

THE IDENTIFICATION, MEASUREMENT AND IMPACT OF NATIONAL
CULTURE ON INTERNATIONAL INVESTING

by

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Traditional neoclassical economics offers a rich, productive framework for analyzing the aggregate effects of market forces such as price, output and employment. However, neoclassical economics does not readily address those circumstances in which market frictions (including transaction costs, imperfect and incomplete information) are high. In particular, market frictions play a critical role in effectively analyzing a wide range of economic problems including the optimal size of organizations, bargaining solutions and the effectiveness of policies in economic development.

During the past fifteen years, two new approaches have emerged prominently within economics to more effectively address these problems--information economics and the new institutional economics. Of these, the new institutional economics has gained substantial notoriety during recent years due to its Nobel Prize-winning proponents including Douglass North and Ronald Coase. The purpose of this speech is to describe an application of the new institutional economics to international investing which uses national culture as a primary explanatory factor.

Formally, the new institutional economics can be described by "a contractual perspective on organizational relationships, a theoretical focus on hierarchical control, and formal analysis via principal agent models." (Moe 1984, 739) However, its epistemological origins lie more with sociologists, particularly a former President of New Jersey Bell during the 1930s, Chester Barnard. Barnard's primary insight regarded the nature of institutions as those humanly devised structures which limit and define human behavior. In effect, institutions are the primary constraints which govern human behavior:

Institutions are the rules of the game in a society or... the humanly devised constraints that shape human interaction.... [T]hey structure incentives in human exchange, whether political, social, or economic....

Institutions reduce uncertainty by providing structure to everyday life. They are a guide to human interaction, so that... we know (or can learn easily) how to perform tasks. We would readily observe that institutions differ if we were to try to make the same transactions in a different country--Bangladesh for example.... [I]nstitutions define and limit the set of choices of individuals (North 1990, 3-4).

Institutions can then be analytically subdivided into two classes--formal and informal, where formal institutions comprise constitutions, political systems, written laws, legal systems, and contractual relationships which arise as conscious responses to a wide array of prevailing social circumstances. Informal institutions (or culture in this analysis) represent the unconscious habits, attitudes and beliefs that affect the decision-making of domestic economic agents.

In effect, virtually all formal institutions are the direct or indirect result of policies of the prevailing domestic political regime. Domestic constitutions, laws, regulations and taxation are all typically enacted and enforced by the regime. Economic contracts and expectations are also highly dependent upon governmental policies and enforcement. Thus, the domestic political regime can and should be viewed as the primary group which establishes a nation's formal institutions through its political policies. In other words, the formal institutions affecting economic activities are largely the result of domestic political regime policy. Indeed, because of the influence of domestic regime policies upon national economic development and the deliberate way in which regime policies are devised, formal institutions embodied in regime policies are what best constitute a *national development strategy*. Furthermore, North observes that formal institutions (or constraints, as he terms them) are "clearly related to the increasing specialization and division of labor associated with more complex societies" (North 1990, 46).

Informal institutions, in contrast, constitute the cultural underpinnings which both constrain behavior and give rise to formal institutions:

Informal [institutions], although comprising the processes of society which are unconscious as contrasted with those of formal [institutions] which are conscious, [have] two important classes of effects: (a) [they] establish certain attitudes, customs, habits... and (b) [they] create the conditions under which formal [institutions] may arise (Barnard 1938, 49).

Further, as Granovetter (1985) has argued, these informal social institutions guide economic behavior to a considerable degree in both pre-industrial and industrial societies. Indeed, compared to formal institutions, which "make up a small (although very important) part of the sum of constraints that shape choices" (North 1990, 36), informal institutions are pervasive across society even though their effects may not be consciously perceived. Also, because they consist of long-term adaptations to socio-economic conditions, informal institutions are more persistent:

Japanese culture survived the U.S. occupation after World War II; the post-revolutionary U.S. society remained much as it had been in colonial times; Jews, Kurds, and endless other groups have persisted through centuries despite endless changes in their formal status. Even the Russian Revolution, perhaps the most complete formal transformation of a society we know, cannot be completely understood without exploring the survival and persistence of many informal constraints (North 1990, 36-37).

The pervasiveness and persistence of informal institutions does not render them interpretable as conscious national policy choices. They are, therefore, distinct from the formal institutions which are constituted in domestic political regime policies. However, informal institutions only give rise to a limited range of formal institutions, so that not all formal institutions are viable in every society. Moreover, the efficiency of formal institutions (and, thereby, national development strategies) may depend substantially upon a nation's prevailing informal institutions. Yet, how can the numerous types of informal institutions be rendered analytically tractable?

Important insights regarding the nature of informal institutions can be gained from the fields of social psychology and anthropology. Of particular interest, Hofstede's seminal works (1980; 1991) have identified and measured five basic cultural dimensions of nations:

- (1) IND: **degree of individualism** (versus collectivism)-- "*Individualism* pertains to societies in which the ties between individuals are loose: everyone is expected to look after... immediate family. Collectivism as its opposite pertains to societies in which people from birth onwards are integrated into strong, cohesive ingroups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (1991, 51 emphasis his),
- (2) LTO: **long-term orientation** (Hofstede and Bond 1988)-- thrift; perseverance; virtue of deeds over need for truth; willingness to subordinate oneself for a purpose,
- (3) MAS: **desirability of assertive behavior** (versus modest behavior) in economic contexts,
- (4) PDI: **power distance index**-- acceptance of social stratification or "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (1991, 28) and
- (5) UAI: **uncertainty avoidance** (first used by Cyert and March 1963)-- "*the extent to which the members of a culture feel threatened by uncertain or unknown situations*" (Hofstede 1991, 113 emphasis his).

The IND, MAS, PDI and UAI variables were distinguished and measured based on 116,000 questionnaires completed for 58 industrialized and developing countries representing all six populated continents. Moreover, these variables are not time-series like economic and political variables because their values (with the exception of IND, explained later) remain stable over long periods of time. Therefore, even though these measures were originally compiled during 1968 and 1972, they remained remarkably stable in a follow-up study some 15 years later. The

empirical stability of these values is, thus, consistent with the theoretical stickiness of cultural institutions. Long-term orientation (LTO), although originally computed only for 23 countries, is closely linked empirically with a country's marginal propensity to save. The values for these cultural variables are presented in Tables I and II.

These cultural dimensions can be instrumental in explaining both conflict and cooperation among domestic economic agents, and consequently, on the suitability of international investment. For example, increasing disparities in incomes may cause moderate social stress in cultures with a low tolerance for social stratification. Similarly, substantial numbers of foreign migrant workers (or significant ethnic and religious minorities) may pose special political problems in cultures with high uncertainty avoidance. Also, while a social emphasis on individual over collective concerns is typically viewed as an artifact of economic wealth, there is a significant spread in individualism among industrialized countries. Adjusting for wealth effects, a focus on individual concerns may have either a positive or negative impact on future economic efficiency and growth. As a result, economic cooperation and conflict can depend upon embedded cultural institutions in the context of prevailing socio-economic conditions. This cooperation and conflict among domestic economic agents, in turn, can largely determine the efficiency of national development strategies established through the formal institutions of political policy. Before examining the effects of national culture on international investing further, however, it is useful to explore some general characteristics of economic growth among nations.

TABLE I
SOCIAL INDICATORS I

<u>obs</u>	<u>COUNTRY</u>	<u>IND</u>	<u>RIND</u>	<u>MAS</u>	<u>PDI</u>	<u>UAI</u>
1	ARGENTINA	46	67.00	56	49	86
2	AUSTRALIA	90	75.16	61	36	51
3	AUSTRIA	55	45.57	79	11	70
4	BELGIUM	75	66.75	54	65	94
5	BRAZIL	38	62.74	49	69	76
6	CANADA	80	55.68	52	39	48
7	CHILE	23	42.63	28	63	86
8	COLOMBIA	13	36.13	64	67	80
9	COSTA RICA	15	33.24	21	35	86
10	DENMARK	74	61.25	16	18	23
11	ECUADOR	8	28.94	63	78	67
12	EGYPT	38	78.26	53	80	68
13	EL SALVADOR	19	47.98	40	66	94
14	ETHIOPIA	27	70.34	41	64	52
15	FINLAND	63	54.14	26	33	59
16	FRANCE	71	56.03	43	68	86
17	GHANA	20	56.58	46	77	54
18	GREECE	35	46.23	57	60	112
19	GUATEMALA	6	28.16	37	95	101
20	HONG KONG	25	24.98	57	68	29
21	INDIA	48	95.54	56	77	40
22	INDONESIA	14	48.34	46	78	48
23	IRAN	41	58.37	43	58	59
24	IRELAND	70	89.05	68	28	35
25	ISRAEL	54	60.47	47	13	81
26	ITALY	76	76.60	70	50	75
27	JAMAICA	39	69.66	68	45	13
28	JAPAN	46	35.82	95	54	92
29	KENYA	27	66.67	41	64	52
30	MALAYSIA	26	51.27	50	104	36
31	MEXICO	30	44.02	69	81	82
32	NETHERLANDS	80	70.41	14	38	53
33	NEW ZEALAND	79	70.83	58	22	49
34	NIGERIA	20	55.69	46	77	54
35	NORWAY	69	57.57	8	31	50
36	PAKISTAN	14	48.46	50	55	70
37	PANAMA	11	31.29	44	95	86
38	PERU	16	38.16	42	64	87
39	PHILIPPINES	32	67.72	64	94	44
40	PORTUGAL	27	41.05	31	63	104
41	SIERRA LEONE	20	55.92	46	77	54
42	SINGAPORE	20	27.36	48	74	8
43	SOUTH AFRICA	65	99.99	63	49	49
44	SOUTH KOREA	18	42.80	39	60	85
45	SPAIN	51	54.45	42	57	86
46	SWEDEN	71	51.52	5	31	29

<u>obs</u>	<u>COUNTRY</u>	<u>IND</u>	<u>RIND</u>	<u>MAS</u>	<u>PDI</u>	<u>UAI</u>
47	SWITZERLAND	68	31.91	70	34	58
48	TAIWAN	17	33.96	45	58	69
49	TANZANIA	27	68.98	41	64	52
50	THAILAND	20	50.71	34	64	64
51	TURKEY	37	66.67	45	66	85
52	UNITED KINGDOM	89	90.49	66	35	35
53	UNITED STATES	91	59.30	62	40	46
54	URUGUAY	36	55.56	38	61	100
55	VENEZUELA	12	0.00	73	81	76
56	WEST GERMANY	67	51.34	66	35	65
57	YUGOSLAVIA	27	40.65	21	76	88
58	ZAMBIA	27	64.95	41	64	52

TABLE II

SOCIAL INDICATORS II-- LONG-TERM ORIENTATION

<u>obs</u>	<u>COUNTRY</u>	<u>GDS80</u>	<u>LTO</u>	<u>MPS</u>	<u>SAV</u>
1	ARGENTINA	20.04	.	0.00	10.02
2	AUSTRALIA	23.66	31	5.81	14.74
3	AUSTRIA	26.49	.	27.37	26.93
4	BANGLADESH	2.11	40	0.00	1.06
5	BELGIUM	19.28	.	22.00	20.64
6	BRAZIL	21.05	65	23.85	22.45
7	CANADA	25.43	23	20.29	22.86
8	CHILE	16.82	.	48.53	32.68
9	CHINA	32.24	118	58.17	45.21
10	COLOMBIA	19.70	.	38.49	29.10
11	COSTA RICA	16.23	.	41.80	29.02
12	DENMARK	17.45	.	36.40	26.93
13	ECUADOR	25.88	.	48.08	36.98
14	EGYPT	15.16	.	0.00	7.58
15	EL SALVADOR	14.19	.	28.76	21.48
16	ETHIOPIA	4.86	.	20.78	12.82
17	FINLAND	28.19	.	32.10	30.15
18	FRANCE	22.99	.	15.61	19.30
19	GHANA	4.94	.	15.38	10.16
20	GREECE	19.70	.	0.00	9.85
21	GUATEMALA	13.14	.	12.32	12.73
22	HONG KONG	35.71	96	39.74	37.73
23	INDIA	17.37	61	33.94	25.66
24	INDONESIA	37.15	.	51.93	44.54
25	IRAN	29.31	.	46.12	37.72
26	IRELAND	14.35	.	54.61	34.48
27	ISRAEL	10.35	.	24.55	17.45
28	ITALY	24.26	.	17.59	20.93
29	JAMAICA	15.76	.	7.03	11.40
30	JAPAN	31.35	80	27.66	29.51
31	KENYA	18.12	.	11.86	14.99
32	MALAYSIA	32.92	.	41.88	37.40
33	MEXICO	24.90	.	42.01	33.46
34	NETHERLANDS	21.00	44	30.92	25.96
35	NEW ZEALAND	19.73	30	23.10	21.42
36	NIGERIA	27.29	16	17.95	22.62
37	NORWAY	33.79	.	38.03	35.91
38	PAKISTAN	6.86	0	20.91	13.89
39	PANAMA	24.41	.	34.57	29.49
40	PERU	27.47	.	0.00	13.74
41	PHILIPPINES	24.19	19	37.76	30.98
42	PORTUGAL	19.00	.	27.57	23.29
43	SIERRA LEONE	0.00	.	17.76	8.88
44	SINGAPORE	37.52	48	63.93	50.73
45	SOUTH AFRICA	39.12	.	0.00	19.56
46	SOUTH KOREA	24.29	75	46.54	35.42

<u>obs</u>	<u>COUNTRY</u>	<u>GDS80</u>	<u>LTO</u>	<u>MPS</u>	<u>SAV</u>
47	SPAIN	21.50	.	21.23	21.37
48	SWEDEN	18.87	33	22.76	20.82
49	SWITZERLAND	23.67	.	34.27	28.97
50	TAIWAN	32.28	87	35.52	33.90
51	TANZANIA	9.83	.	23.08	16.46
52	THAILAND	20.12	56	47.29	33.71
53	TURKEY	14.07	.	23.04	18.56
54	UNITED KINGDOM	19.11	25	12.09	15.60
55	UNITED STATES	18.29	29	3.00	10.65
56	URUGUAY	18.73	.	40.51	29.62
57	VENEZUELA	33.34	.	34.49	33.92
58	WEST GERMANY	22.89	31	31.37	27.13
59	YUGOSLAVIA	35.67	.	7.45	21.56
60	ZAMBIA	19.26	.	0.00	8.63
61	ZIMBABWE	15.84	25	3.01	9.43

First, national income levels exert profound effects upon both economic and social indicators of development. To show this effect, I employ economic data from Summers and Heston (1991) which is based on purchasing power parity relationships rather than the more commonly used exchange rate-based measures of national income. GDP_{PPP} is preferable for this analysis because it is both less sensitive to dramatic shifts in exchange rates and more inclusive of the overall economic activity in poorer countries which is currently masked by exchange rate-based GDP. As shown in Table III, the use of GDP_{PPP} causes China, the Soviet Union and India to emerge prominently among the ten largest economies during the 1980s as measured by average real (1985) per-capita GDP multiplied by average population level.

TABLE III
THE TEN LARGEST ECONOMIES DURING THE 1980s
AS MEASURED BY GDP_{PPP}
(Figures in \$1,000,000,000s)

<u>Country</u>	<u>Average Real (1985) GDP</u>
United States	\$4,007
China	\$1,946
Japan	\$1,490
Soviet Union	\$1,365
West Germany	\$ 787
India	\$ 714
France	\$ 696
United Kingdom	\$ 653
Italy	\$ 642
Brazil	\$ 546

Figures 1-4 show the relationship between economic growth (CGDP) and real per-capita incomes (GDP) during the 1950s, 1960s, 1970s and 1980s. Three consistent features of these figures are immediately striking. First, high-income countries show remarkably similar growth rates within each of the four decades.¹ Whereas the range of real economic growth rates among high-income countries does not exceed 5% in any decade, the range among low-income countries exceeds 8.5% in each decade. Even the Japanese economy, which grew at compound annual rates of 3.22% and 3.72% during the 1970s and 1980s, respectively, only exceeded U.S. growth rates (which were relatively low among high-income countries during these decades) by 1.50% and 1.72%. To be sure, these differences on a compounded, annualized basis over the course of a decade are significant. By comparison, however, the range of growth rates among low-income countries exceeded 10% during both the 1970s and 1980s.

Second, no pervasive "convergence effect" for national incomes can be measured. Indeed, high-income countries generally enjoyed higher economic growth rates than low-income countries during the post-World War II period. Table IV demonstrates that during each of the four post-World War II decades regression line estimates between economic growth and per-capita income were positive, albeit statistically significant only in the 1960s and 1980s. These results are also corroborated by comparing the average economic growth rates for high-income countries with those for low-income countries (Table V). For each decade except the 1950s, high-income country average growth rates exceeded low-income country average growth rates. Assuming unequal variances and large sample sizes, these differences were highly statistically significant during the 1980s ($\alpha < .001$) and weakly statistically significant during the 1960s ($\alpha < .1$).

¹High-income countries are easily distinguished in these figures as those with real (1985) per-capita incomes in excess of \$5,400 during the 1950s, \$5,400 during the 1960s, \$8,500 during the 1970s and \$10,000 during the 1980s.

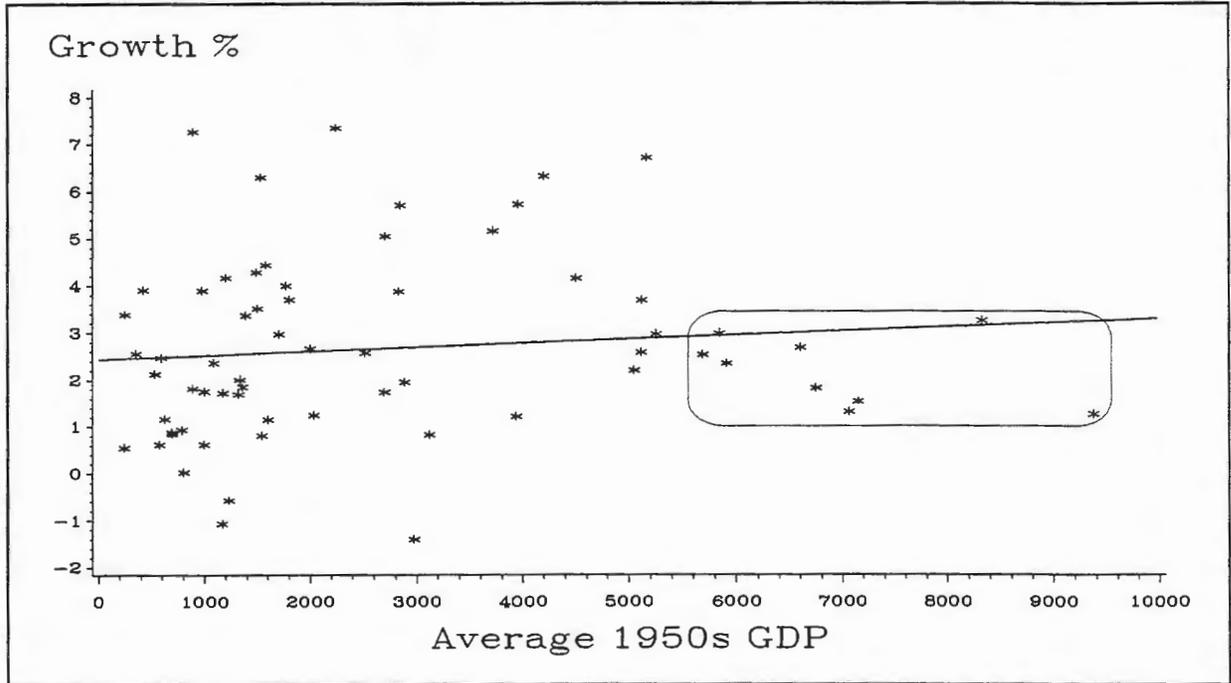


Figure 1. Annualized Real Compound Growth in Per-Capita GDP Versus Average Real (1985) Per-Capita GDP during the 1950s.

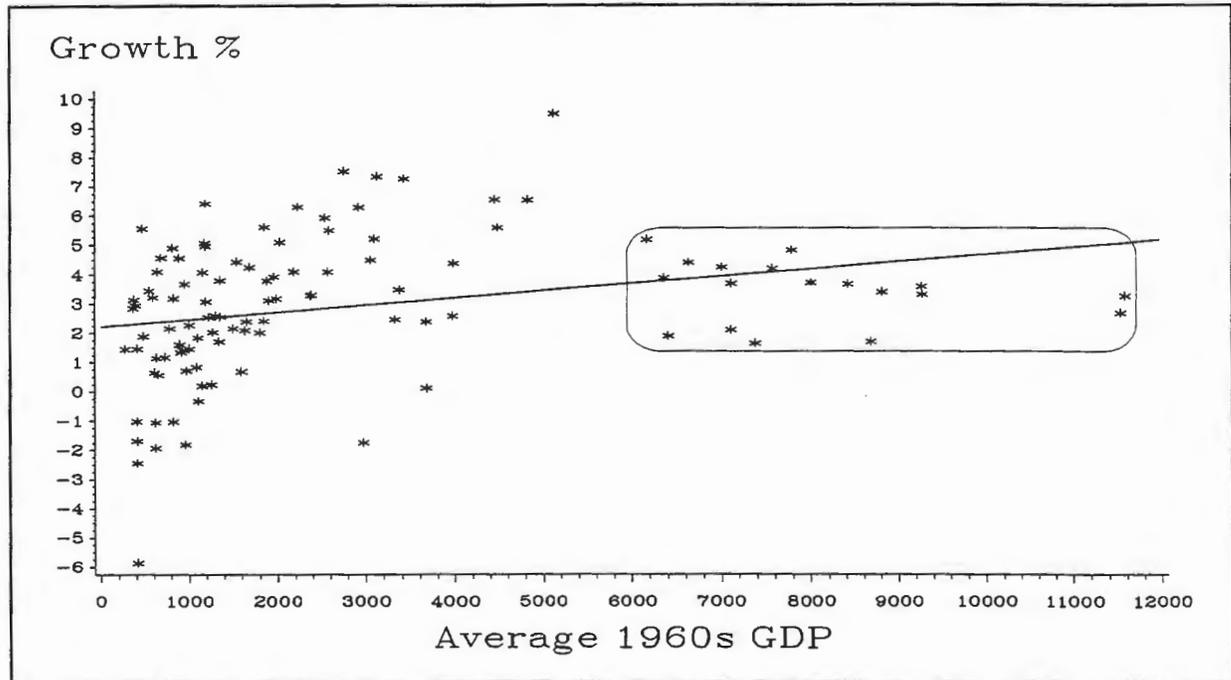


Figure 2. Annualized Real Compound Growth in Per-Capita GDP Versus Average Real (1985) Per-Capita GDP during the 1960s.

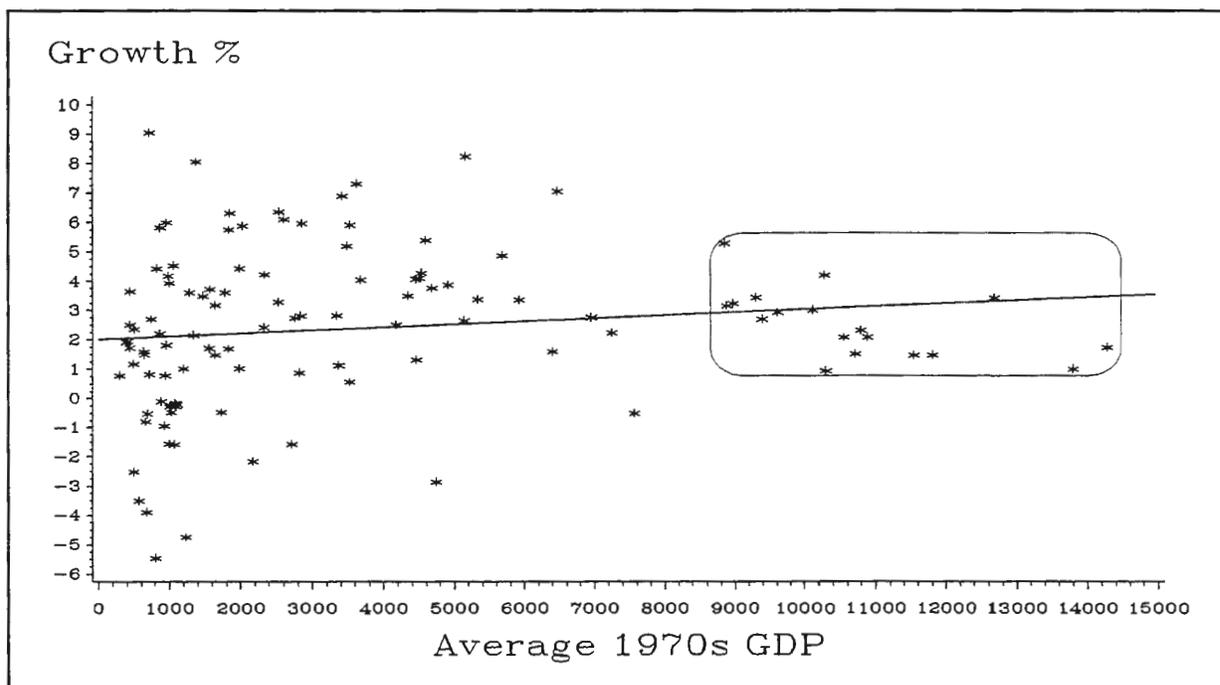


Figure 3. Annualized Real Compound Growth in Per-Capita GDP Versus Average Real (1985) Per-Capita GDP during the 1970s.

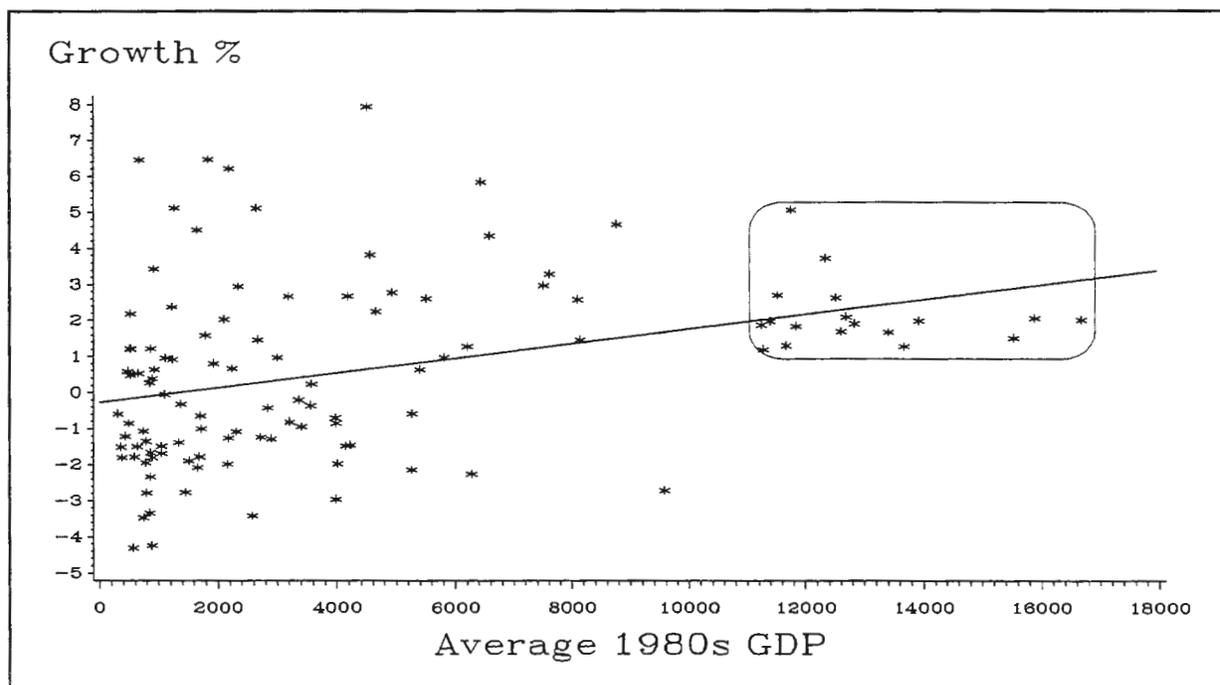


Figure 4. Annualized Real Compound Growth in Per-Capita GDP Versus Average Real (1985) Per-Capita GDP during the 1980s.

TABLE IV

ORDINARY-LEAST-SQUARES SLOPE ESTIMATES OF REAL
PER-CAPITA GDP GROWTH ON AVERAGE REAL
PER-CAPITA INCOME BY DECADE

<u>Decade</u>	<u>n</u>	<u>Slope Parameter</u>	<u>Standard Error</u>	<u>t-stat</u>	<u>P-value</u>
1950s	65	.000087	.000108	.80	.427
1960s	107	.000246	.000082	2.99	.004
1970s	113	.000101	.000071	1.42	.159
1980s	113	.000203	.000051	3.97	<.001

TABLE V

PER-CAPITA ECONOMIC GROWTH FOR HIGH-INCOME COUNTRIES
AND LOW-INCOME COUNTRIES BY DECADE

<u>Decade</u>	<u>Average High-Inc. Growth (%)</u>	<u>n_H</u>	<u>Average Low-Inc. Growth (%)</u>	<u>n_L</u>	<u>t-stat</u>	<u>P-value</u>
1950s	2.19	9	2.74	56	-1.52	.139
1960s	3.40	18	2.79	89	1.67	.100
1970s	2.54	18	2.36	95	.44	.659
1980s	2.13	18	.32	95	5.20	<.001

A third important characteristic of the growth-income relationship concerns economic take-off. Namely, rapid sustained economic growth is experienced by several low-income countries during each decade. It is for these countries which the convergence effect may actually apply because they are able to control the deleterious effects of poor social, political and economic institutions which dog other low-income countries. The central questions which thus emerges from this data are (1) what socio-political explanations can account for the sustained rapid growth which certain low-income countries have experienced and (2) what positive and normative implications do these relationships have for developing nations in the post-Cold War era?

Cultural Foundations of Authoritarianism
and Economic Growth

First, the cultural determinants of political rights and turbulence can be explored by regressing these political variables on the five national culture variables and controlling for national income. Not every cultural variable, however, need have a direct influence on political rights or political turbulence. In order to determine which cultural variables best explain political rights and political instability, I utilize the C_p statistic analysis first developed by Mallows (1967) to identify best explanatory subsets of cultural variables. As shown in Tables VI, the cultural factor which exerted a consistent influence on authoritarianism during the 1970s and 1980s was PDI, or the extent to which a nation accepts social stratification. Specifically, citizens who are generally acceptant of social stratification are much more likely to accept authoritarianism, even after controlling for the effects of income and other cultural factors. By contrast, MAS, or the assertiveness of economic agents exerts a democratic influence on nations.

TABLE VI

ORDINARY-LEAST-SQUARES ESTIMATES FOR THE BEST SUBSET
REGRESSIONS OF POLITICAL RIGHTS ON NATIONAL
CULTURE AND REAL PER-CAPITA INCOME
DURING THE 1970s AND 1980s
(n=58)

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-statistic</u>	<u>P-value</u>
For PR70, ($R^2 = .635$)				
constant	4.42	.856	5.16	<.001
MAS	-.0147	.00907	-1.63	.109
PDI	.0203	.00986	2.06	.044
GDP70	-.000295	.0000526	-5.62	<.001
For PR80, ($R^2 = .583$)				
constant	4.74	.957	4.96	<.001
MAS	-.0145	.00939	-1.55	.128
PDI	.0214	.0101	2.13	.038
UAI	-.0163	.00711	-2.29	.026
GDP70	-.000295	.0000526	-5.62	<.001

Whereas a culture's acceptance of social stratification and its assertiveness in economic contexts are strong indicators of a country's level of political rights, fear of uncertain or unknown situations (UAI) exerts an especially strong effect on the variability of political rights. Applying the C_p statistic technique to help determine the cultural bases of political rights variability, UAI was the only cultural variable selected as exerting a significant influence during both the 1970s and 1980s. Table VII presents these best subset regressions and shows that societies which feel threatened by uncertain or unknown situations experienced significantly more variability in their political rights than other countries. UAI also contributed significantly to the number of irregular executive transfer during the 1970s (Table VIII), although none of the best subset regressions for irregular executive transfers during the 1950s, 1960s and 1970s demonstrated a strong goodness of fit ($R^2 < .21$). Moreover, UAI was significantly negatively related to the number of deaths attributable to domestic political violence during the 1950s and 1960s (Table IX). This demonstrates that while cultures which feel threatened by uncertain or unknown situations may be more prone to changes in domestic political rights, it does not necessarily translate into increased domestic violence. The domestic political regimes in these countries may thus be better able to tactically shift political rights in order to more peacefully quell domestic political disorder. Unfortunately, high UAI countries also appear to be potential powder-kegs. Yugoslavia, for example, has an exceptionally high UAI score and remained peaceful and politically stable throughout the Cold War era. However, their insecurity with uncertain or unknown situations combined with their ethnic diversity to foment a difficult to resolve civil war beginning in the early 1990s. Japan's high UAI measure may be less problematic for domestic political violence because of its ethnic homogeneity. Yet, it

may play a decisive role in its international economic and political relations.

TABLE VII

ORDINARY-LEAST-SQUARES ESTIMATES FOR THE BEST SUBSET
REGRESSIONS OF POLITICAL RIGHTS VARIABILITY ON
NATIONAL CULTURE AND REAL PER-CAPITA INCOME
DURING THE 1970s AND 1980s
(n=58)

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-statistic</u>	<u>P-value</u>
For PVOL70, ($R^2 = .352$)				
constant	.533	.650	.82	.416
UAI	.0295	.00828	3.57	<.001
GDP70	-.000180	.0000488	-3.69	<.001
For PVOL80, ($R^2 = .372$)				
constant	1.33	.556	2.38	.021
UAI	.0147	.00702	2.10	.040
GDP80	-.000164	.0000337	-4.88	<.001

TABLE VIII

ORDINARY-LEAST-SQUARES ESTIMATES FOR THE BEST SUBSET
REGRESSIONS OF IRREGULAR EXECUTIVE TRANSFERS ON
NATIONAL CULTURE AND REAL PER-CAPITA INCOME
DURING THE 1950s, 1960s AND 1970s

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-statistic</u>	<u>P-value</u>
For COUPS50, ($R^2 = .201$, n=48)				
constant	-.483	.570	-.85	.402
PDI	.0191	.00745	2.57	.014
GDP50	-.0000196	.0000670	-.29	.772
For COUPS60, ($R^2 = .206$, n=58)				
constant	2.14	.521	4.11	<.001
MPS	-.0151	.00791	-1.91	.062
RIND	-.0160	.00667	-2.39	.020
GDP60	-.000104	.0000378	-2.76	.008
For COUPS70, ($R^2 = .160$, n=58)				
constant	.285	.429	.67	.509
UAI	.00971	.00546	1.78	.081
GDP70	-.0000794	.0000322	-2.47	.017

TABLE IX

ORDINARY-LEAST-SQUARES ESTIMATES FOR THE BEST SUBSET
REGRESSIONS OF $\log(\text{POLITICAL DEATHS})$ ON NATIONAL
CULTURE AND REAL PER-CAPITA INCOME DURING
THE 1950s, 1960s AND 1970s

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-statistic</u>	<u>P-value</u>
For $\log(\text{PDEATH50})$, ($R^2 = .360$, $n=48$)				
constant	5.17	2.05	2.53	.015
PDI	.0263	.0157	1.67	.102
RIND	-.0329	.0158	-2.08	.044
UAI	-.0294	.0141	-2.08	.043
GDP50	-.000366	.000137	-2.67	.011
For $\log(\text{PDEATH60})$, ($R^2 = .373$, $n=58$)				
constant	4.17	1.86	2.24	.029
PDI	-.0220	.0155	1.42	.163
RIND	-.0239	.0141	-1.69	.096
UAI	-.0195	.0107	-1.82	.075
GDP60	-.000287	.000103	-2.80	.007
For $\log(\text{PDEATH70})$, ($R^2 = .206$, $n=58$)				
constant	4.75	1.17	4.07	<.001
PDI	-.0309	.0144	-2.15	.037
GDP70	-.000287	.0000765	-3.76	<.001

Not only may domestic culture exert a strong influence over the character and stability of the domestic polity, but culture can also exert a direct influence over the national economy by shaping the expectations and interactions of domestic economic agents. From Table X, which shows the best subset regressions from the C_p statistic analysis of real per-capita economic growth on national culture and per-capita income, two prominent cultural effects emerge. Namely, during the 1950s and 1960s culturally collective societies tended to economically grow faster than individualistic societies; in the 1970s and 1980s, however, those societies with high marginal propensities to save (associated with long-term orientations) tended to have high-growth economies, including the five Tigers of East Asia. The other cultural variables, by contrast, did not exert consistent effects across decades. Moreover, the fact that RIND and MPS exerted

consistent effects over the first two and last two decades of analysis, respectively, indicates that a structural economic change may have occurred between these periods, altering how culture affected domestic economic activity.

TABLE X

ORDINARY-LEAST-SQUARES ESTIMATES FOR THE BEST SUBSET
REGRESSIONS OF REAL ECONOMIC GROWTH ON NATIONAL
CULTURE AND REAL PER-CAPITA INCOME DURING
THE 1950s, 1960s, 1970s AND 1980s

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-statistic</u>	<u>P-value</u>
	For CGDP50, ($R^2 = .262$, $n=48$)			
constant	5.74	1.43	4.01	<.001
MAS	.0301	.0121	2.48	.017
PDI	-.0437	.0138	-3.17	.003
RIND	-.0247	.0122	-2.02	.050
GDP50	-.000201	.000119	-1.68	.100
	For CGDP60, ($R^2 = .080$, $n=58$)			
constant	4.99	.811	6.16	<.001
RIND	-.0276	.0131	-2.10	.041
GDP60	.0000525	.0000796	.66	.512
	For CGDP70, ($R^2 = .187$, $n=58$)			
constant	-.855	1.46	-.59	.560
MPS	.0532	.0177	3.01	.004
PDI	.0281	.0173	1.63	.110
GDP70	.0000907	.0000919	.99	.328
	For CGDP80, ($R^2 = .328$, $n=58$)			
constant	-1.85	.620	-2.98	.004
MPS	.0645	.0169	3.82	<.001
GDP80	.000187	.0000545	3.42	.001

In this section, we have investigated the impact of national culture (i.e., norms, attitudes, habits and beliefs) on political rights, political instability and economic growth. National culture, unlike domestic political policies, remains remarkably stable across time and even through dramatic changes in economic and political conditions. Five measures of national culture can be distinguished which represent generally independent and

exhaustive cultural dimensions--desirability of assertive behavior in economic contexts (MAS), marginal propensity to save (MPS), acceptance of social stratification (PDI), income-adjusted individualism (RIND) and uncertainty avoidance (UAI). During the 1970s and the 1980s, acceptance of social stratification and unassertive economic behavior exerted strong propensities towards authoritarianism. These authoritarian tendencies were counteracted, however, to a greater or lesser degree through democratic social supports (such as high educational levels) which higher income levels produced. Likewise, uncertainty avoidance (which refers to the extent to which societies feel threatened by uncertain or unknown situations) was strongly linked to variability in a country's political rights. Although uncertainty avoidance was also weakly linked to irregular executive transfers during the 1970s, it was negatively associated with deaths attributable to domestic political violence during the 1950s and 1960s. Moreover, even though all three measures of political instability (political rights variability, irregular executive transfers and deaths attributable to domestic political violence) had direct negative impacts on economic growth throughout the post-World War II period, their cultural causes remained distinct. Furthermore, a direct, positive impact of national culture on economic growth during the 1950s and 1960s occurred through cultural collectivism but shifted towards savings and a long-term orientation during the 1970s and 1980s.

Clustering the Regime Policies and Socio-Political Conditions of High-Growth Economies

Regime policy and socio-political condition patterns for high-growth economies during the 1950s, 1960s, 1970s and 1980s can be statistically distinguished through the use of cluster analysis. Cluster analysis is a statistical technique which partitions observations (i.e., countries) into mutually-

exclusive, exhaustive groups so that observations within a group are similar and observations in different groups are dissimilar. For our purposes, high-growth economies for these decades can be grouped according to similar socio-political conditions and policies.

Table XI lists the regime policy and socio-political condition clusters for above-average growth developing countries during the 1950s, 1960s, 1970s and 1980s. Except for the 1950s in which four distinct clusters emerged, six clusters were identifiable during the 1960s, 1970s and 1980s. Countries and clusters are listed in Table XI so that their proximity in the table reflects their socio-political similarity during each decade. Developing countries are used here because, as argued earlier, high-income nations displayed relatively stable economic growth and high-levels of democracy throughout the post-World War II era. Sustained, rapid economic growth and dramatic ranges in regime policies and socio-political conditions were, thus, far more a developing country phenomenon than an industrialized country one. Also, the sample size is more limited than in previous sections because cultural data in this analysis is limited to only 58 countries.

TABLE XI

SOCIO-POLITICAL CONDITION AND POLICY CLUSTERS FOR ABOVE-AVERAGE GROWTH DEVELOPING COUNTRIES DURING THE 1950s, 1960s, 1970s AND 1980s (n=18)

Cluster ID#	Clusters By Decade			
	1950s	1960s	1970s	1980s
I	Austria W. Germany Italy Japan Spain	Brazil Turkey Mexico Egypt Malaysia Tanzania	Brazil Kenya Turkey Egypt Indonesia Malaysia South Korea Taiwan Philippines	Colombia Thailand Turkey Malaysia
II	Greece Peru Portugal Jamaica	Costa Rica Iran Thailand South Korea Taiwan	Colombia Mexico Guatemala Hong Kong Panama	Greece Spain Portugal
III	Brazil Finland France Turkey Israel Netherlands	Hong Kong Singapore	Ecuador Thailand	Egypt Indonesia Pakistan India
IV	Costa Rica Taiwan Philippines	Nigeria Pakistan Sier. Leone Panama Peru	Costa Rica Yugoslavia Greece Portugal Uruguay Nigeria	Singapore So. Korea Taiwan
V		Greece Portugal Spain Japan Yugoslavia	Ireland Israel	Ireland Jamaica Israel
VI		Ireland Jamaica So. Africa Israel	Singapore	Tanzania

Most clusters in the 1950s through the 1980s did emerge from geographically proximate countries which shared similar political orientations as well as market, demographic and cultural compositions. However, high-growth, geographically proximate countries were not always clustered together and some clusters included countries which were geographically remote. What is striking, for example, is that of the four newly industrializing countries (NICs) of East Asia, only South Korea and Taiwan consistently clustered. Singapore, in particular, failed to cluster with any other country during the 1970s and was paired exclusively with Hong Kong during the 1960s. Singapore's clustering during these decades was due primarily to its disproportionately high marginal propensity to save (MPS) and size-adjusted openness to international trade (ROPEN). Similarly, Hong Kong, which clustered with Colombia, Mexico, Guatemala and Panama for the 1970s diverged from the other NICs due both to high size-adjusted openness to international trade (ROPEN) and its commercial acceptance of foreign business practices, ideas and workers (UAI).

Thus, even though an export-orientation may have greatly contributed to the economic growth of all of the East Asian NICs, how export-oriented strategies were developed and implemented varied according to each country's desired openness to international markets and cultural predispositions. Most notably, Singapore and Hong Kong, with exports+imports in 1990 nearly four times GNP and two and one-half times GNP, respectively, were considerably more trading-oriented during the entire post-World War II period than either South Korea or Taiwan even after adjusting for size-effects. As argued by Stephan Haggard (1990), the producer-orientation of South Korea and Taiwan is ascribable to import substitution by these countries during the early phase of their industrialization in the 1950s. Singapore and Hong Kong, in contrast, were "commercial *entrepôts*" during these early post-war years. Although the East Asian NICs may now share similar export-oriented industrialization

strategies in a general sense, the dissimilarity of their early stages of industrialization have led to persistent differences in domestic production, trading relationships and openness to foreign trade, ideas and workers.

Of course, uncovering the socio-political stories of each high-growth country case during the post-World War II period is well beyond the scope of this paper. However, the cluster analysis presented in this section does provide a window for identifying the socio-political patterns which have emerged in the post-World War II era.

Five prominent regime policy and socio-political condition patterns of high economic growth can be distinguished from the above cluster analyses. This typology offers a stylized account of economic growth patterns based on socio-political clusters which recurred throughout the post-World War II era. No one country's experience may exactly fit a particular theoretical pattern. Yet, each pattern should have important developing country cases from which it draws support.

The first prominent pattern which emerges is that of the **economic rebuilders**. These countries, represented by cluster I of the 1950s, are former industrialized nations whose economic infrastructures are devastated by war. Although per-capita income levels following the conflicts place these nations in the developing country category, they have substantial skills and industrial experience in which to draw. These nations also help to propel their economic rebuilding through low domestic prices. They have highly stable political structures imposed upon them which, in turn, facilitates the planning of domestic economic agents. They also feel moderately threatened by uncertain or unknown situations, have slow growing populations and are unacceptant of social stratification domestically which limits their openness to international trade.

The second pattern which emerges is that of the **uncertainty avoiders**. These countries, represented by cluster II of the 1950s, cluster V of the 1960s, cluster IV of the 1970s and

cluster II of the 1980s, are countries which feel highly threatened by uncertain or unknown situations. When they are prospering, it is typically due to internally-led growth during times of political stability. They are not high savings countries by nature. Still, national savings are tactically promoted by the regime by keeping domestic prices high. These nations are typically collectivist ones which do not strongly promote international trade. Politically, these nations are volatile with weak tendencies towards democracy.

The third pattern which emerges, represented by cluster III of the 1950s, cluster VI of the 1960s, cluster V of the 1970s and cluster V of the 1980s, is that of the **individualistic nations**. These nations are by far the most individualistic nations in any period during the post-World War II era. They consistently have high domestic prices but are moderately open to international trade and do not feel threatened by uncertain or unknown situations. Politically, they tend to be stable democracies. Although they are highly individualistic, they are also strongly unacceptant of social stratification.

The fourth and fifth prominent patterns are that of the **thrifty nations**. All of these nations have high propensities to save increments to their disposable income. However, they are by no means homogeneous. In effect, two patterns of thrifty nations can be distinguished based on their openness to international trade. Thus, the fourth pattern is that of the **open thrifty nations**, represented by cluster III of the 1960s, clusters I and VI of the 1970s and cluster IV of the 1980s. These nations utilize low domestic prices and are collectivist by nature. Politically, they are stable authoritarian regimes.

The fifth pattern, represented by cluster IV of the 1950s, clusters I and IV of the 1960s, clusters II and III of the 1970s and cluster I of the 1980s, are the **closed thrifty nations**. They are highly authoritarian nations which are highly subject to political instability. They are collectivist by nature and tend to have low domestic prices.

What is provocative about all of these patterns, except for the economic rebuilders, is that they recur throughout the post-World War II era and are largely distinguishable by their cultural dimensions. National cultures appear to economically favor only certain kinds of political institutions and policies. Consequently, no single policy prescription for economic growth can easily be generalized. Rather, the economic efficiency of political policies is highly dependent upon prevailing socio-political conditions with a strong emphasis on embedded national culture. Certain socio-political conditions should, of course, be economically favorable to any nation. What this work shows, however, is that being blessed with the right socio-political conditions, including national culture, is less important to national economic growth than fitting the right political policies to a nation's prevailing socio-political conditions. Therefore, no one set of political policy prescriptions would appear appropriate for all nations. Moreover, one nation's successful economic growth experience may not be replicable by another nation using identical political policies if they are faced with significantly different socio-political conditions.

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