
	N	126
Factor 2	Correlation Coefficient	.178(*)
	Sig. (2-tailed)	0.046

	N	126
Factor 3	Correlation Coefficient	-0.053
	Sig. (2-tailed)	0.555
	N	126
Factor 4	Correlation Coefficient	-.179(*)
	Sig. (2-tailed)	0.045
	N	126
Factor 5	Correlation Coefficient	.381(**)
	Sig. (2-tailed)	0
	N	126
Factor 6	Correlation Coefficient	.247(**)
	Sig. (2-tailed)	0.005
	N	126
Factor 7	Correlation Coefficient	-0.059
	Sig. (2-tailed)	0.509
	N	126
Factor 8	Correlation Coefficient	-.247(**)
	Sig. (2-tailed)	0.005
	N	126
Factor 9	Correlation Coefficient	0.035
	Sig. (2-tailed)	0.701
	N	126
Factor 10	Correlation Coefficient	0.149
	Sig. (2-tailed)	0.096
	N	126
Factor 11	Correlation	-0.13

	Coefficient	
	Sig. (2-tailed)	0.146
	N	126
Factor 12	Correlation Coefficient	-.203(*)
	Sig. (2-tailed)	0.022
	N	126
Factor 13	Correlation Coefficient	-.225(*)
	Sig. (2-tailed)	0.011
	N	126
Factor 14	Correlation Coefficient	-0.087
	Sig. (2-tailed)	0.335
	N	126
Factor 15	Correlation Coefficient	.216(*)
	Sig. (2-tailed)	0.015
	N	126
Factor 16	Correlation Coefficient	0.13
	Sig. (2-tailed)	0.145
	N	126

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

PART THREE

TABLE 5. POLITICAL RIGHTS SHIFT VARIABLES

FACTOR LOADINGS AND *RHOS* FOR POLITICAL RIGHTS GROWTH

	F1	F2	F3
D_V1 Gross national product per capita	0.24	-0.72	0.02
D_V2 Population total	0.21	0.01	-0.08
D_V3 Population urban percent	0.13	-0.81	-0.06
D_V4 Fertility	-0.1	0.91	0.06
D_V5 Life expectancy	0.11	-0.89	-0.01
D_V6 Infant mortality per 1000 deaths	-0.11	0.88	0.02
D_V7 Population per physician	-0.06	0.47	0.08
D_V8 Passenger cars	0.9	-0.18	0.19
D_V9 Population urban total	0.54	-0.1	-0.36
D_V10 Urban population percent of total	0.14	-0.8	-0.08
D_V11 Population growth rate annual percent	-0.07	0.84	0.03
D_V12 Population growth rate urban annual percent	-0.11	0.88	0.05
D_V13 Population density sq. kil	-0.05	-0.21	0.02
D_V14 Birth rate crude per 1000	-0.1	0.93	0.06
D_V15 Death rate crude per 1000	-0.06	0.57	0.02
D_V16 Arms exports in millions	0.74	-0.12	-0.51
D_V17 Armed forces in thousands	0.55	-0.08	-0.38
D_V18 Armed forces per 1000 population	0.11	-0.21	-0.11
D_V19 Arms imports in millions	0.27	-0.02	-0.07
D_V20 Civil rights, 1 equals the most to 7 the least	-0.08	0.65	-0.07
D_V21 Military expenditures in millions	0.88	-0.11	-0.35
D_V22 Political rights, 1 equals the most 7 the least	-0.07	0.6	-0.11
D_V23 GNP (size)	0.89	-0.19	0.04
VDIFF1 GNP Per Capita	0.22	-0.7	0
VDIFF2 Population Total	0.11	0.09	-0.02
VDIFF3 Population urban percent	-0.13	0.19	0.11
VDIFF4 Fertility	0.06	0.19	-0.02

VDIFF5 Life expectancy	-0.09	0.57	0.02
VDIFF6 Infant mortality per 1000 deaths	0.11	-0.67	0.06
VDIFF7 Population per physician	0.04	-0.3	-0.02
VDIFF8 Passenger cars	0.82	-0.24	0.16
VDIFF9 Population urban total	0.31	-0.01	-0.35
VDIFF10 Urban population percent of total	-0.08	0.19	0.02
VDIFF11 Population growth rate annual percent	0	0.53	-0.13
VDIFF12 Population growth rate urban annual percent	0.03	0.09	-0.09
VDIFF13 Population density sq. kil	-0.04	-0.07	0.02
VDIFF14 Birth rate crude per 1000	0.08	0.18	-0.04
VDIFF15 Death rate crude per 1000	0.09	-0.81	0
VDIFF16 Arms exports in millions	0.67	-0.13	-0.57
VDIFF17 Armed forces in thousands	-0.21	0.05	0.06
VDIFF18 Armed forces per 1000 population	0	0.07	0.04
VDIFF19 Arms imports in millions	0.25	0	-0.05
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.02	0.26	0.04
VDIFF21 Military expenditures in millions	0.9	-0.11	-0.32
VDIFF23 GNP (size)	0.88	-0.19	-0.02
D_COP1 Surrender, yield to order	0.97	-0.07	-0.03
D_COP2 Praise, hail	0.96	-0.06	0.15
D_COP3 Promise own policy support	0.98	-0.06	0.1
D_COP4 Express regret	0.95	-0.11	-0.08
D_COP5 Extend economic aid (gift or loan)	0.97	-0.06	0.12
D_COP6 Make substantive agreement	0.95	-0.09	-0.17
D_COP7 Ask for information, policy or material	0.98	-0.06	0.07
D_COP8 Offer proposal	0.98	-0.04	-0.1
D_COP9 Total of all Cooperation	0.99	-0.07	0.02
D_CON1 Reject	0.96	-0.07	0.11
D_CON2 Accuse	0.98	-0.02	-0.03
D_CON3 Protest	0.98	-0.06	0.09
D_CON4 Deny	0.95	0	-0.03
D_CON5 Demand	0.97	-0.04	0
D_CON6 Warn	0.95	-0.03	0.09
D_CON7 Threat	0.89	-0.01	0.1
D_CON8 Demonstrations	0.96	-0.06	0.16
D_CON9 Reduce diplomacy	0.96	-0.11	0.13
D_CON10 Expel	0.67	-0.06	0.16
D_CON11 Seize	0.36	-0.06	-0.09

D_CON12 Force	0.1	0.06	0.06
D_CON13 Total Conflict	0.84	-0.01	0.06
COPDIF1 Copdifl - Surrender, Yield to	0.66	-0.16	0.01
COPDIF2 Praise, hail	0.38	0.05	0.8
COPDIF3 Promise own policy support	-0.7	0.04	0.24
COPDIF4 Express regret	-0.23	0.07	-0.12
COPDIF5 Extend economic aid (gift or loan)	-0.95	0.06	-0.14
COPDIF6 Make substantive agreement	-0.86	0.14	0.34
COPDIF7 Ask for information, policy or material	0.07	0.04	0.72
COPDIF8 Offer proposal	0.72	0.06	0.47
COPDIF9 Total of all Cooperation	-0.74	0.14	0.41
CONDIF1 Condifl - Reject	0.64	0.04	0.54
CONDIF2 Accuse	0.34	0.03	0.7
CONDIF3 Protest	0.94	-0.01	0.23
CONDIF4 Deny	-0.14	0.08	-0.02
CONDIF5 Demand	0.68	-0.02	0.48
CONDIF6 Warn	0.32	0.02	0.55
CONDIF7 Threat	-0.16	0.02	0.11
CONDIF8 Demonstrations	-0.22	0.34	0.14
CONDIF9 Reduce diplomacy	0.8	-0.09	0.32
CONDIF10 Expel	-0.07	-0.05	0.15
CONDIF11 Seize	-0.28	0.14	0.09
CONDIF12 Force	-0.75	-0.04	-0.05
CONDIF13 Total of all Conflict	-0.58	-0.02	0.17
POWER89	0.84	-0.13	-0.26
POWSH89	-0.1	0.07	-0.45

Table 5. POLITICAL RIGHTS DEVELOPMENT (Continued)

	F4	F5	F6
D_V1 Gross national product per capita	0.17	-0.01	-0.07
D_V2 Population total	-0.08	-0.04	-0.09
D_V3 Population urban percent	-0.11	0.28	-0.02
D_V4 Fertility	0.2	0.1	0.02
D_V5 Life expectancy	-0.35	-0.02	0.01
D_V6 Infant mortality per 1000 deaths	0.35	0.02	-0.03
D_V7 Population per physician	0.33	-0.09	0.04
D_V8 Passenger cars	0.04	-0.06	-0.13
D_V9 Population urban total	-0.03	0	0.02
D_V10 Urban population percent of total	-0.11	0.28	-0.01

D_V11 Population growth rate annual percent	-0.09	0.19	0.01
D_V12 Population growth rate urban annual percent	-0.02	0.28	-0.03
D_V13 Population density sq. kil	0	-0.07	0.01
D_V14 Birth rate crude per 1000	0.16	0.07	0.01
D_V15 Death rate crude per 1000	0.71	-0.05	-0.01
D_V16 Arms exports in millions	0.1	0	0.15
D_V17 Armed forces in thousands	-0.05	-0.01	-0.06
D_V18 Armed forces per 1000 population	-0.13	0.12	-0.1
D_V19 Arms imports in millions	-0.05	0.12	0.03
D_V20 Civil rights, 1 equals the most to 7 the least	0.11	0.11	-0.02
D_V21 Military expenditures in millions	0.07	0	0.06
D_V22 Political rights, 1 equals the most 7 the least	0.18	0.09	-0.04
D_V23 GNP (size)	0.04	-0.07	-0.11
VDIFF1 GNP Per Capita	0.16	-0.02	-0.08
VDIFF2 Population Total	-0.1	-0.03	-0.05
VDIFF3 Population urban percent	-0.11	0.92	-0.1
VDIFF4 Fertility	0.88	-0.03	0.04
VDIFF5 Life expectancy	-0.56	0.14	-0.1
VDIFF6 Infant mortality per 1000 deaths	0.46	-0.09	0.08
VDIFF7 Population per physician	-0.12	0.06	-0.01
VDIFF8 Passenger cars	0.03	-0.05	-0.14
VDIFF9 Population urban total	-0.09	0.05	0.02
VDIFF10 Urban population percent of total	-0.11	0.93	-0.05
VDIFF11 Population growth rate annual percent	0.41	-0.16	0.02
VDIFF12 Population growth rate urban annual percent	0.05	-0.49	-0.04
VDIFF13 Population density sq. kil	-0.04	-0.05	0.01
VDIFF14 Birth rate crude per 1000	0.85	-0.1	0.01
VDIFF15 Death rate crude per 1000	0.28	-0.14	0.06
VDIFF16 Arms exports in millions	0.1	0	0.18
VDIFF17 Armed forces in thousands	-0.17	-0.07	-0.4
VDIFF18 Armed forces per 1000 population	-0.11	0.01	-0.34
VDIFF19 Arms imports in millions	-0.05	0.12	0.01
VDIFF20 Civil rights, 1 equals the most to 7 the least	-0.03	-0.01	0.04
VDIFF21 Military expenditures in millions	0.06	0	0.05
VDIFF23 GNP (size)	0.04	-0.07	-0.11
D_COP1 Surrender, yield to order	0.01	-0.02	0
D_COP2 Praise, hail	0.01	-0.03	-0.07

D_COP3 Promise own policy support	0	-0.04	-0.06
D_COP4 Express regret	0.02	0.06	0.09
D_COP5 Extend economic aid (gift or loan)	0.01	-0.03	-0.07
D_COP6 Make substantive agreement	0	-0.03	0.01
D_COP7 Ask for information, policy or material	0	-0.01	-0.02
D_COP8 Offer proposal	0.01	-0.01	0.04
D_COP9 Total of all Cooperation	0.01	-0.02	-0.02
D_CON1 Reject	-0.02	-0.03	0.04
D_CON2 Accuse	0.01	0.01	0.06
D_CON3 Protest	0	-0.02	-0.05
D_CON4 Deny	-0.02	0.01	0.01
D_CON5 Demand	-0.01	-0.03	0.07
D_CON6 Warn	0.01	0.04	0.12
D_CON7 Threat	0.01	0.14	0.09
D_CON8 Demonstrations	-0.02	0	0.01
D_CON9 Reduce diplomacy	0.01	-0.03	-0.05
D_CON10 Expel	-0.03	0.01	0.28
D_CON11 Seize	-0.01	0.06	0.19
D_CON12 Force	0.03	0.04	0.19
D_CON13 Total Conflict	0.01	0.02	0.12
COPDIF1 Copdif1- Surrender, Yield to	-0.05	0.05	0.16
COPDIF2 Praise, hail	-0.01	0.02	-0.09
COPDIF3 Promise own policy support	-0.02	0.05	0.26
COPDIF4 Express regret	0.09	0.23	0.49
COPDIF5 Extend economic aid (gift or loan)	-0.01	0.04	0.16
COPDIF6 Make substantive agreement	-0.05	0.02	0.02
COPDIF7 Ask for information, policy or material	-0.07	0.13	0.22
COPDIF8 Offer proposal	0.04	0	0.04
COPDIF9 Total of all Cooperation	-0.03	0.1	0.24
CONDIF1 Condif1- Reject	-0.02	-0.02	0.28
CONDIF2 Accuse	0.01	0.07	-0.01
CONDIF3 Protest	-0.03	0.01	-0.05
CONDIF4 Deny	-0.01	0	-0.1
CONDIF5 Demand	0.04	-0.03	0.19
CONDIF6 Warn	0.05	0.11	0.08
CONDIF7 Threat	0.09	0.22	0.25
CONDIF8 Demonstrations	-0.08	-0.11	0.14
CONDIF9 Reduce diplomacy	-0.04	-0.03	0.09
CONDIF10 Expel	0.04	-0.2	0.74
CONDIF11 Seize	0	0.05	0.15

CONDIF12 Force	0.02	0.09	0.21
CONDIF13 Total of all Conflict	0.02	0.12	0.24
POWER89	-0.02	0	-0.05
POWSH89	-0.07	0.02	-0.14

Table 5. POLITICAL RIGHTS DEVELOPMENT (Continued)

	F10	F11	F12
D_V1 Gross national product per capita	0.03	0.19	-0.41
D_V2 Population total	0.01	0.06	-0.01
D_V3 Population urban percent	0.15	0.14	-0.08
D_V4 Fertility	-0.04	0.06	0.02
D_V5 Life expectancy	0.03	0.07	-0.05
D_V6 Infant mortality per 1000 deaths	-0.06	-0.04	0
D_V7 Population per physician	0	-0.01	-0.01
D_V8 Passenger cars	-0.03	0.07	-0.13
D_V9 Population urban total	-0.01	0.04	-0.03
D_V10 Urban population percent of total	0.15	0.13	-0.08
D_V11 Population growth rate annual percent	0.04	0.1	-0.03
D_V12 Population growth rate urban annual percent	0	-0.01	-0.06
D_V13 Population density sq. kil	0.96	0	0
D_V14 Birth rate crude per 1000	-0.03	-0.03	0.03
D_V15 Death rate crude per 1000	-0.09	-0.04	-0.01
D_V16 Arms exports in millions	-0.01	-0.07	0.05
D_V17 Armed forces in thousands	-0.01	0.01	0.14
D_V18 Armed forces per 1000 population	0.11	0.17	0.42
D_V19 Arms imports in millions	-0.02	0.8	0.05
D_V20 Civil rights, 1 equals the most to 7 the least	0.05	0.12	0.63
D_V21 Military expenditures in millions	0	0	0.04
D_V22 Political rights, 1 equals the most 7 the least	0.01	0.1	0.64
D_V23 GNP (size)	-0.02	0.11	-0.17
VDIFF1 GNP Per Capita	0.05	0.21	-0.42
VDIFF2 Population Total	0.02	0.11	-0.04
VDIFF3 Population urban percent	-0.07	0.08	0.05
VDIFF4 Fertility	-0.01	0.12	-0.06
VDIFF5 Life expectancy	0.06	0.23	-0.27
VDIFF6 Infant mortality per 1000 deaths	0.02	-0.15	0.09
VDIFF7 Population per physician	-0.03	-0.02	-0.01
VDIFF8 Passenger cars	-0.04	0.1	-0.19

VDIFF9 Population urban total	0	0.02	0.03
VDIFF10 Urban population percent of total	-0.07	0.06	0.04
VDIFF11 Population growth rate annual percent	0.08	0.11	-0.05
VDIFF12 Population growth rate urban annual percent	0.03	-0.08	-0.03
VDIFF13 Population density sq. kil	0.98	-0.01	0.02
VDIFF14 Birth rate crude per 1000	0.01	-0.1	0.04
VDIFF15 Death rate crude per 1000	0.01	-0.21	0.22
VDIFF16 Arms exports in millions	-0.01	-0.08	0.05
VDIFF17 Armed forces in thousands	-0.03	0.09	0.2
VDIFF18 Armed forces per 1000 population	0.16	0.09	0.06
VDIFF19 Arms imports in millions	-0.01	0.81	0.03
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.07	-0.02	0.07
VDIFF21 Military expenditures in millions	0	0.03	0.02
VDIFF23 GNP (size)	-0.02	0.12	-0.18
D_COP1 Surrender, yield to order	0	0.02	0.01
D_COP2 Praise, hail	0.01	0.03	-0.01
D_COP3 Promise own policy support	0	0.01	-0.02
D_COP4 Express regret	-0.01	0.02	0.01
D_COP5 Extend economic aid (gift or loan)	0.01	0.03	-0.03
D_COP6 Make substantive agreement	0	0.02	0.01
D_COP7 Ask for information, policy or material	0	0	-0.01
D_COP8 Offer proposal	0.01	0	0.04
D_COP9 Total of all Cooperation	0	0.02	0
D_CON1 Reject	0	0.03	0
D_CON2 Accuse	0	0.03	0.04
D_CON3 Protest	0	-0.01	0
D_CON4 Deny	-0.01	0.07	0.05
D_CON5 Demand	0	0.03	0.04
D_CON6 Warn	0	0.03	0
D_CON7 Threat	0	0	0.01
D_CON8 Demonstrations	0	0.05	-0.02
D_CON9 Reduce diplomacy	-0.02	0.03	-0.03
D_CON10 Expel	-0.03	0.08	-0.02
D_CON11 Seize	-0.04	0.09	-0.07
D_CON12 Force	-0.03	0.21	-0.04
D_CON13 Total Conflict	-0.02	0.11	0
COPDIF1 Copdif1 - Surrender, Yield to	0	0.1	-0.01
COPDIF2 Praise, hail	0.04	0.01	-0.04

COPDIF3 Promise own policy support	0.01	-0.08	-0.06
COPDIF4 Express regret	-0.01	-0.12	-0.1
COPDIF5 Extend economic aid (gift or loan)	0.02	-0.03	0.02
COPDIF6 Make substantive agreement	0.01	-0.08	0.01
COPDIF7 Ask for information, policy or material	0.02	-0.12	0.04
COPDIF8 Offer proposal	-0.01	-0.17	-0.04
COPDIF9 Total of all Cooperation	0.03	-0.11	0
CONDIF1 Condifl - Reject	0.01	-0.06	0.07
CONDIF2 Accuse	0.01	0.09	-0.11
CONDIF3 Protest	0.02	-0.04	0.03
CONDIF4 Deny	-0.05	0.07	0.09
CONDIF5 Demand	0	0.05	-0.12
CONDIF6 Warn	0.02	-0.08	-0.03
CONDIF7 Threat	0.02	-0.19	-0.04
CONDIF8 Demonstrations	0	0.04	0.18
CONDIF9 Reduce diplomacy	-0.03	-0.05	-0.04
CONDIF10 Expel	0.02	0.06	0.03
CONDIF11 Seize	0	0.07	-0.04
CONDIF12 Force	-0.03	0.07	-0.03
CONDIF13 Total of all Conflict	-0.03	0.08	-0.06
POWER89	0.02	0.07	0.1
POWSH89	0.1	0.1	0.03

Table 5. POLITICAL RIGHTS DEVELOPMENT (Continued)

	F13	F14	F15
D_V1 Gross national product per capita	0.01	-0.01	0.18
D_V2 Population total	-0.03	0	0
D_V3 Population urban percent	0.01	0.03	-0.06
D_V4 Fertility	0.1	-0.02	0.05
D_V5 Life expectancy	-0.03	0.03	-0.02
D_V6 Infant mortality per 1000 deaths	0	-0.01	0.02
D_V7 Population per physician	0.07	0.67	0.12
D_V8 Passenger cars	-0.06	0	0.06
D_V9 Population urban total	0.07	0.01	-0.01
D_V10 Urban population percent of total	0.02	0.03	-0.06
D_V11 Population growth rate annual percent	0.01	-0.03	0.1
D_V12 Population growth rate urban annual percent	-0.01	0.12	0.08
D_V13 Population density sq. kil	-0.01	0	0.03

D_V14 Birth rate crude per 1000	0.07	-0.02	0.05
D_V15 Death rate crude per 1000	0	-0.03	-0.01
D_V16 Arms exports in millions	0.16	0.01	0.02
D_V17 Armed forces in thousands	0.08	0.02	-0.05
D_V18 Armed forces per 1000 population	0.22	-0.02	-0.17
D_V19 Arms imports in millions	0.01	-0.03	-0.02
D_V20 Civil rights, 1 equals the most to 7 the least	0.01	-0.06	0.2
D_V21 Military expenditures in millions	0.11	0.01	0.01
D_V22 Political rights, 1 equals the most 7 the least	-0.01	-0.01	0.19
D_V23 GNP (size)	-0.03	0	0.1
VDIFF1 GNP Per Capita	0.03	-0.01	0.17
VDIFF2 Population Total	-0.04	-0.01	-0.02
VDIFF3 Population urban percent	-0.01	0.01	-0.03
VDIFF4 Fertility	-0.02	0.01	0
VDIFF5 Life expectancy	-0.08	-0.07	-0.01
VDIFF6 Infant mortality per 1000 deaths	0.19	0.03	0.09
VDIFF7 Population per physician	0.01	0.85	-0.02
VDIFF8 Passenger cars	-0.04	0	0.04
VDIFF9 Population urban total	0.05	0.01	-0.05
VDIFF10 Urban population percent of total	0.03	0.01	-0.02
VDIFF11 Population growth rate annual percent	-0.43	0.01	-0.02
VDIFF12 Population growth rate urban annual percent	-0.43	0.48	-0.25
VDIFF13 Population density sq. kil	0.02	-0.01	0.04
VDIFF14 Birth rate crude per 1000	-0.09	0.01	-0.04
VDIFF15 Death rate crude per 1000	0.14	0.03	-0.06
VDIFF16 Arms exports in millions	0.18	0.01	0.02
VDIFF17 Armed forces in thousands	0.09	0.07	-0.06
VDIFF18 Armed forces per 1000 population	0.42	0.07	-0.05
VDIFF19 Arms imports in millions	0.03	-0.03	0
VDIFF20 Civil rights, 1 equals the most to 7 the least	0.02	0	0.85
VDIFF21 Military expenditures in millions	0.11	0.01	0.02
VDIFF23 GNP (size)	0	-0.01	0.1
D_COP1 Surrender, yield to order	0.09	0.02	-0.02
D_COP2 Praise, hail	-0.04	0	-0.02
D_COP3 Promise own policy support	0.01	0	0
D_COP4 Express regret	-0.04	0.02	0.04
D_COP5 Extend economic aid (gift or loan)	-0.03	0	0.01
D_COP6 Make substantive agreement	0.05	0	-0.01

D_COP7 Ask for information, policy or material	0.01	0	0.01
D_COP8 Offer proposal	0.05	0	-0.02
D_COP9 Total of all Cooperation	0.01	0	0
D_CON1 Reject	0	0	-0.04
D_CON2 Accuse	0.04	0	-0.04
D_CON3 Protest	-0.02	0.01	0
D_CON4 Deny	0.05	0	-0.08
D_CON5 Demand	0.04	0	-0.09
D_CON6 Warn	-0.08	-0.01	-0.04
D_CON7 Threat	-0.12	-0.02	0
D_CON8 Demonstrations	-0.05	-0.01	-0.03
D_CON9 Reduce diplomacy	-0.03	0	0.02
D_CON10 Expel	-0.14	-0.01	-0.08
D_CON11 Seize	-0.05	-0.01	0.06
D_CON12 Force	-0.16	-0.02	-0.05
D_CON13 Total Conflict	-0.07	-0.01	-0.05
COPDIF1 Copdifl- Surrender, Yield to	0.45	0.09	0
COPDIF2 Praise, hail	-0.09	-0.01	-0.01
COPDIF3 Promise own policy support	0.08	-0.02	-0.03
COPDIF4 Express regret	0.13	-0.02	0.19
COPDIF5 Extend economic aid (gift or loan)	0.06	-0.01	-0.04
COPDIF6 Make substantive agreement	0.01	-0.01	-0.04
COPDIF7 Ask for information, policy or material	0.28	0.05	0.03
COPDIF8 Offer proposal	0.16	-0.01	-0.03
COPDIF9 Total of all Cooperation	0.14	0	-0.02
CONDIF1 Condifl- Reject	0.05	-0.01	-0.04
CONDIF2 Accuse	-0.08	-0.02	0.08
CONDIF3 Protest	0	0.01	-0.02
CONDIF4 Deny	0.05	0.01	-0.01
CONDIF5 Demand	0.08	-0.01	-0.01
CONDIF6 Warn	-0.19	-0.03	0.07
CONDIF7 Threat	-0.1	-0.05	0.2
CONDIF8 Demonstrations	0.14	-0.01	-0.16
CONDIF9 Reduce diplomacy	-0.04	-0.02	0.04
CONDIF10 Expel	-0.02	0.02	0.01
CONDIF11 Seize	-0.06	-0.02	0.25
CONDIF12 Force	0.15	0.02	0.06
CONDIF13 Total of all Conflict	0.12	0.01	0.09
POWER89	0.1	0	-0.03
POWSH89	0.48	0.05	-0.03

Rhos for Political Rights Development

POLITICAL RIGHTS SHIFT	R estimate = .64	VDIFF22
Factor 1	Correlation Coefficient	0.058
	Sig. (2-tailed)	0.518
	N	126
Factor 2	Correlation Coefficient	0.169
	Sig. (2-tailed)	0.058
	N	126
Factor 3	Correlation Coefficient	0.038
	Sig. (2-tailed)	0.671
	N	126
Factor 4	Correlation Coefficient	0.001
	Sig. (2-tailed)	0.995
	N	126
Factor 5	Correlation Coefficient	-0.075
	Sig. (2-tailed)	0.406
	N	126
Factor 6	Correlation Coefficient	-0.116
	Sig. (2-tailed)	0.197
	N	126
Factor 7	Correlation Coefficient	.190(*)
	Sig. (2-tailed)	0.033
	N	126
Factor 8	Correlation Coefficient	-0.045

	Sig. (2-tailed)	0.617
	N	126
Factor 9	Correlation Coefficient	0.122
	Sig. (2-tailed)	0.175
	N	126
Factor 10	Correlation Coefficient	0.127
	Sig. (2-tailed)	0.158
	N	126
Factor 11	Correlation Coefficient	0.037
	Sig. (2-tailed)	0.683
	N	126
Factor 12	Correlation Coefficient	.202(*)
	Sig. (2-tailed)	0.023
	N	126
Factor 13	Correlation Coefficient	-0.024
	Sig. (2-tailed)	0.793
	N	126
Factor 14	Correlation Coefficient	0.015
	Sig. (2-tailed)	0.871
	N	126
Factor 15	Correlation Coefficient	.528(**)
	Sig. (2-tailed)	0
	N	126

PART FOUR

TABLE 6. CIVIL RIGHTS SHIFT VARIABLES

FACTOR LOADINGS AND *RHOS* FOR CIVIL RIGHTSGROWTH

	F1	F2	F3
D_V1 Gross national product per capita	0.24	-0.72	0.03
D_V2 Population total	0.21	0.01	-0.07
D_V3 Population urban percent	0.13	-0.82	-0.05
D_V4 Fertility	-0.1	0.92	0.06
D_V5 Life expectancy	0.11	-0.89	-0.01
D_V6 Infant mortality per 1000 deaths	-0.11	0.88	0.02
D_V7 Population per physician	-0.06	0.48	0.07
D_V8 Passenger cars	0.9	-0.18	0.19
D_V9 Population urban total	0.53	-0.1	-0.37
D_V10 Urban population percent of total	0.14	-0.82	-0.07
D_V11 Population growth rate annual percent	-0.07	0.83	0.03
D_V12 Population growth rate urban annual percent	-0.11	0.88	0.05
D_V13 Population density sq. kil	-0.05	-0.21	0.02
D_V14 Birth rate crude per 1000	-0.1	0.94	0.05
D_V15 Death rate crude per 1000	-0.06	0.57	0.01
D_V16 Arms exports in millions	0.74	-0.12	-0.52
D_V17 Armed forces in thousands	0.55	-0.08	-0.39
D_V18 Armed forces per 1000 population	0.1	-0.21	-0.11
D_V19 Arms imports in millions	0.26	-0.03	-0.07
D_V20 Civil rights, 1 equals the most to 7 the least	-0.08	0.67	-0.08
D_V21 Military expenditures in millions	0.88	-0.1	-0.36
D_V22 Political rights, 1 equals the most 7 the least	-0.07	0.62	-0.11
D_V23 GNP (size)	0.89	-0.19	0.04
VDIFF1 GNP Per Capita	0.22	-0.71	0
VDIFF2 Population Total	0.11	0.09	-0.02
VDIFF3 Population urban percent	-0.13	0.18	0.11
VDIFF4 Fertility	0.06	0.18	-0.01
VDIFF5 Life expectancy	-0.09	0.55	0.03
VDIFF6 Infant mortality per 1000 deaths	0.11	-0.65	0.05
VDIFF7 Population per physician	0.04	-0.3	-0.02

VDIFF8 Passenger cars	0.82	-0.23	0.16
VDIFF9 Population urban total	0.31	-0.01	-0.36
VDIFF10 Urban population percent of total	-0.08	0.19	0.02
VDIFF11 Population growth rate annual percent	0	0.52	-0.11
VDIFF12 Population growth rate urban annual percent	0.02	0.07	-0.07
VDIFF13 Population density sq. kil	-0.04	-0.06	0.02
VDIFF14 Birth rate crude per 1000	0.08	0.16	-0.03
VDIFF15 Death rate crude per 1000	0.09	-0.8	-0.01
VDIFF16 Arms exports in millions	0.67	-0.13	-0.59
VDIFF17 Armed forces in thousands	-0.22	0.05	0.06
VDIFF18 Armed forces per 1000 population	0	0.07	0.03
VDIFF19 Arms imports in millions	0.25	-0.01	-0.05
VDIFF21 Military expenditures in millions	0.9	-0.11	-0.33
VDIFF22 Political rights, 1 equals the most 7 the least	0.04	0.14	-0.02
VDIFF23 GNP (size)	0.88	-0.19	-0.02
D_COP1 Surrender, yield to order	0.97	-0.07	-0.03
D_COP2 Praise, hail	0.96	-0.07	0.15
D_COP3 Promise own policy support	0.98	-0.06	0.1
D_COP4 Express regret	0.95	-0.11	-0.09
D_COP5 Extend economic aid (gift or loan)	0.97	-0.06	0.12
D_COP6 Make substantive agreement	0.95	-0.09	-0.18
D_COP7 Ask for information, policy or material	0.98	-0.06	0.07
D_COP8 Offer proposal	0.98	-0.04	-0.11
D_COP9 Total of all Cooperation	0.99	-0.07	0.02
D_CON1 Reject	0.96	-0.08	0.11
D_CON2 Accuse	0.97	-0.02	-0.03
D_CON3 Protest	0.98	-0.06	0.09
D_CON4 Deny	0.95	0	-0.03
D_CON5 Demand	0.97	-0.04	-0.01
D_CON6 Warn	0.95	-0.04	0.09
D_CON7 Threat	0.89	-0.01	0.1
D_CON8 Demonstrations	0.96	-0.06	0.16
D_CON9 Reduce diplomacy	0.96	-0.11	0.13
D_CON10 Expel	0.67	-0.07	0.16
D_CON11 Seize	0.36	-0.05	-0.09
D_CON12 Force	0.1	0.06	0.06
D_CON13 Total Conflict	0.84	-0.01	0.05
COPDIF1 Copdif1- Surrender, Yield to	0.66	-0.15	-0.01

COPDIF2 Praise, hail	0.39	0.05	0.8
COPDIF3 Promise own policy support	-0.7	0.03	0.24
COPDIF4 Express regret	-0.23	0.08	-0.14
COPDIF5 Extend economic aid (gift or loan)	-0.95	0.06	-0.14
COPDIF6 Make substantive agreement	-0.86	0.14	0.35
COPDIF7 Ask for information, policy or material	0.08	0.04	0.7
COPDIF8 Offer proposal	0.72	0.06	0.46
COPDIF9 Total of all Cooperation	-0.74	0.14	0.4
CONDIF1 Condif1 - Reject	0.64	0.04	0.53
CONDIF2 Accuse	0.34	0.03	0.7
CONDIF3 Protest	0.95	-0.01	0.23
CONDIF4 Deny	-0.14	0.08	-0.03
CONDIF5 Demand	0.68	-0.02	0.47
CONDIF6 Warn	0.32	0.02	0.55
CONDIF7 Threat	-0.15	0.03	0.1
CONDIF8 Demonstrations	-0.22	0.33	0.14
CONDIF9 Reduce diplomacy	0.8	-0.09	0.32
CONDIF10 Expel	-0.07	-0.05	0.14
CONDIF11 Seize	-0.28	0.16	0.09
CONDIF12 Force	-0.75	-0.03	-0.07
CONDIF13 Total of all Conflict	-0.58	-0.02	0.16
POWER89	0.83	-0.13	-0.27
POWSH89	-0.1	0.07	-0.46

Table 6. CIVIL RIGHTS DEVELOPMENT (Continued)

	F4	F5	F6
D_V1 Gross national product per capita	-0.03	-0.11	-0.06
D_V2 Population total	0.01	0.95	-0.09
D_V3 Population urban percent	0.15	-0.13	-0.02
D_V4 Fertility	0.08	-0.09	0.03
D_V5 Life expectancy	0.05	-0.01	-0.01
D_V6 Infant mortality per 1000 deaths	-0.01	0.02	-0.01
D_V7 Population per physician	-0.08	-0.02	0
D_V8 Passenger cars	-0.09	-0.01	-0.08
D_V9 Population urban total	-0.04	0.73	0.08
D_V10 Urban population percent of total	0.15	-0.13	-0.01
D_V11 Population growth rate annual percent	0.14	-0.09	0.01
D_V12 Population growth rate urban annual percent	0.03	-0.01	0.03

D_V13 Population density sq. kil	0	0.01	-0.01
D_V14 Birth rate crude per 1000	0.08	-0.08	0.02
D_V15 Death rate crude per 1000	-0.13	-0.02	-0.03
D_V16 Arms exports in millions	-0.08	0.15	0.2
D_V17 Armed forces in thousands	0.11	0.67	0.11
D_V18 Armed forces per 1000 population	0.58	-0.15	-0.15
D_V19 Arms imports in millions	0.44	0.18	-0.01
D_V20 Civil rights, 1 equals the most to 7 the least	0.08	0.06	0.15
D_V21 Military expenditures in millions	-0.08	0.15	0.16
D_V22 Political rights, 1 equals the most 7 the least	0.07	0.03	0.13
D_V23 GNP (size)	-0.08	0.09	-0.02
VDIFF1 GNP Per Capita	-0.03	-0.11	-0.05
VDIFF2 Population Total	0.03	0.94	-0.13
VDIFF3 Population urban percent	0.06	-0.02	0.07
VDIFF4 Fertility	-0.08	-0.15	0.02
VDIFF5 Life expectancy	0.03	-0.07	-0.01
VDIFF6 Infant mortality per 1000 deaths	0.01	0.07	-0.02
VDIFF7 Population per physician	0.07	0.01	-0.03
VDIFF8 Passenger cars	-0.1	0.02	-0.07
VDIFF9 Population urban total	-0.01	0.85	0.08
VDIFF10 Urban population percent of total	0.06	0	0.11
VDIFF11 Population growth rate annual percent	-0.06	-0.14	0.13
VDIFF12 Population growth rate urban annual percent	0	0.14	0.04
VDIFF13 Population density sq. kil	0.02	0.01	-0.02
VDIFF14 Birth rate crude per 1000	-0.01	-0.13	0.01
VDIFF15 Death rate crude per 1000	-0.06	0.11	0.01
VDIFF16 Arms exports in millions	-0.08	0.16	0.22
VDIFF17 Armed forces in thousands	0.67	0.14	0.11
VDIFF18 Armed forces per 1000 population	0.69	-0.12	0.15
VDIFF19 Arms imports in millions	0.41	0.18	0.02
VDIFF21 Military expenditures in millions	-0.08	0.12	0.15
VDIFF22 Political rights, 1 equals the most 7 the least	0.05	-0.06	0.02
VDIFF23 GNP (size)	-0.08	0.09	0
D_COP1 Surrender, yield to order	0.05	0.04	-0.09
D_COP2 Praise, hail	-0.04	0.02	-0.15
D_COP3 Promise own policy support	-0.02	0.02	-0.14
D_COP4 Express regret	0.13	0.06	-0.08
D_COP5 Extend economic aid (gift or loan)	-0.05	0.05	-0.11

D_COP6 Make substantive agreement	-0.01	0.19	-0.05
D_COP7 Ask for information, policy or material	-0.01	0.01	-0.12
D_COP8 Offer proposal	-0.02	0.05	-0.01
D_COP9 Total of all Cooperation	-0.01	0.06	-0.1
D_CON1 Reject	0.07	0.01	-0.21
D_CON2 Accuse	0.08	0.05	0.07
D_CON3 Protest	-0.03	0.06	-0.09
D_CON4 Deny	0.21	0.07	0.02
D_CON5 Demand	0.03	0.05	-0.02
D_CON6 Warn	0.18	0.03	0
D_CON7 Threat	0.31	0.03	0.07
D_CON8 Demonstrations	0.07	0.03	-0.1
D_CON9 Reduce diplomacy	0.01	0.06	-0.09
D_CON10 Expel	0.47	0.03	-0.14
D_CON11 Seize	0.85	0.03	0.03
D_CON12 Force	0.86	0.03	0.22
D_CON13 Total Conflict	0.47	0.05	0.08
COPDIF1 Copdif1 - Surrender, Yield to	0	0.18	0.31
COPDIF2 Praise, hail	-0.07	-0.34	-0.06
COPDIF3 Promise own policy support	0.17	-0.28	-0.26
COPDIF4 Express regret	0.16	-0.48	0.39
COPDIF5 Extend economic aid (gift or loan)	0.08	-0.04	0.03
COPDIF6 Make substantive agreement	0.05	-0.21	-0.05
COPDIF7 Ask for information, policy or material	0.03	-0.07	0.28
COPDIF8 Offer proposal	-0.08	-0.05	0.17
COPDIF9 Total of all Cooperation	0.08	-0.32	0.11
CONDIF1 Condif1 - Reject	0.11	-0.22	0.05
CONDIF2 Accuse	-0.03	-0.36	0.38
CONDIF3 Protest	-0.05	-0.03	0
CONDIF4 Deny	0.2	-0.02	0.88
CONDIF5 Demand	-0.07	-0.31	0.19
CONDIF6 Warn	0.15	-0.12	0.63
CONDIF7 Threat	0.32	0.01	0.75
CONDIF8 Demonstrations	-0.08	-0.21	0.58
CONDIF9 Reduce diplomacy	0.07	0.11	-0.01
CONDIF10 Expel	0.05	-0.1	0.18
CONDIF11 Seize	0.74	-0.02	0.31
CONDIF12 Force	0.22	0.1	0.48
CONDIF13 Total of all Conflict	0.26	0	0.65
POWER89	0.08	0.4	0.04

POWSH89	0.54	-0.03	0.33

Table 6. CIVIL RIGHTS DEVELOPMENT (Continued)

	F7	F8	F9
D_V1 Gross national product per capita	0.14	-0.02	-0.07
D_V2 Population total	-0.08	-0.04	-0.08
D_V3 Population urban percent	-0.09	0.29	-0.01
D_V4 Fertility	0.19	0.1	0.02
D_V5 Life expectancy	-0.34	-0.01	0.03
D_V6 Infant mortality per 1000 deaths	0.33	0.01	-0.05
D_V7 Population per physician	0.32	-0.09	0.03
D_V8 Passenger cars	0.03	-0.07	-0.13
D_V9 Population urban total	-0.04	0	0.01
D_V10 Urban population percent of total	-0.09	0.29	0
D_V11 Population growth rate annual percent	-0.1	0.2	0.02
D_V12 Population growth rate urban annual percent	-0.02	0.28	-0.02
D_V13 Population density sq. kil	0	-0.07	0.01
D_V14 Birth rate crude per 1000	0.15	0.07	0
D_V15 Death rate crude per 1000	0.7	-0.06	-0.03
D_V16 Arms exports in millions	0.1	-0.01	0.14
D_V17 Armed forces in thousands	-0.04	-0.01	-0.06
D_V18 Armed forces per 1000 population	-0.11	0.13	-0.09
D_V19 Arms imports in millions	-0.04	0.12	0.04
D_V20 Civil rights, 1 equals the most to 7 the least	0.1	0.12	-0.03
D_V21 Military expenditures in millions	0.07	-0.01	0.05
D_V22 Political rights, 1 equals the most 7 the least	0.16	0.09	-0.05
D_V23 GNP (size)	0.02	-0.08	-0.12
VDIFF1 GNP Per Capita	0.14	-0.02	-0.07
VDIFF2 Population Total	-0.11	-0.02	-0.04
VDIFF3 Population urban percent	-0.1	0.92	-0.09
VDIFF4 Fertility	0.89	-0.02	0.05
VDIFF5 Life expectancy	-0.54	0.16	-0.06
VDIFF6 Infant mortality per 1000 deaths	0.41	-0.12	0.04
VDIFF7 Population per physician	-0.12	0.07	-0.01
VDIFF8 Passenger cars	0.01	-0.07	-0.15
VDIFF9 Population urban total	-0.08	0.05	0.02
VDIFF10 Urban population percent of total	-0.09	0.93	-0.05
VDIFF11 Population growth rate annual percent	0.44	-0.13	0.04

VDIFF12 Population growth rate urban annual percent	0.1	-0.46	0
VDIFF13 Population density sq. kil	-0.05	-0.05	0.01
VDIFF14 Birth rate crude per 1000	0.87	-0.08	0.02
VDIFF15 Death rate crude per 1000	0.27	-0.16	0.04
VDIFF16 Arms exports in millions	0.1	0	0.16
VDIFF17 Armed forces in thousands	-0.15	-0.06	-0.38
VDIFF18 Armed forces per 1000 population	-0.1	0	-0.34
VDIFF19 Arms imports in millions	-0.04	0.12	0.01
VDIFF21 Military expenditures in millions	0.06	-0.01	0.03
VDIFF22 Political rights, 1 equals the most 7 the least	0.13	-0.04	0.08
VDIFF23 GNP (size)	0.02	-0.08	-0.12
D_COP1 Surrender, yield to order	0.01	-0.02	0
D_COP2 Praise, hail	0.02	-0.03	-0.06
D_COP3 Promise own policy support	0	-0.04	-0.05
D_COP4 Express regret	0.02	0.06	0.09
D_COP5 Extend economic aid (gift or loan)	0.01	-0.03	-0.06
D_COP6 Make substantive agreement	0	-0.03	0
D_COP7 Ask for information, policy or material	0	0	-0.02
D_COP8 Offer proposal	0.01	-0.01	0.04
D_COP9 Total of all Cooperation	0.01	-0.02	-0.02
D_CON1 Reject	-0.01	-0.03	0.05
D_CON2 Accuse	0.01	0.01	0.06
D_CON3 Protest	0	-0.02	-0.05
D_CON4 Deny	-0.01	0.01	0.02
D_CON5 Demand	0	-0.03	0.07
D_CON6 Warn	0.02	0.05	0.13
D_CON7 Threat	0.01	0.14	0.09
D_CON8 Demonstrations	-0.02	0	0.01
D_CON9 Reduce diplomacy	0	-0.03	-0.04
D_CON10 Expel	-0.02	0.02	0.29
D_CON11 Seize	-0.02	0.05	0.17
D_CON12 Force	0.02	0.04	0.18
D_CON13 Total Conflict	0.01	0.03	0.12
COPDIF1 Copdif1- Surrender, Yield to	-0.04	0.04	0.16
COPDIF2 Praise, hail	-0.01	0.02	-0.08
COPDIF3 Promise own policy support	-0.01	0.05	0.27
COPDIF4 Express regret	0.06	0.21	0.45

COPDIF5 Extend economic aid (gift or loan)	0	0.04	0.16
COPDIF6 Make substantive agreement	-0.05	0.02	0.03
COPDIF7 Ask for information, policy or material	-0.04	0.13	0.23
COPDIF8 Offer proposal	0.04	0	0.05
COPDIF9 Total of all Cooperation	-0.02	0.1	0.24
CONDIF1 Condifl - Reject	-0.01	-0.01	0.29
CONDIF2 Accuse	0	0.06	-0.02
CONDIF3 Protest	-0.03	0.01	-0.04
CONDIF4 Deny	0	0	-0.11
CONDIF5 Demand	0.04	-0.04	0.19
CONDIF6 Warn	0.03	0.1	0.07
CONDIF7 Threat	0.06	0.21	0.22
CONDIF8 Demonstrations	-0.03	-0.08	0.17
CONDIF9 Reduce diplomacy	-0.03	-0.02	0.1
CONDIF10 Expel	0.05	-0.19	0.76
CONDIF11 Seize	-0.03	0.04	0.12
CONDIF12 Force	0.01	0.08	0.2
CONDIF13 Total of all Conflict	0.01	0.1	0.22
POWER89	-0.02	0	-0.05
POWSH89	-0.08	0	-0.16

Table 6. CIVIL RIGHTS DEVELOPMENT (Continued)

	F10	F11	F12
D_V1 Gross national product per capita	0.03	0.21	-0.41
D_V2 Population total	0.01	0.06	-0.03
D_V3 Population urban percent	0.14	0.14	-0.02
D_V4 Fertility	-0.04	0.07	0
D_V5 Life expectancy	0.03	0.09	0.01
D_V6 Infant mortality per 1000 deaths	-0.05	-0.05	-0.05
D_V7 Population per physician	0	-0.02	-0.08
D_V8 Passenger cars	-0.02	0.06	-0.16
D_V9 Population urban total	-0.01	0.04	-0.04
D_V10 Urban population percent of total	0.14	0.14	-0.01
D_V11 Population growth rate annual percent	0.04	0.12	-0.04
D_V12 Population growth rate urban annual percent	0	0.01	-0.09
D_V13 Population density sq. kil	0.96	-0.01	0
D_V14 Birth rate crude per 1000	-0.03	-0.02	0.01
D_V15 Death rate crude per 1000	-0.09	-0.06	-0.07

D_V16 Arms exports in millions	0	-0.07	0.04
D_V17 Armed forces in thousands	-0.01	0.01	0.15
D_V18 Armed forces per 1000 population	0.1	0.18	0.5
D_V19 Arms imports in millions	-0.02	0.77	0.05
D_V20 Civil rights, 1 equals the most to 7 the least	0.05	0.1	0.5
D_V21 Military expenditures in millions	0	0	0.03
D_V22 Political rights, 1 equals the most 7 the least	0.01	0.07	0.5
D_V23 GNP (size)	-0.01	0.1	-0.21
VDIFF1 GNP Per Capita	0.05	0.23	-0.42
VDIFF2 Population Total	0.02	0.1	-0.05
VDIFF3 Population urban percent	-0.07	0.08	0.04
VDIFF4 Fertility	-0.01	0.12	-0.07
VDIFF5 Life expectancy	0.06	0.29	-0.18
VDIFF6 Infant mortality per 1000 deaths	0.02	-0.19	0.01
VDIFF7 Population per physician	-0.04	-0.04	0
VDIFF8 Passenger cars	-0.04	0.09	-0.22
VDIFF9 Population urban total	0	0.02	0.02
VDIFF10 Urban population percent of total	-0.07	0.06	0.04
VDIFF11 Population growth rate annual percent	0.08	0.12	-0.06
VDIFF12 Population growth rate urban annual percent	0.01	-0.07	0.05
VDIFF13 Population density sq. kil	0.98	-0.01	0.02
VDIFF14 Birth rate crude per 1000	0	-0.08	0.05
VDIFF15 Death rate crude per 1000	0	-0.24	0.2
VDIFF16 Arms exports in millions	0	-0.08	0.04
VDIFF17 Armed forces in thousands	-0.03	0.12	0.28
VDIFF18 Armed forces per 1000 population	0.16	0.12	0.17
VDIFF19 Arms imports in millions	-0.02	0.78	0.01
VDIFF21 Military expenditures in millions	0	0.02	0.01
VDIFF22 Political rights, 1 equals the most 7 the least	0.03	0.04	0.02
VDIFF23 GNP (size)	-0.01	0.11	-0.22
D_COP1 Surrender, yield to order	0	0.03	0.03
D_COP2 Praise, hail	0.01	0.02	0
D_COP3 Promise own policy support	0	0.01	-0.02
D_COP4 Express regret	-0.01	0.01	-0.02
D_COP5 Extend economic aid (gift or loan)	0.01	0.03	-0.04
D_COP6 Make substantive agreement	0	0.02	0.01
D_COP7 Ask for information, policy or material	0	0	-0.01
D_COP8 Offer proposal	0.01	0	0.05

D_COP9 Total of all Cooperation	0	0.02	0
D_CON1 Reject	-0.01	0.03	0.03
D_CON2 Accuse	0	0.03	0.06
D_CON3 Protest	0	-0.01	0
D_CON4 Deny	-0.01	0.08	0.09
D_CON5 Demand	-0.01	0.04	0.08
D_CON6 Warn	0	0.03	0.01
D_CON7 Threat	0	-0.01	-0.01
D_CON8 Demonstrations	0	0.05	-0.02
D_CON9 Reduce diplomacy	-0.01	0.04	-0.03
D_CON10 Expel	-0.04	0.09	0.03
D_CON11 Seize	-0.04	0.06	-0.1
D_CON12 Force	-0.04	0.18	-0.04
D_CON13 Total Conflict	-0.02	0.1	0.01
COPDIF1 Copdif1- Surrender, Yield to	0.01	0.11	0.03
COPDIF2 Praise, hail	0.04	0	-0.04
COPDIF3 Promise own policy support	0.01	-0.07	-0.02
COPDIF4 Express regret	0	-0.14	-0.18
COPDIF5 Extend economic aid (gift or loan)	0.02	-0.03	0.04
COPDIF6 Make substantive agreement	0.01	-0.08	0.04
COPDIF7 Ask for information, policy or material	0.02	-0.11	0.09
COPDIF8 Offer proposal	-0.01	-0.15	0.01
COPDIF9 Total of all Cooperation	0.03	-0.11	0.04
CONDIF1 Condif1- Reject	0.01	-0.06	0.11
CONDIF2 Accuse	0.01	0.07	-0.14
CONDIF3 Protest	0.01	-0.03	0.05
CONDIF4 Deny	-0.05	0.09	0.11
CONDIF5 Demand	0	0.04	-0.1
CONDIF6 Warn	0.01	-0.1	-0.08
CONDIF7 Threat	0.03	-0.22	-0.14
CONDIF8 Demonstrations	-0.01	0.09	0.3
CONDIF9 Reduce diplomacy	-0.03	-0.05	-0.03
CONDIF10 Expel	0.02	0.06	0.03
CONDIF11 Seize	0.01	0.05	-0.14
CONDIF12 Force	-0.02	0.06	-0.05
CONDIF13 Total of all Conflict	-0.02	0.07	-0.09
POWER89	0.02	0.06	0.1
POWSH89	0.11	0.13	0.11

Table 6. CIVIL RIGHTS DEVELOPMENT (Continued)

	F13	F14	F15
D_V1 Gross national product per capita	0.04	0.01	0.06
D_V2 Population total	-0.02	0.01	0
D_V3 Population urban percent	0	0.04	-0.05
D_V4 Fertility	0.09	-0.02	0.04
D_V5 Life expectancy	-0.04	0.04	-0.04
D_V6 Infant mortality per 1000 deaths	0.02	-0.02	0.04
D_V7 Population per physician	0.08	0.64	0.17
D_V8 Passenger cars	-0.04	-0.01	0.02
D_V9 Population urban total	0.07	0.01	-0.02
D_V10 Urban population percent of total	0.01	0.04	-0.05
D_V11 Population growth rate annual percent	0	-0.02	0.05
D_V12 Population growth rate urban annual percent	-0.01	0.12	0.02
D_V13 Population density sq. kil	-0.01	-0.01	0.01
D_V14 Birth rate crude per 1000	0.07	-0.01	0.04
D_V15 Death rate crude per 1000	0.03	-0.05	0.03
D_V16 Arms exports in millions	0.16	0.01	0
D_V17 Armed forces in thousands	0.05	0.03	-0.03
D_V18 Armed forces per 1000 population	0.16	-0.01	-0.03
D_V19 Arms imports in millions	0.01	-0.05	0.04
D_V20 Civil rights, 1 equals the most to 7 the least	0.01	-0.12	0.35
D_V21 Military expenditures in millions	0.1	0.01	0.01
D_V22 Political rights, 1 equals the most 7 the least	0	-0.07	0.42
D_V23 GNP (size)	0	-0.02	0.05
VDIFF1 GNP Per Capita	0.06	0	0.06
VDIFF2 Population Total	-0.03	-0.01	0
VDIFF3 Population urban percent	0.01	0	-0.02
VDIFF4 Fertility	-0.02	0.02	0.04
VDIFF5 Life expectancy	-0.13	-0.01	-0.16
VDIFF6 Infant mortality per 1000 deaths	0.25	-0.01	0.25
VDIFF7 Population per physician	-0.01	0.83	0.12
VDIFF8 Passenger cars	-0.01	-0.02	0.01
VDIFF9 Population urban total	0.05	0.02	-0.03
VDIFF10 Urban population percent of total	0.05	0	-0.03
VDIFF11 Population growth rate annual percent	-0.46	0.01	-0.02
VDIFF12 Population growth rate urban annual percent	-0.51	0.5	-0.15

VDIFF13 Population density sq. kil	0.02	-0.02	0.02
VDIFF14 Birth rate crude per 1000	-0.11	0.03	0.06
VDIFF15 Death rate crude per 1000	0.17	0	0.07
VDIFF16 Arms exports in millions	0.18	0.01	0
VDIFF17 Armed forces in thousands	0.03	0.09	-0.04
VDIFF18 Armed forces per 1000 population	0.36	0.13	-0.09
VDIFF19 Arms imports in millions	0.03	-0.05	0.05
VDIFF21 Military expenditures in millions	0.11	0	0.01
VDIFF22 Political rights, 1 equals the most 7 the least	0.01	0.16	0.83
VDIFF23 GNP (size)	0.03	-0.02	0.05
D_COP1 Surrender, yield to order	0.08	0.03	-0.02
D_COP2 Praise, hail	-0.03	0	0
D_COP3 Promise own policy support	0.01	0	-0.01
D_COP4 Express regret	-0.03	0.01	0.07
D_COP5 Extend economic aid (gift or loan)	-0.03	0	0
D_COP6 Make substantive agreement	0.04	0	0
D_COP7 Ask for information, policy or material	0.02	0	0.01
D_COP8 Offer proposal	0.04	0	0
D_COP9 Total of all Cooperation	0.01	0	0
D_CON1 Reject	0	0.01	-0.02
D_CON2 Accuse	0.02	0.01	-0.01
D_CON3 Protest	-0.01	0	0.01
D_CON4 Deny	0.02	0.01	-0.04
D_CON5 Demand	0.01	0.02	-0.05
D_CON6 Warn	-0.08	-0.01	0
D_CON7 Threat	-0.11	-0.03	0.04
D_CON8 Demonstrations	-0.05	-0.01	0
D_CON9 Reduce diplomacy	-0.02	-0.01	0.01
D_CON10 Expel	-0.16	0	-0.05
D_CON11 Seize	-0.02	-0.03	0.05
D_CON12 Force	-0.16	-0.03	0
D_CON13 Total Conflict	-0.07	-0.01	0
COPDIF1 Copdif1- Surrender, Yield to	0.44	0.11	-0.08
COPDIF2 Praise, hail	-0.07	-0.01	0
COPDIF3 Promise own policy support	0.08	0	-0.03
COPDIF4 Express regret	0.19	-0.05	0.12
COPDIF5 Extend economic aid (gift or loan)	0.05	0.01	-0.03
COPDIF6 Make substantive agreement	0.01	0.01	-0.03
COPDIF7 Ask for information, policy or material	0.28	0.07	-0.09

COPDIF8 Offer proposal	0.15	0.02	-0.09
COPDIF9 Total of all Cooperation	0.14	0.01	-0.04
CONDIF1 Condif1- Reject	0.05	0	-0.01
CONDIF2 Accuse	-0.05	-0.03	0.04
CONDIF3 Protest	0	0.01	-0.01
CONDIF4 Deny	0.02	0.02	-0.03
CONDIF5 Demand	0.09	-0.01	-0.04
CONDIF6 Warn	-0.15	-0.05	0.08
CONDIF7 Threat	-0.05	-0.08	0.17
CONDIF8 Demonstrations	0.05	0.05	-0.16
CONDIF9 Reduce diplomacy	-0.03	-0.02	-0.01
CONDIF10 Expel	-0.02	0.02	0.06
CONDIF11 Seize	-0.02	-0.06	0.17
CONDIF12 Force	0.16	0.01	0
CONDIF13 Total of all Conflict	0.15	-0.01	0.02
POWER89	0.09	0.01	0
POWSH89	0.43	0.09	-0.06

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CIVIL RIGHTS SHIFT	R estimate = .68	VDIFF20
Factor 1	Correlation Coefficient	0.021
	Sig. (2-tailed)	0.812
	N	126
Factor 2	Correlation Coefficient	.227(*)
	Sig. (2-tailed)	0.011
	N	126
Factor 3	Correlation Coefficient	0.037
	Sig. (2-tailed)	0.681
	N	126
Factor 4	Correlation Coefficient	-0.145
	Sig. (2-tailed)	0.106
	N	126

Factor 5	Correlation Coefficient	-0.135
	Sig. (2-tailed)	0.133
	N	126
Factor 6	Correlation Coefficient	0.046
	Sig. (2-tailed)	0.608
	N	126
Factor 7	Correlation Coefficient	-0.079
	Sig. (2-tailed)	0.377
	N	126
Factor 8	Correlation Coefficient	-0.021
	Sig. (2-tailed)	0.811
	N	126
Factor 9	Correlation Coefficient	0.144
	Sig. (2-tailed)	0.107
	N	126
Factor 10	Correlation Coefficient	.230(**)
	Sig. (2-tailed)	0.01
	N	126
Factor 11	Correlation Coefficient	0.054
	Sig. (2-tailed)	0.547
	N	126
Factor 12	Correlation Coefficient	-0.104
	Sig. (2-tailed)	0.247
	N	126
Factor 13	Correlation Coefficient	0.067
	Sig. (2-tailed)	0.458

	N	126
Factor 14	Correlation Coefficient	-0.136
	Sig. (2-tailed)	0.129
	N	126
Factor 15	Correlation Coefficient	.497(**)
	Sig. (2-tailed)	0
	N	126

* Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).