



Analyzing the Impact of Political and Social Factors on GDP Growth: A Comparative Study of Developed and Developing Countries

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Abstract

The economic potential of developing countries is a subject of hot debate. But how much of that potential comes from social and political progress? In this research paper I investigated the effects of sociopolitical progress on GDP growth in developed and developing countries. The findings reveal that sociopolitical progress is statistically significant in predicting economic growth in developing countries, whereas the effect is insignificant in developed countries. These findings highlight the importance of sociopolitical development in driving economic growth, particularly in developing countries. Hence, developing countries can tap into this potential by focusing on improving judicial systems, freedom of speech, wealth distribution, and human development.

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Introduction

This research paper aims to examine the impact of social and political factors on GDP growth in developed and developing countries. The objective is to identify variations in the extent of these effects based on a country's level of advancement. If Brazil were to economically benefit more from improving its rule of law than France does. Then, it can be inferred that Brazil has an economic potential that can be reached through sociopolitical development.

The extent of a country's social and political development is determined by the collective choices its society makes. The outcomes of these decisions are in turn reflected by the economic & political institutions of that country (Robinson & Acemoglu, 2008). Through institutions, social & political choices affect a country's economic growth (Gourevitch, 2008). Literature is abundant on the effects of economic & political institutions on economic growth. The current literature on this topic is mainly focused on explaining why some countries have developed socially and grown economically while others have remained stagnant. The consensus is that economic & political institutions heavily affect a country's long-run economic growth. It is no coincidence that economically developed countries enjoy the benefits of advanced judicial systems, civil liberties, political rights, human capital, and income equality whereas developing countries struggle. Since the ground of economic growth is uneven, can it be argued that developing countries stand to benefit more from improvements in institutional quality as opposed to developed countries, in terms of economic growth? Does the effect of institutional quality on GDP growth converge to a plateau in developed countries? If so, do developing countries stand to benefit more from a marginal increase in institutional quality?

Economically developed nations have taken the lead in achieving social and political advancements, reaping the benefits in terms of growth. By development, I am exclusively considering GDP size, rather than sociopolitical progress. If emerging nations experience a greater positive impact on their GDP from sociopolitical progress compared to developed nations, it indicates the untapped economic potential that can be unlocked through further sociopolitical development... This comparison between developed and developing countries is necessary because demonstrating that developed countries have reached their economic potential through sociopolitical progress and are no longer benefiting from it, while developing countries have so much to gain, would strengthen the case for the significance of such progress.

This research is especially relevant for policymakers of developing countries due to the probability of discovering channels for unlocking more economic growth and reaching their full economic potential. Furthermore, given the evidence that developing countries benefit from social and political development, we may expect a shift in their social paradigm and accelerate the rate of progress in those areas. Thus, it would not be implausible to expect the betterment of the living standards of millions of people. Additionally, a strong and significant correlation between sociopolitical development and real GDP can be used when evaluating a country's macroeconomic outlook.

If developed countries are not economically benefitting anymore from sociopolitical progress whereas developing countries do, policymakers of developing countries would be strongly motivated to prioritize sociopolitical progress. As it would not only foster higher economic growth but also attract investors. Sociopolitical qualities can be measured using indexes of governance, social progress, and political freedom. The aim is to investigate the contributions of these social and political factors on GDP growth by varying the level of

development. Thus, the primary research questions are as follows: How much do these political, and social indicators affect GDP growth? Does the magnitude of the effect vary according to economic development? If these indicators have a bigger effect on GDP growth in developing countries rather than in developed countries, can this be evidence of an unrealized economic potential of developing countries?

To answer these questions, two groups of countries were created: developed and developing countries. Then, 11 sociopolitical variables that are expected to affect real GDP growth were chosen. The variables are Civil liberties, Control for Corruption, Consumer confidence, Government effectiveness, Human Development Index, Income inequality, Political rights, Political stability, Regulator quality, Rule of law index, Voice & accountability. After gathering the data of these variables for both groups of countries, devising a panel regression model, and conducting the necessary preliminary regression tests, real GDP growth was regressed against the sociopolitical variables for developed and developing countries. The results are evaluated comparatively to examine the effect of sociopolitical development on real GDP growth.

In the literature, all of these variables have been found to affect economic growth in some way. However, there aren't any studies on how these variables affect economic growth in countries with varying economic development. Thus, this research will be contributing to the literature by determining which category of sociopolitical factors affect economic growth the most and whether it varies according to economic development.

As the sample of developed countries, I will use G7 countries to serve as the developed group of countries. That is Canada, France, Germany, Italy, Japan, the United Kingdom, United States. As developing countries, I will consider G20 countries not listed in G7 with the addition of Chile, due to the economic growth and improvements in institutional quality it experienced in the past three decades (Schmidt-Hebbel, 2006). Hence non-G7 countries in my sample are Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, and Chile.

Results indicate that sociopolitical development's effect is indeed statistically significant in developing countries whereas the effect is statistically insignificant in developed countries. Furthermore, the direction of the effect is what was expected. For example, an increase in the Rule of Law index contributes to growth in developing countries.

I will begin by explaining the theory behind how sociopolitical factors affect GDP growth. Then I will go over all the chosen sociopolitical variables and how they have been shown to affect GDP in the past. It will be followed by the sampling methods and methodology. Lastly, I will comparatively analyze the results.

Theoretical Framework and Literature Review

Social and political progress, like technological progress, helps a nation utilize all of its resources, create an efficient market, foster cooperation within the society, and decrease risks (Milligan & O'Keeffe, 2019). Thus, improvements in these subjects, through various channels, increase total factor productivity in a country which is reflected in its economic output.

Greater inequality in wealth, income, and land ownership is associated with less economic growth. Unequal distributions of wealth results in lower GDP growth (Alesina & Rodrik, 1994). Furthermore, income inequality is related to higher capital taxes, which dampens economic growth (Adam et al, 2015). Hence, an improvement in income inequality can be expected to contribute positively to GDP growth.

Voice & Accountability encapsulates perceptions of how much a nation's residents can choose their government, as well as freedom of expression, freedom of association, and a free press (Worldwide governance indicators). A study (Ozpolat et al, 2016) found that the rule of law and voice & accountability indexes are correlated with long-term GDP growth in developed countries but they found no statistically significant effect in underdeveloped countries. I will expand on that study by taking a larger sample of countries, with higher differences in economic development, over a wider period. Voice & accountability is linked to the legitimacy and responsiveness of the state which is relevant for improving the tax effort and raising the economic development and social welfare of a country (Bird et al, 2008). According to Otrok et al. (2019), increasing tax progressivity can lead to economic growth without reducing income inequality as the upper end of the distribution benefits more.

Furthermore, voice & accountability is related to more transparency in government affairs leading to less corruption, reducing ease of doing business, promoting foreign direct investment, and incentivizing policymakers to make policies that will benefit a larger portion of the population. Therefore, voice & accountability is expected to have a statistically significant effect on GDP growth through indirect economic channels. The effect is anticipated to be significant in developing countries due to their less evolved democracies and lower levels of voice & accountability (Diamond, 2008). As a result, even marginal differences in this variable can be expected to have a substantial impact on GDP compared to developed countries.

Political instability reduces growth (Alesina et al., 1996). The effect of political instability on growth is more pronounced for unconstitutional administration changes (Gani, 2008). Feng (1997) found that political stability promotes growth through the political system of democracy by instituting regular government changes. Decreased total factor productivity growth and less accumulation of human capital is another channel through which political instability negatively affects GDP growth (Aisen & Veiga, 2011). Therefore, it is expected that political unrest will harm economic growth.

The consumer confidence indicator is a useful tool for predicting future household consumption and saving. It is based on responses about the expected financial situation, sentiment about the economy, unemployment, and savings capability. Consequently, it has been studied extensively concerning GDP growth through the channel of consumption. Positive consumer confidence shocks have been found to cause immediate and long-lasting economic booms in developing countries, in contrast, the effect is only temporary in G7 countries (Constantinides et al, 2023). Consumer confidence has also been shown to predict economic downturns and crises (Batchelor & Dua, 1998; Taylor & McNabb, 2007).

“During times of recession and low confidence, consumer confidence can significantly improve economic growth by amplifying the effects of monetary and fiscal policy” (Guo & He, 2020). Consumer confidence can be useful in predicting future household consumption, saving, and its relationship with GDP growth. Hence, consumer confidence is expected to positively contribute to GDP growth in developing countries.

Government effectiveness, is the government's ability to supply and implement public policies and services effectively, openly, and without corruption or improper influence, is a key indicator of how successfully that government can benefit its constituents and foster economic progress. It has been demonstrated to have a large beneficial impact on GDP growth in developing nations and is one of the primary metrics used to evaluate the quality of governance in a country (Gani, 2008). Thus, government effectiveness is both a deciding factor for a country’s development and varies highly with economic development. A positive relationship between government effectiveness and growth is to be expected.

There is an ongoing debate about the relationship between political rights and GDP growth in developing countries. While some argue that economic growth can occur even in countries without political freedom, others suggest that democracy and political freedom foster economic growth. A study found that countries switching to democratic rule experienced a 20% increase in GDP over 25 years compared to what would have happened had they remained authoritarian states (Acemoglu, 2019). An opposing view suggests that in countries with weak political institutions, autocratic regimes could promote economic growth by providing stable leadership and policy continuity. Some studies have not found considerable differences between economic growth as a function of political regimes, either in democracies or

autocracies (Przeworski & Limongi, 1997). Hence, GDP growth and political rights are expected to be positively correlated.

The link between corruption and economic growth has been studied extensively with the overall consensus being, corruption affects growth negatively (Spyromitros & Panagiotidis, 2022). A contribution to the literature asserts that the effect of political instability on economic growth is more pronounced for autocracies and countries with low rule of law and government effectiveness, which are comparative differences between developed and developing countries (Gründler & Potrafke, 2019). Control of corruption is another point of difference between developed and developing countries which is anticipated to be positively related to economic growth.

While the precise causal link between civil liberties and economic growth is not fully understood, a study suggests that the level of Personal Autonomy and Individual Rights, which encompasses second-generation human rights impacting individual mobility in areas such as housing, employment, and education, is associated with long-term economic development (Benyishay & Betancourt, 2010). Because the civil rights index encapsulates personal autonomy and individual mobility it can be expected to affect GDP growth positively through a more efficient labor market and, to some extent, free movement of capital.

The Human Development Index (HDI) is a metric developed by the United Nations that aims to measure the social and economic development levels of countries based on three dimensions: a long and healthy life, access to knowledge, and a decent standard of living (Max Roser, 2014). Since these dimensions are related to higher economic growth, HDI and GDP

are strongly correlated and there is a feedback mechanism between them (Elistia & Syahzuni, 2018). Although a clear causal link between HDI and economic growth hasn't been uncovered, two aspects of the index are expected to be highly correlated with economic growth in developing countries namely, labor and productivity.

By providing accountability, fair & clear laws, and a stable investment climate, the Rule of Law Index plays a significant role in fostering economic growth. It is essential to building just, prosperous, and peaceful communities that support development, transparent governance, and adherence to fundamental rights (WJP, 2022). A relationship between the rule of law, democracy, and economic development has been established in developing countries (Butkiewicz & Yanikkaya, 2006). Rule of law can be expected to be positively correlated with GDP growth in both developed and developing countries by decreasing risks while promoting cooperation and stability.

Regulatory quality refers to the government's capacity to create and carry out sensible laws and rules that support the growth of the private sector. How effectively markets and the economy perform will likely depend on the state's capacity to establish effective regulatory institutions. As a result, there is now significant evidence of a connection between effective regulation and economic growth in developing nations (Jalilian et al., 2007). Thus, a positive correlation with GDP growth is expected.

The existing body of research extensively investigates the relationship between sociopolitical variables chosen in this study and their impact on GDP. However, a significant gap remains in the literature concerning the examination of these variables' effects across countries with varying levels of development. Therefore, analyzing the effects of sociopolitical

variables on GDP in countries at different stages of development makes a valuable contribution to the existing literature.

Data and Methodology

I used a country-specific panel data set for the period 1991 – 2021 at an annual frequency. The independent variables are Income inequality, voice & accountability, political stability, consumer confidence, government effectiveness, control for corruption, civil liberties, human development index (HDI for short), rule of law index, and regulator quality. The dependent variable is real GDP growth. The definition of each variable can be found in Table 1. Descriptive statistics of the variables for developed, developing and all countries can be found in the following tables.

Table 1

Variable	Definition
rgdpg	Real GDP growth, in constant 2015 USD.
consc	Consumer confidence. Measures how optimistic consumers are about the state of the economy. Range: 0 to 100. 100 meaning maximum consumer confidence.
controlcorrupt	Reflects perceptions of the extent to which public power is exercised for private gain, as well as "capture" of the state by elites and private interests. Range: -2,5 to 2,5. 2,5 meaning maximum control on corruption.
rulelaw	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Range: -2,5 to 2,5. 2,5 meaning maximum rule of law.
regulatorq	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Range: -2,5 to 2,5. 2,5 meaning maximum regulator quality.
governmente	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures. Range: -2,5 to 2,5
politicals	Measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Range: -2,5 to 2,5. 2,5 meaning maximum political stability.
voiceacc	Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Range: -2,5 to 2,5. 2,5 meaning maximum Voice & Accountability.

civil	Civil liberties are inherent rights and freedoms granted to individuals within a society. Range: 1 to 7, 1 meaning maximum civil liberties.
polr	Measures the entitlements and freedoms that individuals possess within a political system, participate in the electoral process, express their opinions, and hold elected officials accountable. Range: 1 to 7, 1 meaning maximum political rights.
gini	Measures economic inequality in a population. Range: 1 to 100. 100 meaning absolute inequality.
hdi	A statistical measure used to quantify the degree of income inequality within a population. Range: 0 to 1, 1 meaning maximum human development.

Table 2

Developing Countries Descriptive Statistics								
Variable	count	mean	std	min	25%	50%	75%	max
consc	264.0	92.182	17.760	45.032	99.718	99.990	100.012	100.245
rgdpg	264.0	3.811	4.153	-13.127	1.903	4.250	6.412	14.231
controlcorrupt	264.0	2.364	0.604	1.340	2.019	2.237	2.591	4.044
rulelaw	264.0	2.423	0.605	1.416	1.955	2.348	2.615	3.849
regulatorq	264.0	2.619	0.576	1.434	2.191	2.530	2.894	4.043
governmente	264.0	2.648	0.481	1.795	2.318	2.551	2.828	3.907
politicals	264.0	2.074	0.595	0.405	1.691	2.053	2.505	3.589
voiceacc	264.0	2.434	0.868	0.593	1.875	2.765	3.073	3.793
civil	264.0	4.534	1.759	1.000	3.000	5.000	6.000	7.000
polr	264.0	4.727	2.126	1.000	3.000	6.000	6.000	7.000
gini	264.0	44.335	8.627	29.500	37.850	42.200	50.250	64.800
hdi	264.0	0.742	0.094	0.466	0.683	0.750	0.817	0.923

Table 3

All Countries Descriptive Statistics								
	count	mean	std	min	25%	50%	75%	max
consc	418.0	95.045	14.596	45.032	99.619	99.994	100.040	100.335
rgdpg	418.0	2.838	3.849	-13.127	1.142	2.780	5.167	14.231
controlcorrupt	418.0	2.942	0.953	1.340	2.146	2.670	3.877	4.572
rulelaw	418.0	2.974	0.903	1.416	2.177	2.651	3.926	4.386
regulatorq	418.0	3.077	0.783	1.434	2.384	2.957	3.824	4.521
governmente	418.0	3.120	0.770	1.795	2.464	2.894	3.958	4.424
politicals	418.0	2.488	0.751	0.405	1.907	2.540	3.061	3.911
voiceacc	418.0	2.910	0.936	0.593	2.499	3.134	3.610	4.168
civil	418.0	5.359	1.785	1.000	5.000	6.000	7.000	7.000
polr	418.0	5.553	2.008	1.000	5.000	6.000	7.000	7.000
gini	418.0	40.527	8.723	28.000	33.925	38.800	45.700	64.800
hdi	418.0	0.800	0.108	0.466	0.720	0.828	0.893	0.948

Table 4

Developed Countries Descriptive Statistics

Variable	count	mean	std	min	25%	50%	75%	max
consc	154.0	99.954	0.312	99.477	99.550	100.037	100.302	100.335
rgdpg	154.0	1.171	2.509	11.031	0.713	1.709	2.660	5.178
controlcorrupt	154.0	3.934	0.532	2.506	3.780	4.052	4.335	4.572
rulelaw	154.0	3.918	0.413	2.736	3.854	4.062	4.161	4.386
regulatorq	154.0	3.862	0.347	2.995	3.626	3.960	4.126	4.521
governmente	154.0	3.930	0.415	2.691	3.892	4.035	4.196	4.424
politicals	154.0	3.198	0.352	2.267	2.929	3.175	3.515	3.911
voiceacc	154.0	3.726	0.185	3.369	3.564	3.753	3.865	4.168
civl	154.0	6.773	0.420	6.000	7.000	7.000	7.000	7.000
polr	154.0	6.968	0.178	6.000	7.000	7.000	7.000	7.000
gini	154.0	33.999	3.392	28.000	31.600	33.150	35.200	41.500
hdi	154.0	0.899	0.026	0.816	0.882	0.899	0.921	0.948

Income inequality (reflected by the GINI index), control on corruption, regulator quality, government effectiveness, voice & accountability, political stability, HDI, real GDP,

and rule of law indexes have been retrieved from the World Bank website (Worldwide governance indicators). The consumer confidence series is retrieved from the OECD's website (Leading Indicators OECD Data). Civil liberties and political rights series are retrieved from the Freedom House website (Freedom House). Real GDP growth in percentage terms was calculated using Equation 1.

(1)

$$rGDPG_t = \frac{rGDP_{t+1} - rGDP_t}{rGDP_t} * 100$$

The Freedom in the World report's variables for assessing political rights and civil liberties are generated from a series of inquiries pertaining to many aspects of government and human rights. The degree of freedom in each nation or territory is evaluated using a two-tiered methodology that consists of scores and status. Each category's different indicators, such as the election system and political pluralism, are given points as part of the scoring procedure. The total scores decide whether a country is Free, Partly Free, or Not Free, indicating the degree of political and civil liberties that each person has access to. The approach places a focus on methodological consistency, intellectual rigor, and objective assessments. For this paper, each country's yearly scores in political rights and civil liberties are used.

The six aggregate indicators—Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption—are based on over 30 data sources, capturing perceptions of governance from respondents and expert assessments worldwide (Kraay et al, 2010). These indicators provide a comprehensive assessment of governance quality, considering citizen participation, stability, government competence, regulatory transparency, legal fairness, and corruption control. They serve as valuable tools for understanding and promoting effective governance practices. Hence, the

explanatory power of these variables for real GDP growth in developed and developing countries helps us understand how significant good governance practices are for economic growth.

The variables Control for Corruption, Rule of Law, Regulator Quality, Government Effectiveness, Political Stability, Voice & Accountability, Civil Liberties, and Political Rights are measured on a scale ranging from -2.5 to 2.5. Positive values in these variables indicate a positive effect or a higher level of the respective factor. For ease of interpretation and obtaining correct coefficients for the variables the values have been rescaled to range from 0 to 5. Political rights and civil liberties are measured on a negative scale ranging from 1 to 7, with 7 indicating the least amount. Hence, the scale is reversed so 7 indicates the maximum positive score of the variable.

To assess the correlation among the explanatory variables, a correlation matrix was constructed. Furthermore, the variance inflation factor (VIF) was calculated for each variable to identify potential multicollinearity issues and determine which variables to exclude. The findings revealed a high correlation among the governance indicators, including control of corruption, regulator quality, and government effectiveness. Consequently, the rule of law index was selected to represent these governance indicators, as it encompasses the broader concept. Additionally, the voice & accountability index exhibited a strong correlation with both the civil liberties and political rights indexes. Therefore, the voice & accountability index was chosen to represent the political and civil rights of a country. Hence, the final set of variables are Consumer Confidence, Rule of Law, Voice & Accountability, Gini (income inequality), HDI (human development index).

Based on prior research and presented arguments it is expected that the majority of the sociopolitical variables explaining real GDP growth will be statistically significant in developing countries and statistically insignificant in developed countries. To empirically evaluate the research questions the following hypotheses have been formed, and the significance level is set to 95%.

Hypothesis 1: In developed countries, the majority of sociopolitical factors examined (consc, rulelaw, voiceacc, gini, hdi, time) are insignificant in explaining GDP growth.

Hypothesis 2: In developing countries, the majority of sociopolitical factors examined (consc, rulelaw, voiceacc, gini, hdi, time) are significant in explaining GDP growth.

Hypothesis 3: The cumulative effect of sociopolitical variables is positive for developing countries.

Given the lower institutional quality present in developing countries, the concept of diminishing returns of institutional quality on real GDP, along with the influence of globalization in facilitating the transfer of sociopolitical advancements, provides compelling reasons to consider the possibility of a catch-up effect, also known as convergence theory, in developing nations (Rassekh, 1998). Social progress is expected to significantly benefit GDP growth in developing countries and have an insignificant effect on developed ones. The cumulative effect of explanatory variables is expected to be positive in developing countries. I will empirically test these hypotheses relying on data.

Based on Thompson's 2011 study (Thompson, 2011), the use of double clustering is expected to be particularly valuable in datasets when regression errors encompass significant time and cross-section (country) components and when the regressors themselves exhibit substantial firm and time variations, double clustering can help reduce bias effectively. Moreover, the impact of double clustering is more pronounced when the number of firms and periods is relatively balanced.

Applying this insight to the dataset, which covers the period of 1996-2021 and includes a total of 19 countries (7 developed and 12 developing), the conditions described in Thompson's work align with the data. Regressor errors contain significant time and country. By employing double clustering, considering both time and country clusters, the potential biases arising from the interplay of time and country-specific effects are addressed. This approach allows for a more accurate estimation of the regression coefficients and helps account for within-firm correlations and within-time period correlations

I regressed real GDP growth on all independent variables using double clustering of country and year. This way I was able to capture the autocorrelation present in year and country dimensions. I also added a linear time trend to avoid any spurious relations. The regression equation is as follows, hypotheses include every variable in the equation. The variable names represent, in order, Gini (Income inequality), VA(Voice & Accountability), Consc (Consumer Confidence), HDI (Human Development Indicator), and RoL (Rule of Law).

$$rGDPG_{c,t} = a_0 + a_1 Gini_{c,t} + a_2 VA_{c,t} + a_3 ConsC_{c,t} + a_4 HDI_{c,t} + a_5 RoL_{c,t} + e_{c,t}$$

After acquiring coefficients of every variable on real GDP growth, patterns in these coefficients between the groups of developed and developing countries have been analyzed. This way, every independent variable's contribution to growth in varying levels of economic development has been investigated. As a robustness check, a single regression has been run using the same variables but including development as a categorical variable in order to assess whether development is significant in predicting growth. The results, which can be found in the appendix, didn't differ.

There are potential weaknesses with this regression model that must be noted. Because country-wide shocks, such as COVID, can influence real GDP growth, income inequality, and consumer confidence at the same time endogeneity is a possible problem. Consumer Confidence, Rule of Law, Voice & Accountability, Gini, and HDI all depend on indicators that can induce subjectivity, the surveys used in calculating GINI and Rule of Law are examples of how measurement errors can occur. Additionally, variables that highly affect GDP growth, such as interest rate and consumption, that are not included in this analysis can lead to omitted variable bias.

Results and Interpretation

The regression results for the developed, developing, and full samples can be found in Table 5. Additionally, four lags of each independent variable have been tested to see if the model has any predictive power, lagged variables are labeled as L. Variables with significance levels above 95% are reported in Tables 6,7, and 8.

Table 5
Pooled OLS, Double clustering by country and year

	<i>Dependent variable:rgdpg</i>		
	All Sample	Developed	Developing
consc	0.012 (0.019)	-0.384 (0.744)	0.020 (0.019)
const	15.921*** (2.947)	17.615 (72.587)	13.490*** (3.160)
gini	-0.028 (0.022)	0.141** (0.058)	-0.071*** (0.025)
hdi	-13.233*** (2.630)	8.500 (13.594)	-8.902*** (3.133)
rulelaw	1.034** (0.420)	0.762 (0.866)	1.157** (0.507)
time	-0.006*** (0.002)	-0.008** (0.004)	-0.008*** (0.003)
voiceacc	-1.473*** (0.328)	2.158 (1.685)	-1.174*** (0.353)
Observations	418	154	264
R ²	0.256	0.204	0.207
Adjusted R ²	0.245	0.171	0.188
Residual Std. Error	3.345 (df=411)	2.284 (df=147)	3.742 (df=257)
F Statistic	18.061*** (df=6; 411)	7.303*** (df=6; 147)	7.985*** (df=6; 257)
Note:	*p<0.1; **p<0.05; ***p<0.01		

Table 6

Developed Countries	Coefficient	Significance
rulelaw	7.416730	0.013288
time	-0.046458	0.000342
consc_L1	32.001290	0.011092
voiceacc_L1	-4.228814	0.026560
voiceacc_L3	3.834057	0.017504
gini_L4	0.351707	0.035365
hdi_L4	77.549949	0.021600

Table 7

All Countries	Coefficient	Significance
gini	0.180441	0.035391
time	-0.022003	0.000034
voiceacc_L3	2.807210	0.000261
gini_L3	-0.131721	0.028473
hdi_L2	15.915692	0.000599
hdi_L4	27.578412	0.000929

Table 8

Developing Countries	Coefficient	Significance
voiceacc	3.913692	3.449614e-02
gini	0.220660	1.684567e-02
time	-0.049878	3.313594e-09
rulelaw_L3	3.600204	2.226556e-02
voiceacc_L4	3.202569	3.758371e-02
hdi_L1	87.423392	1.817972e-06
hdi_L4	52.502449	5.326664e-07

This section analyzes the empirical findings concerning the literature review, proposed theory, and developed hypotheses. However, because the regressors include arbitrary sources of data, such as surveys and estimations, and lack a defined unit, evaluation of the regression outcomes is based on significance, variance, and direction of estimated effect. Additionally, because economic growth depends on many other variables, such as national income identities, that are not present in this analysis, it would be illogical to evaluate the coefficient's magnitude in causality to economic growth. Therefore, the sign and significance of the estimated coefficient are considered in interpreting regression results.

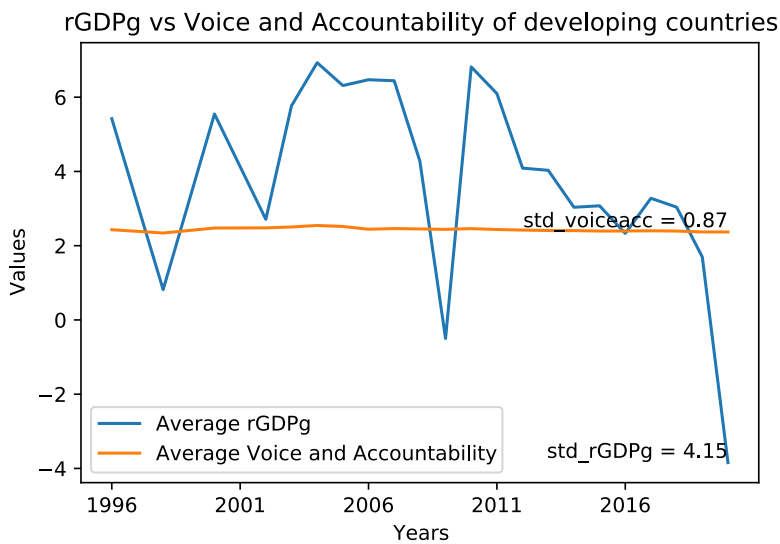
The analysis reveals that in developed countries, except for GINI, all of the explanatory variables are found to be insignificant. Conversely, in developing countries, almost all of the explanatory variables exhibit statistical significance, except for consumer confidence. These findings align with hypotheses 1 and 2. Specifically, social and political progress is found to have a significant impact on economic growth in developing countries, while the effect is insignificant for economic growth in developed countries. The cumulative effect of explanatory variables is positive for both developed and developing countries, failing to reject hypothesis 3. It must be noted that all explanatory variables in both regressions are jointly significant, as depicted by their F-scores. Although developed countries exhibit more variation in variables, the significance of explanatory variables in developing countries is higher, strengthening the argument for the importance of sociopolitical development's importance in developing countries.

Consumer confidence, labeled *consc*, has a negative estimated coefficient in developed countries and a positive one in developing countries. This finding supports the literature which states a positive relationship between consumer confidence and economic booms in developing countries (Constantinides et al, 2023). The literature also states that the causal relationship between consumer confidence and growth can be influenced by other factors such as monetary and fiscal policies (Bătrâncea, 2020). Which can explain the negative coefficient in developed countries. Consumer confidence is found to be significant in predicting one year's economic growth in developing countries, underlining the importance of confidence in the economy for developing countries.

The Rule of Law index has a positive impact on GDP growth, consistent with prior research. The effect is nonsignificant in developed countries but significant in developing countries, supporting hypotheses 1 & 2. These results contradict the findings of Ozpolat's (2016) study, insignificant effect in developed countries, but provide support for the proposed relationship among economic development, rule of law, and democracy (Butkiewicz & Yanikkaya, 2006). The third leg of the Rule of Law index is significant. Hence, it can be inferred that improvements in the Rule of Law will continue to contribute to growth three years after in developing countries.

Voice & Accountability index has a positive but insignificant effect in developed countries whereas the effect is negative but significant in developing countries, contradicting Ozpolat's (2016) study. Although the finding is in line with hypotheses 1 & 2 the direction of the effect is contrary to what was expected. The reason for this result is that the average level of Voice & Accountability has remained relatively stable in the developing world, while the average real GDP growth has exhibited fluctuations with a negative trend over the past 10 years, as reported in Figure 1. That may be the reason why we observe a negative and significant effect of Voice & Accountability on real GDP growth in developing countries. The significant relationship and a negative effect, contradicting previous literature, call for further research regarding the dynamics of the relationship between Voice & Accountability and real GDP growth in developing countries. The first and third lags are significant in predicting growth in developed countries, with the first lag having a negative coefficient. The fourth lag of Voice & Accountability is significant in predicting growth in developing countries.

Figure 1



Income inequality, reflected by the GINI index, is significant for both groups of countries. The effect is positive for developed countries and negative for developing countries. The index ranges from 1 to 100, with 1 indicating absolute inequality. Given the decreasing scale, it can be inferred that income inequality positively affects growth in developing countries and negatively affects growth in developed countries. A possible explanation is that developing countries distribute their income unequally and, through higher capital taxes, suffer from it economically. Whereas developed countries distribute their income equally, hence contrary to expectations, forcing a more equal distribution of income hurts economic growth.

Inequality in wealth, income, and land ownership is linked to less economic growth, as unequal wealth distribution results in lower GDP growth (Alesina & Rodrik, 1994). Additionally, income inequality is associated with higher capital taxes that dampen economic growth (Adam et al, 2015). The positive correlation in developing countries aligns with previous research, however, the negative correlation in developed countries seems contradictory. A plausible explanation is that, since wealth in developed countries is distributed more equally than in developing countries and developed countries have strong welfare systems that create safety nets for their citizens, the effect is less pronounced.

The human development index has an insignificant effect on growth in developed countries but a significant and negative effect in developing countries. The significance of the relationship is as expected and it is in line with hypotheses 1 & 2. However, the negative coefficient for developing countries is unexpected. HDI ranges from 0 to 1, with 1 indicating higher development. The negative coefficient can be explained by thinking of HDI as a proxy for the development of a country. Since developing countries grow more rapidly than developed countries and have lower HDIs, it can be concluded HDI is significantly and negatively associated with economic growth in developing countries. The finding is in line with the research of Alesina and Rodrik (Alesina & Rodrik, 1994). Furthermore, the first and fourth lags of HDI are significant in predicting real GDP growth in developing countries, whereas, only the fourth lag is significant in developed countries. It should be noted that, although the size of the coefficient is not taken into account in this analysis due to the aforementioned reasons, HDI's estimated coefficient is larger than other variables by orders of magnitude. Hence, human development is the largest contributor to economic growth by far.

Conclusion & Discussion

Discussions about the potential of developing countries are quite common. It is possible for developing markets to experience growth rates higher than developed ones and become prosperous economies. This paper aimed to investigate how much of that potential comes from sociopolitical improvements such as fair laws and equal distribution of wealth. I found that improvements in these areas are significantly contributing to the economic growth of developing countries, whereas the same variables, excluding income inequality, have an insignificant effect on developed countries. Therefore, it can be concluded that sociopolitical development is an important factor for economic growth and policymakers of developing countries can tap into this potential by improving their judicial systems, freedom of speech, distribution of wealth, and human development.

A significant correlation between certain sociopolitical variables and real GDP growth has been reported. However, It would be prudent to question the causality. Does economic development cause sociopolitical progress? Or does sociopolitical progress cause economic development? On the one hand, it can be argued that Voice & Accountability, income inequality, Rule of Law, and Human Development enable economic growth by creating equal opportunities for citizens, increasing the productivity of workers, and distributing resources equally. On the other hand, sociopolitical progress can be the result of increased welfare enabled by economic growth. But, a common significant factor for growth in both developed and developing countries is income inequality. Hence, while the causal relationship between GDP growth and sociopolitical progress remains a point of debate, income inequality is imperative for growth regardless of economic development. Further research is warranted into the causal relationship between growth and sociopolitical progress.

Some weaknesses of this research are the inherent subjectivity of sociopolitical variables and how they relate to one another. Which makes it harder to distinguish the individual contribution of parameters. Voice & Accountability is closely related to the Rule of Law, thus an increase in one spillover to the other. To overcome this variable distinct aspects of society, such as legislation, freedom, and education can be built using numerical data excluding subjective opinions such as surveys.

Another insight of this research that investors could utilize is that improvements in the sociopolitical variables discussed here are significantly associated with economic growth in developing countries. Hence, this relationship serves as a lens to view the economic prospects of a developing country and evaluate investment opportunities.

Further research can be done to investigate the relationship between Voice & Accountability and GDP growth. There are several reasons for the negative effect on developing countries. It could be that in countries with a less free electorate policy implementation costs may be lower for the government. Hence, it would be easier for governments to apply policies that their electorate opposes, but, benefits economic growth. China can be an example of this. Another reason may be: how people from different cultures evaluate their freedom concerning their government. In the relatively more hierarchical societies of Asia, authority is not questioned as much as in Western societies. An outcome of this is that, Voice & Accountability index may not be accounting for how people from different cultures view their government, hence providing wrong estimates. For example, in a hierarchical society, citizens may be saying that they are free: choosing their government, expression, and association. However, more egalitarian societies may view those societies as unfree. Hence, the index may underperform.

Appendix

Developing Categorical Variable, Double Clustering

<i>Dependent variable:rgdpg</i>	
consc	0.020 (0.019)
const	10.050*** (3.296)
deving	2.466*** (0.587)
gini	-0.059** (0.023)
hdi	-9.120*** (2.857)
rulelaw	1.390*** (0.416)
time	-0.007*** (0.002)
voiceacc	-1.229*** (0.340)
Observations	418
R ²	0.279
Adjusted R ²	0.267
Residual Std. Error	3.296 (df=410)
F Statistic	19.141 *** (df=7; 410)
Note:	* p<0.1; ** p<0.05; *** p<0.01

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