Polyarchy, Liberal Principles, and Economic Development: A Quantitative Analysis of Regime Types

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Abstract

This thesis looks at how regimes, conceptualized through competitiveness of access to power (polyarchy) and liberal principles, affects economic development. In that regard, political regimes are conceptualized as: liberal democracies, electoral democracies, electoral autocracies, and closed autocracies. Next, economic development is conceptualized material well-being of society, measured in two ways. Firstly, through GDP per capita growth percentage between 2018-2019 to demonstrate short-term change, and secondly through GDP per capita from 2019. Utilizing the Varieties of Democracy (V-Dem) dataset, this thesis employs a linear regression model to look at the effects, holding politico-geographic region, political stability, population, control of corruption, and property rights constant. The models demonstrate that overall, regimes with more polyarchy and other liberal principles do not contribute to more economic development, with some nuances that are highlighted by six hypotheses comparing each regime type to one another. Overall, this research provides valuable insights for both policymakers and scholars interested in how various regimes affect economic development.

Keywords: regimes, polyarchy, liberal principles, economic development, institutions

1- Introduction

In the modern world, the interplay between regimes and economic development has captivated academic and societal interest, sparking an ongoing debate on how different governance systems and practices affect economic outcomes. This thesis builds upon the foundational research within those fields comparing how various regimes affect economic development.

The relationship between regimes and economic development is a complex and multifaceted subject. The question of how regime type affects economic development is widely contested in both theoretical and empirical discussions. Theoretically, scholars like Acemoglu and Robinson (2012) give foundational theories arguing for a strong link between regimes and economic outcomes, while other scholars like Zakaria (2003) argue otherwise. Therefore, the empirical debate in academia on this topic is still ongoing, which is elaborated on in the following section.

From a societal perspective, this study is critically important as it extends beyond academia, and taps into a critical contemporary issue. This study sheds light on the nuanced manners in which the structure of political participation and competition dynamics can influence economic prosperity. Such studies keep on being instrumental for societies having to tackle the question of the political reforms to adopt to enhance economic development (Rodrik, 2000). From this problem statement, and academic and social relevance, a focused research question emerges: How do different regime types, conceptualized as closed autocracies, electoral autocracies, electoral democracies, and liberal democracies, affect economic development?

This thesis is structured to methodologically answer the research question in a series of interconnected components by relying on V-Dem. Firstly, the foundational section conceptualizes key concepts. This discussion leads to the critical review of existing theories, approaches and from various literature. Next, the research design and methodology applied in this paper are elaborated on, including the selection of quantitative research, choice of dataset, and the operationalization of key variables. This section also critically links the empirical findings back to the theoretical discussions specified in the prior section. Lastly, the concluding section of this thesis synthesizes the findings, and answers the research question.

2-Theoretical Discussion and Conceptual Framework

The literature surrounding the impact of regimes on economic development is rich and diverse, reflecting a spectrum of perspectives. This section begins with the conceptualization of key terms followed by a discussion of previous literature.

2.1-Conceptualization

2.1.1-Regimes and Democracy

In this paper, regimes are conceptualized as the organization and operation of power in society in relation to the sets of rules, procedures, and understandings that affect political participation (Macridis, 1986, as cited in Gasiorowski, 1996, p. 470). Therefore, this conceptualization includes the broader norms surrounding political participation, as stated by Almond and Powel (1996), regimes are "a pattern of organization for a government" (p. 18) that are embedded within the broader societal context. This conceptualization shows how regimes are not merely about visible institutions, but rather are about deeper, embedded understandings that affect patterns of participation in politics.

There are ongoing discussions of how to differentiate various regimes, and the concept of democracy itself. Some such as Schumpeter (1950) defend a "minimalist" conceptualization of democracy that only encapsulates political representatives competing for the citizens' votes. In contrast, other authors counter that conceptualization arguing that democracy needs other features for competition to be truly meaningful (L. Diamond, Linz, & Lipset, 1990). This paper utilizes the latter definition which views it not just as a system, but rather as a much more comprehensive arrangement of politics and society. In that regard, in this thesis types of regimes are differentiated according to competitiveness of access to power (polyarchy) and various liberal principles. Robert Dahl (1971) defines polyarchy as "(...) the opportunities for political opposition, competition, and participation (...)" (p. 222), is a crucial component in defining political regimes.

In other words, polyarchy particularly focuses on how we can categorize political regimes based on how they hinder or facilitate broader involvement and participation. Secondly, liberal principles include respect for personal liberties, the presence of rule of law, and constraints on branches of government (see Appendix A; Lührmann et al., 2018, as cited in Coppedge et al. 2024, pp. 292-293). This broader conception is more in alignment with the current reality that there are significant differences between various regimes in terms of facilitating meaningful competition, civil liberties and social rights, and enabling continued responsiveness. Therefore, this creates a "need to categorize separately those countries that allow greater political competition and freedom (...)" (Diamond, Lin, & Lipset, 1990 p. 7).

Therefore, conceptualizing it in this manner ensures that the difference between a regime that has robust framework that fosters an active society, and individual rights is differentiated from a state that only holds elections without such consideration and practices. While pioneering for its decade, the

Schumpeterian approach attracts criticism for reducing democracy to a transactional activity, which misses the profound engagements for a functioning democracy (Pateman, 1970).

2.1.1.2- Closed Autocracy

Closed autocracy is a regime where the power is highly centralized, and political pluralism is extremely restricted. In closed autocracies, no competitive elections take place, often the executive branch has strong control over all electoral, legislative, and judicial processes. In other words, the executive branch does not create accountability mechanisms (Lührmann et al., 2018 as cited in Coppedge et al., 2011). Moreover, the government becomes not accountable to either other government bodies or the public. Therefore, this fundamental absence of mechanisms that typically create checks and balances and limit executive power are not present (Gandhi & Przeworski, 2007). Additionally, the environment facilitated by this regime has very limited polyarchy, meaning extensive political participation, and opportunities for opposition are very limited.

2.1.1.3- Electoral Autocracy

Electoral autocracy is conceptualized as a regime in which "de-jure multiparty elections for chief executive and the legislature" can be present, but the elections are not "free and fair, or de-facto multiparty" or do not fulfill the minimum prerequisites for polyarchy and liberal principles (Lührmann, 2018 as cited in Coppedge et al., 2024 p. 292). In electoral autocracies, the prerequisites are mainly not met due to manipulation and control by ruling authorities. Schedler (2002) describes this process as a part of the "menu of manipulation" in which states with elections without democracy "(...) try to obtain at least a semblance of democratic legitimacy, hoping to satisfy external as well as internal actors. At the same time, by placing those elections under tight authoritarian controls they try to cement their continued hold on power. Their dream is to "reap the fruits of electoral legitimacy without running the risks of democratic uncertainty" (p. 37). This manipulation and control undermine the principles of polyarchy as discussed by Dahl (1971).

2.1.1.4 - Electoral Democracy

Electoral democracy is a regime in which "de-facto free and fair multiparty elections" are present, but the minimum level of prerequisites for polyarchy and liberal principles are not met (Lührmann et al., 2018 as cited in Coppedge et al., 2024 p. 292). In such regimes, there can be challenges in relation to liberal principles such as "access to justice, or transparent law enforcement, or liberal principles of respect for personal liberties, rule of law, and judicial as well as legislative constraints on the executive" (p. 292). Such challenges suggest a surface-level adherence to democratic understandings where democratic processes do occur, but deeper structural and institutional requirements are not present.

The difference between electoral democracies and electoral autocracies lies in the effectiveness of elections and the broader democratic framework in which they take place (Lührmann, 2018 as cited in

Coppedge et al,. 2024). Elections in electoral democracies are substantive and ensure competition, but rather struggle with full liberal democratic compliance, and lack the most fundamental characteristics of fairness and freedom, often married by voter manipulation and suppression.

2.1.1.5- Liberal Democracy

Liberal democracy is conceptualized as encompassing the three components (Lührmann et al., 2018 as cited in Coppedge et al,. 2024). Firstly, liberal democracies have free and fair multiparty elections. In these elections, citizens can choose among multiple options in a fair electoral process. In other words, in liberal democracies, multiple groups have the possibility of influencing decisions using democratic processes, and the democratic culture extends beyond the right to vote and be voted (Dahl, 1971). Secondly, the institutional requirements of polyarchy are met. As discussed before, Dahl conceptualizes these requirements for polyarchy as political participation, freedom of expression, and the right to assembly. Thirdly, liberal democratic regimes ensure that there is respect for liberal principles. These include personal liberty protection such as freedom of speech, religion, press, and assembly. This third component also includes the rule of law- the sentiment that "laws [are] transparently, independently, predictably, impartially, and equally enforced" (Lührmann, 2018 as cited in Coppedge et al,. 2024, p. 308). Additionally, liberal democracy emphasizes strong accountability in governance, which are "constraints on the government's use of political power through requirements for justification for its actions and potential sanctions" (Lührmann, 2018 as cited in Coppedge et al,. 2024, p. 294)

2.2- Control Variables

In the context of social science research, control variables are factors that are not explicitly and directly studied, but rather must be accounted for because of their supposed influence on the outcomes of the model. Grounded in previous research, this paper utilizes the following control variables: political stability, politico-geographic region, population, property rights, and control of corruption.

In this study, political stability is conceptualized as "perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism" (Coppedge et al., 2024, p. 385). Adding political stability to this research is essential and beneficial for an array of reasons. Firstly, according to research by Alesina and Perotti (1996), stable political conditions are conducive to receiving investment because they reduce the uncertainty and risk that comes with economic activities. Specifically, they argue that in unstable political environments, investors are reluctant to commit resources because they have concerns about the continuity of government policies, and also potential risks of social unrest or expropriation.

Region is defined in politico-geographic terms, meaning the conceptualization does not rely on the geographic location, but rather encompasses various factors like cultural, economic, political, and social attributes. Considering these attributes allows a deeper understanding of the overall impact and

importance of political background, beyond their mere location. The historical and political context linked to a country's region is a very important legacy of colonialism which affects current institutional structures and in turn economic performance. As illustrated by Acemoglu, Johnson and Robinson (2001), countries with similar political histories or regional influences may share political and economic traits. Therefore, many articles such as Acemoglu et al. (2001) utilized this control variable in cross-country economic comparisons.

Incorporating population size as a control variable is essential as it ensures that the analysis accounts for fundamental economic differences shaped by population such as the efficiency of public services and infrastructure and labor market dynamics. In addition, similar studies such as Khaprak (2023), and Durham (1999) have included it as a control variable.

Next, the property rights variable has been defined as "the right to acquire, possess, inherit, and sell private property, including land" Coppedge et al., 2024, p. 309). Property rights shape economic incentives, investment decisions, and overall economic outcomes, making it a crucial factor that can influence how regimes affect economic development. Specifically, "the structure of incentives created by a society's property rights regime will determine the degree of specialization in productive activities and hence the overall productivity of an economy" (Saleh 2004, p. 3).

Furthermore, control of corruption is conceptualized as measures of perceptions of control of corruption, corruption being defined as the misuse of public power for private gain (Coppedge et al., 2024, p. 385). Including this control variable is crucial because there is a body of research that discusses how corruption can negatively affect economic development through the reduction of investment, in terms of both physical and human capital (Keefer & Knack, 1997), and by creating a misallocation of the public budget towards minimally productive areas, instead of growth-enhancing areas (Mauro, 1997). On the other hand, some scholars focus on the "East Asian Paradox" where some countries (mostly with electoral authoritarian regimes) have economically developed while low control for corruption (Gill & Kharas, 2007).

2.3- Economic Development

Economic development can be conceptualized in various ways, depending on the aspects of the economy that are considered. In conceptualizing economic development some scholars consider the wider standards of living and well-being of the citizens such as by looking at education levels or healthcare (Todaro & Smith, 2020). However, for the purposes of this study, economic development is conceptualized strictly in terms of the material well-being of society as reflected through GDP per capita, and GDP per capita growth. This measure reflects both the efficiency of the economy in terms of output, while also adjusting for the population size. In addition, the dual measurement reveals both short-term impacts and cumulative effects of regime types on economic development.

Such approach aligns with empirical research on how regime types affect economic development as seen in Acemoglu et al. (2019). However, it is important to acknowledge that this measure does not capture all dimensions of development like inequality or quality of life (Stiglitz, Sen, & Fitoussi, 2009). Nonetheless, due to the purpose and scope of this research which aims to look at the broad economic consequences rather than intra-state economic disparities, or individual welfare, such conceptualization is adequate.

2.4- Literature Review: Overview of Academic Theories and Approaches

In the following section, relevant academic theories, approaches and findings on the topic are discussed. All of the literature mentioned touches upon different aspects of how various regimes affect economic development.

2.4.1- Institutionalism and Economic Performance Theory

The Institutionalism and Economic Performance Theory is supported by an array of academic literature that emphasizes the role of institutions in shaping economic policies and outcomes. As a whole, the theory suggests that certain structures and regimes are better at facilitating economic development. One of the most important seminal works in this field is Acemoglu and Robinson (2012) who argue that the main differentiator between states that have poverty versus prosperity trajectories is the nature and functioning of their institutions in practice. In that regard, they create a clear dichotomy between inclusive, and extractive economic and political institutions. They define inclusive institutions as those that give equal opportunities for participation in economic and political processes. This also includes the upholding of the rule of law and the protection of property rights. The authors argue that inclusive institutions provide incentives for both individuals and businesses to invest in their future, and pursue economic opportunities.

In contrast, extractive institutions are those that concentrate power and wealth in the hands of a few, which limits economic freedoms, and therefore hinder growth. These institutions generally serve the interests of narrow groups and stifle competition. Douglas North (1990) adds depth to this discussion by underscoring the role of institutions in structuring day-to-day interactions and the continuity of economic practices. North argues this happens through “path dependence” meaning historical differences in institutions can lead to significant variations in economic performance in the long run. This path dependence shows the lasting impact of economic outcomes (pp. 92-98).

2.4.2- Social Cooperation and The Democratic Advantage Theories

The second theory that is important in this research area is the social cooperation theory discussed by Rodrik (2000), and the Democratic Advantage Theory discussed by Halperin et al. (2005). Rodrik (2000) concludes that democracies enable cooperation, deliberation, constitutional constraints, and

repeated interactions all of which contribute to reduced volatility in economic performance for regimes with more polyarchy and liberal principles. He points out that, as citizens engage "(...) they come to understand each other's viewpoints, develop empathy, recognize the value of moderation, internalize the common interest, and de-emphasize narrow self-interest" (p. 141).

Halperin et al. (2005) add to this by emphasizing the role of interest groups in contributing to the free flow of information, therefore discouraging insular thinking, and stimulating vigorous debate (p. 13). They overall argue that this shows how democratic regimes are by nature "learning organizations" that are not constrained by pre-existing knowledge (p. 14). Adding on to this, Citing Mill (1861), Rodrik (2000) theorizes that "democracy induces cooperation and compromise not by changing the constraints we face, but rather changing the type of people we are" (p. 141). In addition, Rodrik points out the constitutional constraints created by liberal democracy which constrain winners of economic policies from not expropriating, and allowing for more broadly acceptable and inclusive policies.

This is also supported by Halperin et al. (2015) who find that the multiplicity of decision-making process "(...) leads to more moderate and nuanced policies" (p. 13). Halperin et al. also emphasize that in democracies, this process is not merely limited to citizens and the government. They discuss how structurally democracies allow for "horizontal networking" which is the "(...) flow of ideas back and forth between public, private, and civic sectors" (p. 14). They argue that this allows for more versatility, capability of adjustment, and timeliness in comparison to more autocratic regimes (p. 14). In that regard, Rodrik concludes that "democracy is of economic value precisely in societies where ethnic, linguistic, geographical, and other cleavages would otherwise result in excessive amounts of unproductive opportunistic behavior" (p. 144). Overall, Rodrik concludes that although these attributes make democracies "(...) better at adjusting policies in response to shocks" (p. 141) but that their impact on accelerating economic growth is not clearly established.

2.4.3- The Accountability and Competition Approach

One important approach that touches upon the effect of democratic regimes on economic development is the accountability and competition approach. Strongly linked to the previous theory discussed, it emphasizes how elections foster accountability to citizens influenced by competition. Halperin et al. (2005) contend that since in regimes with more competitiveness, polyarchy leaders are accountable to the citizens through free and fair elections, this incentivizes leaders to make policies that promote an efficient allocation of resources, and therefore more economic development. This is also stated by Knutsen (2012) who points out that "(...) political accountability is lower under dictatorship, among other reasons owing to the lack of free and fair elections. This reduces pressures on leaders to channel resources to immediate public consumption" (p. 400). Przeworski and Limongi (1993) although they find ambiguous effects of democracy on economic development, support this argument by

emphasizing how authoritarian regimes are more likely to eventually be predatory, and turn into a source of inefficiency.

Additionally, Wittman (1989) by looking at the case of seventeenth-century England argues that within democratic regimes, political competition is particularly crucial in facilitating economic development He argues that because of political competition, those who want to be in power are incentivized to avoid socially wasteful rent-seeking behavior like "alter(ing) tax levels unilaterally" (p. 829).

Several authors add on to this by arguing that the state is always ready to prey on and exploit society, and that "only democratic institutions can constrain it [the state] to act in general interest. From this view, "dictatorships are a source of inefficiency" (North, 1990 as cited in Przeworski & Limongi, 1993, p. 57). Building on this, Chaudhry and Mazhar (2018) contend that "political competition is built into and is endogenous to the process of elections in a democracy" (p. 3), and finds that "both in theory and evidence, political competition is documented to have a positive influence on economic outcomes" (p. 13), focusing on the case of Pakistan. It is argued that this is because the "(...) ruling party's probability of remaining in power is positively affected by economic growth" (Feng, 1997, as cited in Chaudhry & Mazhar, 2018, p. 3).

2.4.4- The Case for More Autocratic Qualities within Democracies

Plümper and Martin (2002) agree with scholars of the accountability approach that as democratic attributes in the regime increase, the government begins to provide more public goods to maintain power which contributes to economic development. However, according to Plümper and Martin (2002) "if levels of democracy exceed beyond a certain point, governments face an incentive to invest more in the provision of public goods. By doing so, they increase the government share of the economy and reduce private investment" (p. 29). In other words, as a regime becomes very democratic, the government tends to spend more which crows out private investment, affecting economic development results (pp. 30-36). To sum up, they argue that while "purely autocratic governments tend to over-invest in rent activities (...) pure democracies have an incentive to over-invest in public goods" (p. 44).

2.4.5- Nuances of the Accountability and Competition Approach

Many scholars discuss how regimes with more autocratic tendencies can be conducive to economic development, some arguing that they "manage the growth process with more precision and efficiency than do democracies" (Magee and Doces, 2015, p. 224). In addition, democracies are more vulnerable to "immediate consumption, redistribution demands, and special interests" (Huntington, 1968; Bhagwati, 1982, as cited in Wu, 2012, p. 367) that can hinder economic performance, while closed autocratic regimes can more easily resist such demands.

In summary, there are trade-offs within each regime structure. Closed autocracies are more likely to lack institutional incentives for development due to the absence of an electoral system, unless the dictators are personally motivated to enhance development, while democratic regimes are hindered by the need to balance short-term interests and "multiple constituencies with parochial interests" (Wu, 2012, p. 368).

2.5- Theoretical and Conceptual Application

Building on the seminal works of Dahl (1971) and Almond and Powell (1996) political regimes are conceptualized to include not only governmental arrangements but also by the environment in which they operate. In that regard, regimes are divided into: closed autocracies, electoral autocracies, electoral democracies, and liberal democracies. Keeping the theories and approaches in mind, the hypotheses compare each regime type to one another.

3- Research Design and Methodology

3.1- Methods of Analysis and Dataset

This thesis utilizes a quantitative methodology to empirically test the expected effect. Quantitative methodology is particularly suited to this research question due to its ability to give precise and statistical insights. By conducting a linear regression, this study seeks to identify and quantify the effect of regime type (alongside relevant control variables) on economic development.

In this study, six hypotheses are tested using different dependent variables: one measures the percentage growth of GDP per capita between 2018-2019 while holding the GDP per capita of 2018 constant, and using 2018 data constant for other variables, and the latter uses GDP per capita for 2019 as the dependent variable, with 2018 data for all other variables. The first approach looks at short-term fluctuations providing insights into the direct impacts on economic growth within a single year. The latter offers a complementary perspective, revealing the cumulative economic development. This dual approach not only enhances the robustness of the analysis, but also gives a comprehensive view of how various regime types with varying characteristics of polyarchy and liberal principles affect economic outcomes.

As a data source, this paper makes use of the largest dataset on democracy, the V-Dem dataset which "gathers data from five experts per country-year observation, using a pool of over 3,700 country experts" (Marquardt, n.d.). This ensures that a holistic view of democracy is created. In addition, potential systematic biases of these experts are addressed "by aggregating expert coded data with a measurement model" (Marquardt, n.d.) V-Dem generates a rigorous methodology that helps mitigate biases and enhance reliability. In addition, it is considered to be "the largest dataset on democracy" (Lindberg, n.d) which means it is a rich and authoritative data source with regards to democracy utilized in numerous literature such as Lührmann & Lindberg (2019) and Pemstein, Meserve, & Melton (2010).

Overall, leveraging the V-Dem dataset provides broader coverage, enhanced reliability, and the ability to conduct more nuanced analyses compared to alternative data sources. In the operationalization of economic development, data from the World Bank (that is included in the V-Dem dataset as additional indices) will be utilized.

3.2- Temporal Scope and Selection Criteria

Focusing on the years 2018-2019 to explore this research question is particularly insightful because they are the most recent year with completed data of global activity before the disruption of the COVID-19 pandemic. According to the International Monetary Fund (2021), global GDP growth dropped dramatically by 3.3% in 2020 due to the global pandemic, which was the biggest global economic contraction since the Great Depression, which has been called the synchronized slowdown of the global economy by Gopinath (2019).

Consequently, this temporal scope provides a crucial baseline for understanding the influence without being affected by the pandemics confounding impacts (World Bank, 2020). Therefore, the scope of this research is to look into the intrinsic economic outcomes associated with different regime types while getting less affected from the pandemic's global economic shock.

As the main goal of this study is to quantify the effect of regime type on economic development, 26 countries that have missing regime type value have been removed from the dataset, most of them being small island countries with populations below 1 million or micro-states (see Appendix A, Table 1). In addition, Zanzibar, Somaliland, and Palestine/West Bank, Kosovo and Hong Kong have been removed from the dataset due to their ambiguous political status regarding recognition, in addition to having missing values. Venezuela has also been removed because it experienced a severe economic collapse with hyperinflation, and a sharp decline in GDP per capita during the chosen time period, becoming an extreme outlier (Wang, 2021). In addition, Singapore has been removed because it is an extreme outlier for the regression model with GDP per capita as a dependent variable. Including Singapore skews the mean and increases the variance within the whole category substantially, distorting the overall picture of economic conditions for electoral autocracies (see Appendix A, Figures 2-3).

3.3- Quality Assurance

In this thesis, the steps of quality assurance have been carefully considered in terms of research design and methodological choices. In terms of data reliability, the V-Dem dataset's expert aggregation reliance on multiple experts, and measurement models, and highly regarded reputation minimizes potential biases arising from the data collection and source, increasing reliability. In terms of research design, as mentioned before, in order to quantify this relationship, a linear regression is utilized. The choice of a linear regression is particularly useful and suitable for this research for several reasons.

Firstly, a linear regression allows for a quantification of the relationship between the independent and dependent variables, while controlling the necessary variables. In addition, linear regressions offer straightforward representations in which each displayed coefficient indicates an expected change in economic development outcomes while holding other factors in constant. Nevertheless, it is important to note that none of the hypotheses in this thesis argue for a direct causal relationship between the variables. The linear regression models only provide insights into whether a change in the independent variables can be associated with a change in the dependent variable.

Furthermore, this paper addresses both internal and external validity in its methodology. Internal validity looks at whether the "(...) study design, conduct, and analysis answer the research question without bias" (Andrade, 2018, p. 498). In this research, the use of reliable data sources enhances internal validity by making sure that the operationalization and measurements are accurate and consistent. Building on that, including control variables also contributes to internal validity by isolating the effects of the independent variable. In addition, by only focusing on the years before COVID it controls for the economic distortions caused by the aftermath of the pandemic. Also, the exclusion of cases with ambiguous political status which aims to minimize potential confounding effects.

External validity is "(...) the extent to which inferences drawn from a given study's sample apply to a broader population or other target populations" (Findley et al., 2021, p. 365). In the dataset of this research, with over 170 cases which strengthens the external validity of this research. However, it should be noted that the sample excludes countries with ambiguous political statuses and certain small island states. In addition, some regions such as Sub-Saharan Africa have more cases while the Middle East & North Africa have fewer, which is inherent to the distribution of states and not a result of deliberate selection. Furthermore, the temporal scope of this research is limited which constrains the generalizability of the findings to longer time periods.

3.4- Operationalization

3.4.1- Regimes

Concerning operationalization of the regimes: this paper utilizes the Regimes of the World (RoW) indicator, where closed autocracy is operationalized as 0, electoral autocracy (1), electoral democracy (2), liberal democracy (3). This indicator is operationalized in an ordinal scale, and includes: electoral regime indexes, the executive, legislature, and party system, perceived fairness of electoral processes focusing on the existence of interference, the extent to which the executive branch is held accountable, legislative constraints, and the presence of polyarchic characteristics (Coppedge et al., 2024, p. 292; see Appendix A).

This categorical operationalization is based on fundamental differences in how power is distributed, exercised, and governed in various regimes. Each regime is defined through specified criteria

from empirical data, ensuring a rigorous basis. Therefore, this simplifies data interpretation and creates a structured approach to conduct comparative analysis across regime types. This terminology is widely accepted as seen in Diamond (2002) and Schedler (2013) as cited in Lührmann, Tannenberg, and Lindberg (2018). Moreover, this conceptual framework is widely adopted in the field, enabling integration of insights from other researchers who use the same terminology (Miller 2015).

Overall, the variable asks "how can the political regime overall be classified considering the competitiveness of access to power (polyarchy) as well as liberal principles?" (p. 292). As indicated in Table 1, electoral democracy is the most prominent regime type, followed by electoral autocracy, liberal democracy, and closed autocracy.

Table 1: Frequency Distribution of Regimes in the Sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Closed Autocracy	22	12.9	12.9	12.9
Electoral Autocracy	56	32.7	32.7	45.6
Electoral Democracy	54	31.6	31.6	77.2
Liberal Democracy	39	22.8	22.8	100.0
Total	171	100.0	100.0	

3.4.2- Control Variables

As mentioned before, this study utilizes the following control variables: political stability, politico-geographic region, population, control of corruption, and property rights. For the operationalization of all the control variables, and independent variables this study heavily relies on V-Dem as the only data source.

Political stability is measured by quantifying the presence of stability threats, and their perceptions. The range of political stability is substantial, spanning from the lowest score -3.01 of Yemen to the highest score of 1.53 attributed to New Zealand.

Table 2: Descriptive statistics for Political Stability

N	Valid	171
	Missing	0
Mean		-.2077
Median		-.1380
Std. Deviation		.95151
Range		4.54
Minimum		-3.01
Maximum		1.53

Next, the geographic region variable ranges between 1-6, each representing different politico-geographic regions. Closed autocracies are most prevalent in the Middle East and North Africa with 11 cases, while electoral autocracies are most seen in Sub-Saharan Africa with 25 cases. In addition, electoral democracies are most prevalent in Eastern Europe & Central Asia, while liberal democracy is predominantly seen in Western Europe and North America, accounting for 23 cases (see Appendix A, Table 2). Since a linear regression will be conducted, all of these categories have been transformed to dummy variables with Sub-Saharan Africa used as the reference category.

Table 3: Politico-geographic regions in the sample

Value	Politico-Geographical Regions
1	Eastern Europe and Central Asia (including Mongolia)
2	Latin America and the Caribbean
3	The Middle East and North Africa (including Israel and Türkiye, excluding Cyprus)
4	Sub-Saharan Africa
5	Western Europe and North America (including Cyprus, Australia and New Zealand)
6	Asia and Pacific (excluding Australia and New Zealand)

Another crucial control variable in this study is population. The scores represent the population of a given state divided by 10,000. Seychelles has the lowest population in this dataset, with 102,900 people, while China has the highest, with 1.4 billion.

Table 4: Descriptive statistics for Population

N	Valid	171
	Missing	0
Mean		4663.5798
Median		1124.3830
Std. Deviation		16079.58280
Range		147603.90
Minimum		10.29
Maximum		147614.19

Furthermore, the control of corruption variable is a continuous variable with lower scores indicating low control of corruption, and high scores indicating high control of corruption. While Somalia scores the lowest on the control of corruption, Finland scores the highest.

Table 5: Descriptive statistics for Corruption

N	Valid	171
	Missing	0
Mean		-.1409
Median		-.3680
Std. Deviation		.99321
Range		3.98
Minimum		-1.77
Maximum		2.21

Next, the property rights variable is measured on an interval scale between 0-1, and has a range of 0.96, with North Korea having the lowest score, and Germany having the highest.

Table 6: Descriptive statistics for Property Rights

N	Valid	171
	Missing	0
Mean		.7261
Median		.7740
Std. Deviation		.20795
Range		.96
Minimum		.01
Maximum		.97

3.4.3- Economic Development

This study utilizes GDP per capita to measure economic development. GDP per capita is " (...) the sum of gross value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output, divided by mid-year population" (World Bank, n.d.). Overall, this measure provides a "basic measure of the value of output per person" (World Bank, n.d.). As discussed before, for all hypotheses, models are estimated with two different measures: GDP per capita for 2019, and the growth in GDP per capita in percentages between 2018-2019.

Table 7: Descriptive statistics for GDP per capita (2018)

N	Valid	171
	Missing	0
Mean		17.5145
Median		11.0810
Std. Deviation		17.49327
Range		88.59
Minimum		.73
Maximum		89.32

Table 8: Descriptive statistics for GDP per capita (2019)

N	Valid	171
	Missing	0
Mean		17.6669
Median		11.0270
Std. Deviation		17.61677
Range		91.65
Minimum		.74
Maximum		92.39

Table 9: Descriptive statistics for GDP per capita **g**rowth (%) (2018-2019)

N	Valid	171
	Missing	0
Mean		1.0326
Median		1.2679
Std. Deviation		2.34469
Range		16.63
Minimum		-8.84
Maximum		7.79

4-Research Results and Analysis

In the following sections, the estimated coefficients for the data are presented in Table 10 and 11. For all hypotheses economic development is measured in two ways: growth in GDP per capita, and GDP per capita. Therefore, each estimated model is interpreted in two parts, the first paragraph is an interpretation of GDP per capita growth (see Table 10), while the second is an interpretation for GDP per capita (see Table 11).

All estimated models use the same set of data, but the reference category has been switched to test each hypothesis. Therefore, the explanatory power of each model is the same when the dependent variable remains the same.

When the dependent variable is GDP per capita growth, adjusted R^2 is 0.030, for the main models. However, when additional control variables are added, the adjusted R^2 increases to 0.207 which shows that the inclusion of those control variables enhances the explanatory power and significance of the models. Similarly, when the dependent variable is GDP per capita itself, the adjusted R^2 is 0.529 for the main models, and the adjusted R^2 increases to 0.723. All models have statistical significance ($p<0.05$) except for the main models for Table 10.

Table 10: Estimated coefficients for models taking GDP per capita growth as dependent variable

GDP per capita Growth as Dependent Variable								
	Model 1 (Main)	**Model 1 (With Controls)**	**Model 2 (Main)**	**Model 2 (With Controls)**	**Model 3 (Main)**	**Model 3 (With Controls)**	**Model 4 (Main)**	**Model 4 (With Controls)**
(Constant)	0.206	1.818*	1.100**	1.820	1.653**	2.492*	1.874**	2.008
	(0.571)	(0.886)	(0.330)	(0.985)	(0.349)	(1.103)	(0.691)	(1.254)
Closed Autocracy	–	–	-0.894	-0.002	-1.446*	-0.674	-1.668*	-0.189
			(0.606)	(0.680)	(0.600)	(0.816)	(0.682)	(1.001)
Electoral Autocracy	0.894	0.002	–	–	-0.552	-0.672	-0.773	-0.187
	(0.606)	(0.680)			(0.442)	(0.486)	(0.670)	(0.788)
Electoral Democracy	1.446*	0.674	0.552	0.672	–	–	-0.221	0.484
	(0.600)	(0.816)	(0.442)	(0.486)			(0.650)	(0.676)
Liberal Democracy	1.668*	0.189	0.773	0.187	0.221	-0.484	–	–
	(0.682)	(1.001)	(0.670)	(0.788)	(0.650)	(0.676)		
GDP per capita	-0.017	-0.025	-0.017	-0.025	-0.17	-0.025	-0.017	-0.025
	(0.015)	(0.018)	(0.015)	(0.018)	(0.015)	(0.018)	(0.015)	(0.018)
Eastern Europe & Central Asia	–	1.711*	–	1.711*	–	1.711**	–	1.711**
		(0.583)		(0.583)		(0.583)		(0.583)
Latin America & the Caribbean	–	-0.948	–	-0.948	–	-0.948	–	-0.948
		(0.570)		(0.570)		(0.570)		(0.570)
Middle East & North Africa	–	-2.289*	–	-2.289*	–	-2.289**	–	-2.289**
		(0.764)		(0.764)		(0.764)		(0.764)
Western Europe & North America	–	0.098	–	0.098	–	0.098	–	0.098
		(0.851)		(0.851)		(0.851)		(0.851)
Asia & Pacific	–	0.829	–	0.829	–	0.829	–	0.829
		(0.548)		(0.548)		(0.548)		(0.548)
Political Stability	–	-0.694*	–	-0.694*	–	-0.694*	–	-0.694*
		(0.304)		(0.304)		(0.304)		(0.304)
Property Rights	–	-0.874	–	-0.874	–	-0.874	–	-0.874
		(1.333)		(1.333)		(1.333)		(1.333)
Control of Corruption	–	1.066**	–	1.066**	–	1.066**	–	1.066**
		(0.391)		(0.391)		(0.391)		(0.391)
Population Size	–	3.651E-7	–	3.651E-7	–	3.651E-7*	–	3.651E-7
		(0.000)		(0.000)		(0.00)		(0.000)
F	2.305	4.407**	2.305	4.407**	2.305	4.407**	2.305	4.407**
R^2	0.053	0.267	0.053	0.267	0.053	0.267	0.053	0.267
Adj. R^2	0.030	0.207	0.030	0.207	0.030	0.207	0.030	0.207

$^{**}p < 0.01$, $^{*}p<0.05$

Note: unstandardized coefficients with standard errors in brackets.

Model 1: reference category as Closed Autocracy

Model 2 : reference category as Electoral Autocracy

Model 3: reference category as Electoral Democracy

Model 4: reference category as Liberal Democracy

Sub-Saharan Africa is the reference category for the politico-geographic region dummies

Table 11: Estimated coefficients for models taking GDP per capita as dependent variable

GDP per capita as Dependent Variable								
	Model 5 (Main)	**Model 5 (With Controls)**	**Model 6 (Main)**	**Model 6 (With Controls)**	**Model 7 (Main)**	**Model 7 (With Controls)**	**Model 8 (Main)**	**Model 8 (With Controls**
(Constant)	19.458**	21.451**	8.100**	18.722**	10.525**	17.474**	40.283**	27.496**
	(2.601)	(3.530)	(1.630)	(4.102)	(1.660)	(4.692)	(1.954)	(5.119)
Closed Autocracy	-	–	11.358**	2.730	8.933**	3.977	-20.825**	-6.044
			(3070)	(3.008)	(3.086)	(3.606)	(3.253)	(4.416)
Electoral Autocracy	-11.358**	-2.730	–	–	-2.425	1.248	-32.183**	-8.774*
	(3.070)	(3.008)			(2.327)	(2.152)	(2.545)	(3.431)
Electoral Democracy	-8.933*	-3.977	2.425	-1.248	–	–	-29.758**	-10.022**
	(3.086)	(3.606)	(2.327)	(2.152)			(2.564)	(2.896)
Liberal Democracy	20.825**	6.044	32.183**	8.774*	29.758**	10.022**	–	–
	(3.253)	(4.416)	(2.545)	(3.431)	(2.564)	(2.896)		
Eastern Europe & Central Asia	–	10.179**	–	10.179**	–	10.179**	–	10.179**
		(2.467)		(2.467)		(2.467)		(2.467)
Latin America & the Caribbean	–	3.831	–	3.831	–	3.831	–	3.831
		(2.507)		(2.507)		(2.507)		(2.507)
Middle East & North Africa	–	14.957**	–	14.957**	–	14.957**	–	14.957**
		(3.159)		(3.159)		(3.159)		(3.159)
Western Europe & North America	–	18.965**	–	18.965**	–	18.965**	–	18.965**
		(3.472)		(3.472)		(3.472)		(3.472)
Asia & Pacific	–	1.819*	–	1.819*	–	1.819*	–	1.819*
		(2.426)		(2.426)		(2.426)		(2.426)
Political Stability	–	3.380*	–	3.380*	–	3.380*	–	3.380*
		(1.318)		(1.318)		1.318		(1.318)
Property Rights	–	-11.673*	–	-11.673*	–	-11.673*	–	-11.673*
		(5.837)		(5.837)		(5.837)		(5.837)
Control of Corruption	–	5.899**	–	5.899**	–	5.899**	–	5.899**
		(1.671)		(1.671)		(1.671)		(1.671)
Population Size	–	2.815E-5	–	2.815E-5	–	2.815E-5	–	2.815E-5
		(0.000)		(0.000)		(0.000)		(0.000)
F	62.465**	38.062**	62.465**	38.062**	62.465**	38.062**	62.465**	38.062**
R^2	0.529	0.743	0.529	0.743	0.529	0.743	0.529	0.743
Adj. R^2	0.520	0.723	0.520	0.723	0.520	0.723	0.520	0.723

$^{**}p < 0.01$, $^{*}p<0.05$

Note: unstandardized coefficients with standard errors in brackets.

Model 5: reference category as Closed Autocracy

Model 6 : reference category as Electoral Autocracy

Model 7: reference category as Electoral Democracy

Model 8: reference category as Liberal Democracy

Sub-Saharan Africa is the reference category for the politico-geographic region dummies.

4.1- The Effect of Regime Type

4.1.1- Hypothesis-1

H1: Electoral autocracies lead to more economic development compared to closed autocracies.

Null: Electoral autocracies do not lead to more economic development compared to closed autocracies.

In Model 1 (with controls) where closed autocracy is the reference category, the coefficient for electoral autocracy is 0.002 ($p>0.05$), indicating that there is no statistically significant difference in GDP per capita growth percentage compared to closed autocracies. Therefore, although the direction of the coefficient in Model 1 suggests support for H1 with a slightly positive coefficient, in the estimated model the coefficient lacks significance, which shows that the model does not show support for H1.

Next, when GDP per capita is the dependent variable, in Model 5 (with controls) the coefficient for electoral autocracy is -2.730 ($p>0.05$). Thus, we fail to reject the null hypothesis for H1 when considering models for both GDP per capita growth, and GDP per capita.

4.1.2- Hypothesis-2

H2: Electoral democracies lead to more economic development compared to electoral autocracies.

Null: Electoral democracies do not lead to more economic development compared to electoral autocracies.

For H2, in Model 2 (with controls) the coefficient for electoral democracy is 0.672 ($p>0.05$), and the coefficient for electoral autocracy. The estimated model suggests that electoral democracies might lead to more economic development compared to electoral autocracies, but since it lacks statistical significance, we fail to reject the null hypothesis for H2 when the dependent variable is measured as GDP per capita growth.

In Model 6 (with controls), the coefficient for electoral democracy is -1.248 ($p>0.05$), meaning that electoral democracies lead to a GDP per capita lower than electoral autocracies, holding other variables constant. However, the results are not statistically significant. Overall, while Model 2 suggests a potential positive effect of electoral democracy, while Model 6 indicates the opposite. Therefore, since in both models the coefficients are not statistically significant, we fail to reject the null hypothesis.

4.1.3- Hypothesis-3

H3: Liberal democracies lead to more economic development compared to electoral democracies.

Null: Liberal democracies do not lead to more economic development compared to electoral democracies.

In Model 3 (with controls), the coefficient for liberal democracy is -0.484 ($p>0.05$) when the reference category is electoral democracy. The coefficient aligns with H3, but due to the lack of statistical significance, we fail to reject the null hypothesis when the dependent variable is measured as GDP per capita growth.

Conversely, when the dependent variable is GDP per capita, according to Model 7 (with controls), the coefficient for liberal democracy is 10.022 ($p<0.05$). This indicates a substantial positive association, suggesting that liberal democracies lead to a significantly higher GDP per capita by 10022 USD compared to electoral democracies (holding all else constant). Therefore, while GDP per capita growth does not support H3, it is the vice versa for GDP per capita.

4.1.4- Hypothesis-4

H4: Electoral democracies lead to more economic development compared to closed autocracies.

Null: Electoral democracies do not lead to more economic development compared to closed autocracies.

In Model 1 (with controls), the coefficient for electoral democracy is 0.674 ($p>0.05$). Although the sign of coefficient aligns with H4, the coefficient is not statistically significant which means we fail to reject the null hypothesis for H4 when the dependent variable is GDP per capita growth.

According to Model 5 (with controls), the coefficient for electoral democracy is -3.977 ($p>0.05$), hinting that electoral democracies lead to a smaller GDP per capita compared to closed autocracies. Therefore, since the coefficients do not have statistical significance in both models, we fail to reject the null hypothesis.

4.1.5- Hypothesis-5

H5: Liberal democracies lead to more economic development compared to closed autocracies.

Null: Liberal democracies do not lead to more economic development compared to closed autocracies.

In Model 1 (with controls), the coefficient for liberal democracy is 0.189 ($p>0.05$), indicating statistical insignificance. Therefore, the coefficient in Model 1 does not provide support for the hypothesis.

When GDP per capita is the dependent variable, in Model 5 (with controls) the coefficient for liberal democracy is 6.044 ($p>0.05$). Despite the positive coefficients suggesting support for H4, the lack of statistical significance means we fail to reject the null hypothesis in both models.

4.1.6- Hypothesis-6

H6: Liberal democracies lead to more economic development compared to electoral autocracies.

Null: Liberal democracies do not lead to more economic development compared to electoral autocracies.

In Model 2 (with controls), the coefficient for liberal democracy is 0.187 ($p>0.05$), which shows that liberal democratic regimes are expected to lead to more economic development in terms of GDP per capita growth in comparison to the reference category of electoral autocracy. However, the coefficient lacks statistical significance.

In Model 6 (with controls), the coefficient for liberal democracy is 8.774 ($p<0.05$), indicating that liberal democracies lead to a GDP per capita 8774 USD higher compared to electoral autocracies. In summary, while Model 2 does not provide sufficient evidence to support H6, Model 6 demonstrates that liberal democracies lead to more economic development compared to electoral autocracies.

4.2- The Effect of the Control Variables

Across the models, Eastern Europe & Central Asia show a positive statistically significant ($p< 0.05$) difference of 1079 USD in GDP per capita compared to Sub-Saharan Africa. The Middle East & North Africa exhibit a significant negative coefficient for GDP per capita growth (-2.289 %), but not for GDP per capita. Western Europe & North America also indicate a 98 USD higher GDP per capita compared to Sub-Saharan Africa. The remaining coefficients for the region variable are not statistically significant ($p>0.05$). Additionally, for the models with GDP per capita growth, the coefficient for GDP per capita control variable is negative, indicating that an increase in GDP per capita leads to a decrease in the GDP per capita growth variable, but the coefficients lack statistical significance.

For the remaining control variables, both control of corruption and political stability indicate a positive effect in both models, while property rights only achieves statistical significance in the model with GDP per capita growth. A one unit increase in political stability is associated with a 0.694% GDP per capita growth rate, and a 3380 USD higher GDP per capita. A one unit increase in control of corruption is associated with an increase in GDP per capita of 5899 USD, while it leads to a GDP per capita growth of 1.066%. Lastly, property rights exhibit a significant negative effect as one unit is associated with a 11673 USD decrease in GDP per capita.

Overall, the control variables have affected the results of the models fundamentally. According to Models 8 (main), liberal democracy consistently leads to a statistically significant and larger GDP per capita compared to the rest of the regimes, which provides support for H6, H5, H3. In addition, Models 1-4 (main) which utilize GDP per capita growth as a dependent variable, provide support for H1 and H5 when control variables are not added.

4.3- Checking Assumptions for Estimated Models

Although there are minimal problems related to multicollinearity, and heteroskedasticity, most assumptions of linear regression are met (see Appendix B).

4.4- Discussion of Findings

Based on the interpretations, regimes with more polyarchy and liberal principles do not lead to significantly more economic development. The following paragraphs go deeper into the discussion of overall trends emerging from the interpretations, and connect them to previous literature.

Firstly, electoral autocracies, electoral democracies, and liberal democracies do not lead to significantly higher economic development than closed autocracies, measured through GDP per capita growth. This suggests that regimes that do hold elections, have more polyarchy and liberal principles do not lead to more GDP per capita growth in comparison to closed autocracies which do not hold elections, and have low scores on such measures. However, the findings for the GDP per capita model indicate statistical significant coefficients. Specifically, liberal democracies stand out in Model 6 and 7, where it demonstrates a significant positive effect on GDP per capita compared to electoral autocracies, and electoral democracies, respectively.

All in all, this shows that while liberal democracies lead to a higher GDP per capita, the one year growth in GDP per capita does not significantly differ among the various regimes. Therefore, the differences between GDP per capita growth and GDP per capita highlights an interesting dynamic. While short-term economic growth rates caused by liberal democracies do not significantly differ from other types, the overall level of economic development caused by liberal democratic regimes tends to be higher.

This is supported by Chan (2001) who concluded that “though it (liberal democracy) cannot guarantee increases in a nation's GDP or per capita income, the practice of democracy is critical for long-term sustainable growth (p. 9). However, it should be noted that GDP per capita from one year cannot measure “long-term sustainable growth” or overall economic performance over the years on its own, therefore a larger temporal scope would need to be conducted to provide support for this statement. Overall, in relation to the theoretical framework, the institutionalism and economic performance, social cooperation, and accountability theories are not fully supported by the findings.

Secondly, in Model 4 where electoral democracy is the reference category, all other regimes have negative and statistically insignificant coefficients. Although the direction of the relationship suggests support for Plümper and Martin (2003)'s argument that both purely autocratic and purely democratic regimes have certain disadvantages in economic development, the findings do not fully support it because the coefficient is not significant.

Thirdly, electoral autocracies fail to show significant economic development advantages compared to closed autocracies. This suggests that electoral processes present in autocratic settings might

not lead to better economic development outcomes in comparison to closed autocracies who do not hold elections. This finding is supported by Kaplan (2000) argues that "if a society is not in reasonable health, democracy can not only be risky but disastrous" (p. 62). Additionally, Zakaria (2003), found that in many African states, while democratization has brought liberty to the people, it has also exacerbated chaos, and lawlessness especially in states with sharp ethnic divisions (p. 92). This contrasts Miller (2015) who argues that autocratic elections matter as they play an important role in establishing accountability and "promoting specific models of development" (p. 1553). Wu (2012) adds nuance to this discussion by saying that democracies are superior to autocracies "only when structural factors, such as external threats or natural resource intensity, are not favorable to growth" (p. 365).

Additionally, based on the findings, we fail to reject the expectation that closed autocracies lead to significantly less economic development compared to electoral autocracies. Therefore, linked to the literature review section, we are unable to reject the argument that closed autocracies may manage economic development efficiently due to less vulnerability to immediate consumption demands (Magee & Doces, 2015; Huntington, 1968; Bhagwati, 1982, as cited in Wu, 2012), in comparison to electoral autocracies who need to consider such demands more. Overall, the lack of significance suggests that both closed autocracies nor electoral autocracies lead to significantly better economic development compared to one another.

5- Conclusion and Reflection

In concluding this thesis, the empirical analysis of the main hypothesis does not confirm the expectation that regimes with more polyarchy and liberal principles lead to more economic development. Electoral autocracies, electoral democracies, and liberal democracies do not lead to a significantly higher GDP per capita growth compared to closed autocracies. While liberal democracies tend to lead to higher overall GDP per capita, they do not demonstrate a significant effect for growth.

One of the main strengths of this research is the robust conceptual framework that explores variations of conceptualizations, and theories. Additionally, the utilization of V-Dem gives the thesis a solid empirical foundation. Also, the differentiation of regimes as liberal democracies, electoral democracies, electoral autocracies, and closed autocracies is used in academic research, and highly relevant in the current global political climate.

However, the thesis has some weaknesses that need to be addressed. Firstly, this thesis has a limited temporal scope which limits generalizability. This can potentially overlook longitudinal dynamics of regime changes, which means that this research is not able to make a more dynamic analysis of these effects that capture change over time. Secondly, the scatter plot for GDP per capita as a dependent variable indicates the presence of heteroskedasticity which shows that the variation in errors is not constant. Since this thesis explores broad trends and correlations and does not seek to provide specific estimations of effects, heteroskedasticity has not been corrected. Nevertheless, it is important to

acknowledge that the presence of heteroskedasticity limits the precision of the coefficients drawn from them. Lastly, this thesis relies exclusively on V-Dem for all data and operationalizations. While V-Dem is a rich and authoritative source widely popular in this field, it should be noted that potential biases stemming from the data source are not fully mitigated.

Building upon this thesis, there are several recommendations that would complement the approaches and findings of this research. Firstly, future research can use time series regression to identify how regimes affect economic development overtime, across different politico-geographic regions. This can also be complemented by a longitudinal analysis of countries transitioning from one regime type to another. By focusing on countries going through regime transitions, future research can look at their economic development levels before, during, and after the transition. Lastly, another recommendation would be to compare how the specific indicators of the RoW indicator such as rule of law, judicial independence, or the presence of polyarchic characteristics affect economic development to measure if there are differences among the indicators.

Appendix A

Operationalization of Political Regimes

The following categorization is my interpretation of the sources.

- electoral regime indexes
  - *v2x_elecreg, v2xlg_elecreg, v2xex_elecreg*
- the executive, legislative, judicial and party system
  - *v2elmulpar_osp, v2elmulpar_osp_ex, v2elmulpar_osp_leg, clacjstm_osp, v2clacjstw_osp, v2cltrnslw_osp*
- perceived fairness of electoral processes focusing on the existence of interference
  - *v2elfrfair_osp, v2elfrfair_osp_leg, v2elfrfair_osp_ex*
- the extent to which the executive branch is held accountable
  - *v2expathhg, v2expathhs*
- legislative constraints
  - *v2ex_legconhos, v2ex_hosw*
- the presence of polyarchic characteristics
  - *V2exaphogp*

Table A.1: Missing countries from the V-Dem Dataset for 2018-2019

Microstates	Small States (based on population size of 1 million or fewer)	Others
Andorra	Antigua and Barbuda, Bahamas, Belize, Brunei	Belize
Liechtenstein	Dominica, Grenada, Kiribati, Marshall Islands	Cabo Verde
Monaco	Micronesia, Nauru, Palau, Saint Kitts and Nevis	Equatorial Guinea
San Marino	Saint Lucia, Saint Vincent and the Grenadines	Eswatini
Vatican City	Samoa, Seychelles, Tonga, Tuvalu	Bahamas

Table A.2: Geographical Distribution of Regimes

		v2x_regime.2018.00: Regimes of the world -- the RoW measure				
		Closed Autocracy	Electoral Autocracy	Electoral Democracy	Liberal Democracy	Total
Region (politico-geographic 6-category)	1.00	1	11	12	5	29
	2.00	1	3	15	5	24
	3.00	11	6	1	1	19
	4.00	4	25	18	2	49
	5.00	0	0	1	23	24
	6.00	5	11	7	3	26
Total		22	56	54	39	171

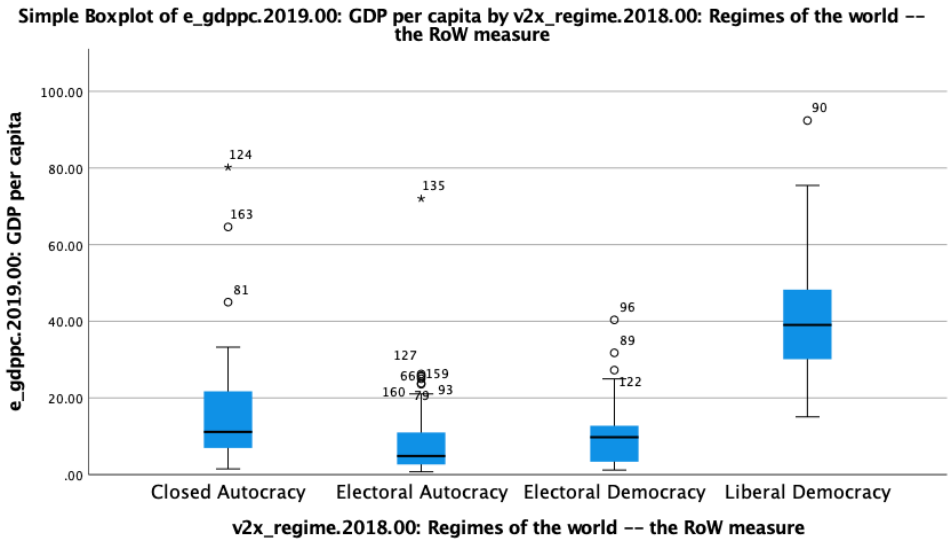


Figure A.2: Box-plot for GDP per capita by different regime types
For Figure A2.2, the values for Singapore (referred to as 135) have been included.

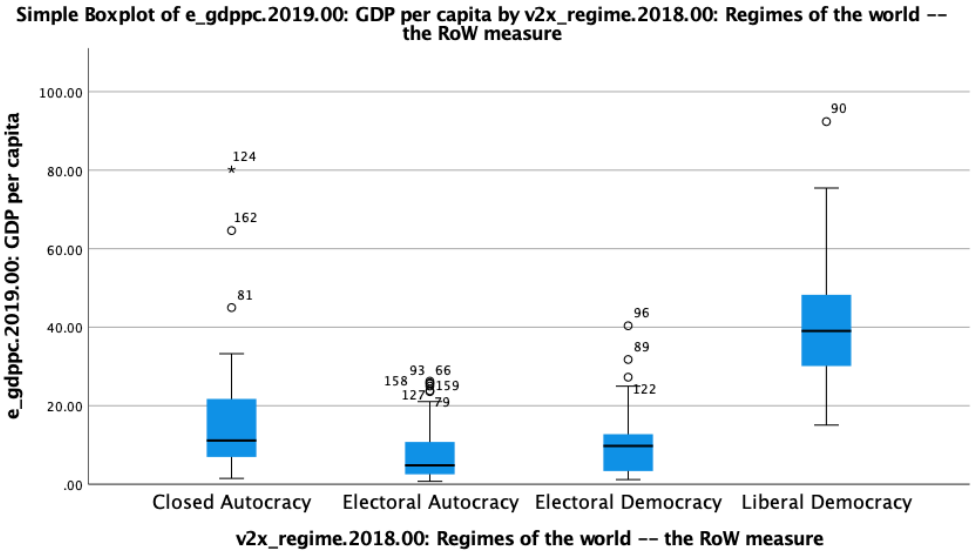


Figure A.3: Box-plot for GDP per capita by different regime types
For Figure A2.3, the values for Singapore (referred to as 135) have been excluded.

Appendix B

The assumption testings have only been conducted for Model 1 and 5 with controls since they have been used extensively in the analysis. The remainder of the models have also demonstrated very similar results, and therefore have not been included.

Regression & Assumption Testing for Model 1 (with controls)

The scatterplot shows a random distribution of residuals, meaning the assumption of linearity is met. According to the histogram, residuals are close to a normal distribution, and the Normal P-P plot also does not indicate any problems with regards to normality. In addition, the Cook's Distance scores are below 1, showing no serious problems with regards to outliers. In addition, there are some problems with regards to multicollinearity, for example between the control variable GDP per capita 2018, and control for corruption (Dimension 14).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517[a]	.267	.207	2.08840

[a] Predictors: (Constant), e_pop.2018.00: Population, e_wbgi_cce.2018.00: Control of corruption --- estimate, Dummy_Latin_America_Caribbean, Dummy_Middle_East_North_Africa, Dummy_Eastern_Europe_Central_Asia, dummy_electoral_democracy.2018.00, Dummy_Asia_Pacific, v2xcl_prpty.2018.00: Property rights, dummy_electoral_autocracy.2018.00, Dummy_Western_Europe_North_America, e_wbgi_pve.2018.00: Political stability --- estimate, e_gdppc.2018.00: GDP per capita, dummy_liberal_democracy.2018.00

[b] Dependent Variable: Growth_Rate

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	249.842	13	19.219	4.407	<.001[b]
	Residual	684.743	157	4.361		
	Total	934.585	170			

a. Dependent Variable: Growth_Rate

b. Predictors: (Constant), e_pop.2018.00: Population, e_wbgi_cce.2018.00: Control of corruption --- estimate, Dummy_Latin_America_Caribbean, Dummy_Middle_East_North_Africa, Dummy_Eastern_Europe_Central_Asia, dummy_electoral_democracy.2018.00, Dummy_Asia_Pacific, v2xcl_prpty.2018.00: Property rights, dummy_electoral_autocracy.2018.00, Dummy_Western_Europe_North_America, e_wbgi_pve.2018.00: Political stability --- estimate, e_gdppc.2018.00: GDP per capita, dummy_liberal_democracy.2018.00

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.818	.886		2.052	.042		
	dummy_electoral_democracy.2018.00	.674	.816	.134	.825	.410	.177	5.645
	dummy_liberal_democracy.2018.00	.189	1.001	.034	.189	.850	.145	6.913
	dummy_electoral_autocracy.2018.00	.002	.680	.000	.003	.998	.251	3.992
	e_gdppc.2018.00: GDP per capita	-.025	.018	-.190	-1.418	.158	.260	3.842
	Dummy_Eastern_Europe_Central_Asia	1.711	.583	.275	2.935	.004	.533	1.878
	Dummy_Latin_America_Caribbean	-.948	.570	-.141	-1.665	.098	.652	1.535
	Dummy_Middle_East_North_Africa	-2.289	.764	-.308	-2.997	.003	.443	2.258
	Dummy_Western_Europe_North_America	.098	.851	.014	.115	.909	.292	3.426
	Dummy_Asia_Pacific	.829	.548	.127	1.514	.132	.659	1.517
	e_wbgi_pve.2018.00: Political stability --- estimate	-.694	.304	-.281	-2.284	.024	.307	3.255
	v2xcl_prpty.2018.00: Property rights	-.874	1.333	-.078	-.656	.513	.334	2.994
	e_wbgi_cce.2018.00: Control of corruption --- estimate	1.066	.391	.451	2.725	.007	.170	5.881
	e_pop.2018.00: Population	3.651E-7	.000	.003	.033	.973	.835	1.198

a. Dependent Variable: Growth_Rate

Residuals Statistics[a]

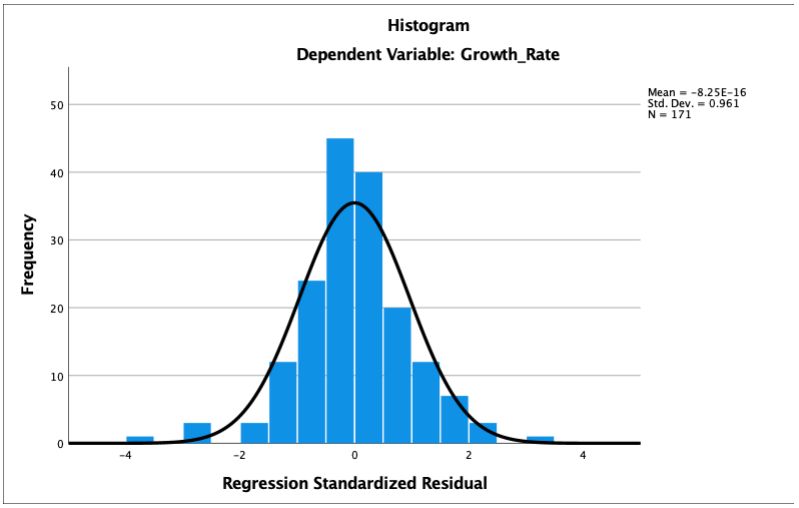
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-2.6217	4.2315	1.0326	1.21230	171
Std. Predicted Value	-3.014	2.639	.000	1.000	171
Standard Error of Predicted Value	.359	1.501	.577	.155	171
Adjusted Predicted Value	-2.5684	4.1108	1.0220	1.22358	171
Residual	-8.14327	7.27777	.00000	2.00696	171
Std. Residual	-3.899	3.485	.000	.961	171
Stud. Residual	-4.103	3.552	.002	1.003	171
Deleted Residual	-9.01640	7.55884	.01060	2.19120	171
Stud. Deleted Residual	-4.329	3.692	.001	1.018	171
Mahal. Distance	4.032	86.774	12.924	9.579	171
Cook's Distance	.000	.129	.007	.015	171
Centered Leverage Value	.024	.510	.076	.056	171

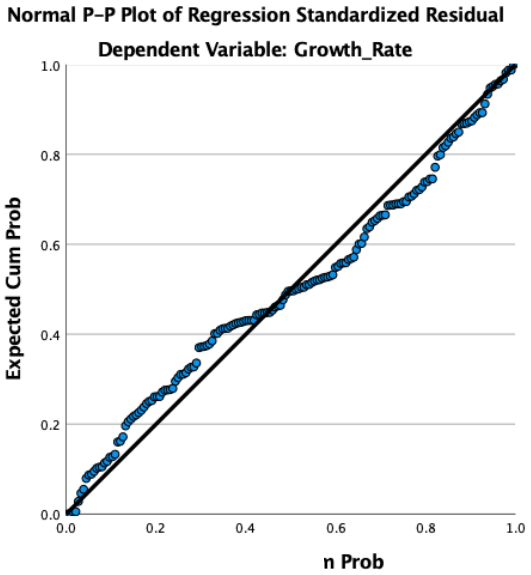
a. Dependent Variable: Growth_Rate

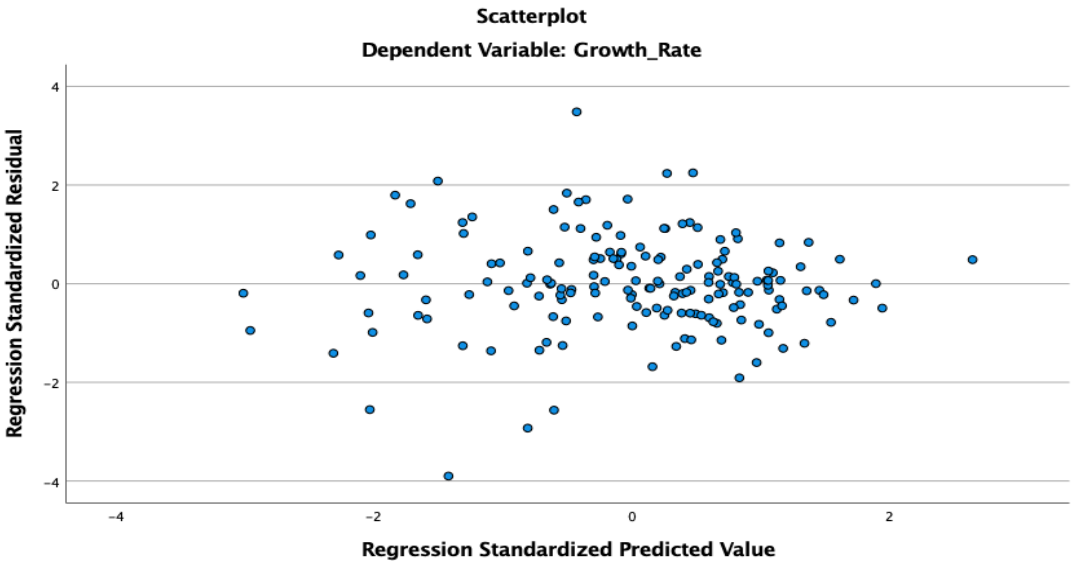
Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions													
				(Constant)	dummy_electoral_democracy.2018.00	dummy_liberal_democracy.2018.00	dummy_electoral_autocracy.2018.00	e_gdppc.2018.00: GDP per capita	Dummy_Eastern_Europe_Central_Asia	Dummy_Latin_America_Caribbean	Dummy_Middle_East_North_Africa	Dummy_Western_Europe_North_America	Dummy_Asia_Pacific	e_wbgi_pve.2018.00: Political stability --- estimate	v2xcl_prpty.2018.00: Property rights	e_wbgi_cce.2018.00: Control of corruption --- estimate	e_pop.2018.00: Population
1	1	4.455	1.000	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	3.064	1.206	.00	.00	.00	.01	.00	.00	.00	.00	.01	.00	.02	.00	.01	.00
	3	1.416	1.774	.00	.03	.00	.01	.00	.02	.09	.02	.01	.02	.01	.00	.00	.04
	4	1.219	1.912	.00	.00	.00	.00	.00	.01	.00	.08	.00	.17	.01	.00	.00	.18
	5	1.053	2.057	.00	.00	.00	.01	.00	.22	.13	.05	.00	.00	.01	.00	.00	.01
	6	.806	2.352	.00	.02	.01	.04	.00	.02	.11	.15	.01	.02	.00	.00	.00	.03
	7	.661	2.597	.00	.00	.00	.00	.00	.05	.03	.00	.00	.26	.00	.00	.00	.62
	8	.531	2.897	.00	.04	.00	.01	.00	.04	.20	.06	.12	.05	.08	.00	.01	.00
	9	.320	3.730	.00	.01	.09	.15	.00	.10	.02	.01	.01	.10	.21	.00	.02	.03
	10	.177	5.016	.00	.02	.12	.03	.11	.10	.15	.00	.35	.11	.02	.01	.14	.00
	11	.140	5.635	.01	.00	.06	.02	.03	.19	.21	.01	.10	.15	.41	.00	.49	.04
	12	.109	6.389	.00	.00	.03	.00	.64	.10	.03	.32	.35	.04	.23	.01	.06	.01
	13	.033	11.639	.39	.67	.53	.61	.10	.01	.00	.20	.00	.06	.00	.05	.14	.02
	14	.016	16.526	.59	.20	.15	.11	.11	.15	.03	.09	.04	.00	.00	.93	.13	.01

a. Dependent Variable: Growth_Rate


Histogram
Dependent Variable: Growth_Rate
Mean = -8.25E-16
Std. Dev. = 0.961
N = 171
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Growth_Rate
Expected Cum Prob
n Prob


Scatterplot
Dependent Variable: Growth_Rate
Regression Standardized Residual
Regression Standardized Predicted Value

Regressions and assumption testing for Model 5

The scatterplot shows a random distribution of residuals, meaning the assumption of linearity is met. According to the histogram, residuals are close to a normal distribution, and the Normal P-P plot also does not indicate any problems with regards to normality. In addition, the Cook's Distance scores are below 1, showing no serious problems with regards to outliers. However, the scatterplot slightly resembles a funnel, indicating that there might be some problems with regards to heteroskedasticity. In addition, the collinearity diagnostics table does not indicate any serious violations.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862[a]	.743	.723	9.26410

a. Predictors: (Constant), e_pop.2018.00: Population, e_wbgi_cce. 2018.00: Control of corruption --- estimate, Dummy_Latin_America_Caribbean, Dummy_Middle_East_North_Africa, Dummy_Eastern_Europe_Central_Asia, dummy_electoral_democracy. 2018.00, Dummy_Asia_Pacific, v2xcl_prpty.2018.00: Property rights, dummy_electoral_autocracy.2018.00, Dummy_Western_Europe_North_America, e_wbgi_pve.2018.00: Political stability --- estimate, dummy_liberal_democracy.2018.00

b. Dependent Variable: e_gdppc.2019.00: GDP per capita

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39199.508	12	3266.626	38.062	<.001[b]
	Residual	13560.120	158	85.824		
	Total	52759.628	170			

a. Dependent Variable: e_gdppc.2019.00: GDP per capita

b. Predictors: (Constant), e_pop.2018.00: Population, e_wbgi_cce.2018.00: Control of corruption --- estimate, Dummy_Latin_America_Caribbean, Dummy_Middle_East_North_Africa, Dummy_Eastern_Europe_Central_Asia, dummy_electoral_democracy.2018.00, Dummy_Asia_Pacific, v2xcl_prpty.2018.00: Property rights, dummy_electoral_autocracy.2018.00, Dummy_Western_Europe_North_America, e_wbgi_pve.2018.00: Political stability --- estimate, dummy_liberal_democracy.2018.00

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	21.451	3.530		6.077	<.001		
	dummy_electoral_autocracy. 2018.00	-2.730	3.008	-.073	-.908	.365	.252	3.969
	dummy_electoral_democracy. 2018.00	-3.977	3.606	-.105	-1.103	.272	.179	5.597
	dummy_liberal_democracy. 2018.00	6.044	4.416	.144	1.369	.173	.146	6.842
	Dummy_Eastern_Europe_Central_Asia	10.179	2.467	.217	4.126	<.001	.585	1.708
	Dummy_Latin_America_Caribbean	3.831	2.507	.076	1.528	.129	.662	1.511
	Dummy_Middle_East_North_Africa	14.957	3.159	.268	4.734	<.001	.509	1.964
	Dummy_Western_Europe_North_America	18.965	3.472	.375	5.461	<.001	.345	2.899
	Dummy_Asia_Pacific	1.819	2.426	.037	.750	.455	.661	1.512
	e_wbgi_pve.2018.00: Political stability --- estimate	3.380	1.318	.183	2.563	.011	.321	3.117
	v2xcl_prpty.2018.00: Property rights	-11.673	5.837	-.138	-2.000	.047	.343	2.918
	e_wbgi_cce.2018.00: Control of corruption --- estimate	5.899	1.671	.333	3.531	<.001	.183	5.455
	e_pop.2018.00: Population	2.815E-5	.000	.026	.583	.561	.836	1.196

a. Dependent Variable: e_gdppc.2019.00: GDP per capita

Collinearity Diagnostics[a]

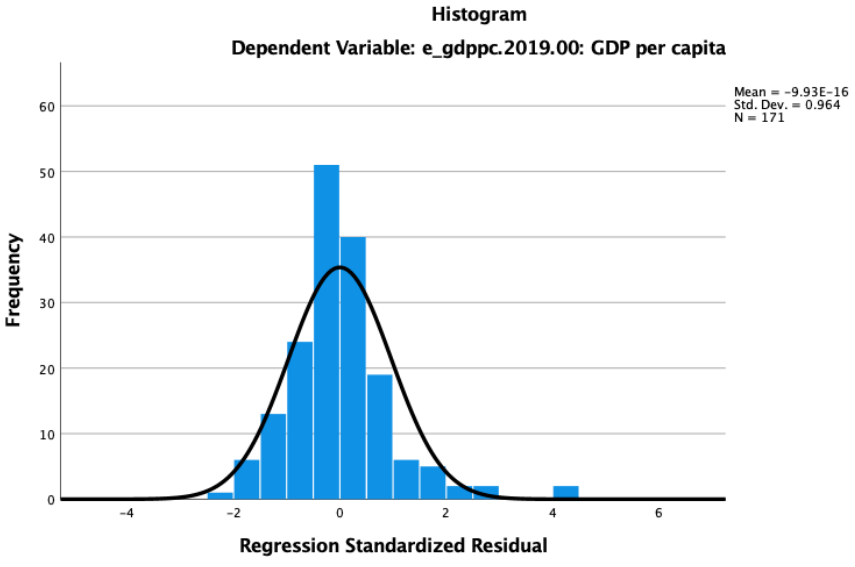
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions												
				(Constant)	dummy_electoral_autocracy. 2018.00	dummy_electoral_democracy. 2018.00	dummy_liberal_democracy. 2018.00	Dummy_Eastern_Europe_Central_Asia	Dummy_Latin_America_Caribbean	Dummy_Middle_East_North_Africa	Dummy_Western_Europe_North_America	Dummy_Asia_Pacific	e_wbgi_pve. 2018.00: Political stability --- estimate	v2xcl_prpty. 2018.00: Property rights	e_wbgi_cce. 2018.00: Control of corruption --- estimate	e_pop.2018.00: Population
1	1	3.802	1.000	.00	.00	.00	.00	.01	.01	.00	.00	.01	.00	.00	.00	.01
	2	2.893	1.146	.00	.00	.00	.01	.00	.00	.00	.02	.00	.02	.00	.02	.00
	3	1.398	1.649	.00	.01	.03	.00	.02	.09	.02	.01	.03	.01	.00	.00	.06
	4	1.193	1.785	.00	.00	.00	.00	.01	.00	.10	.00	.16	.01	.00	.00	.16
	5	1.052	1.901	.00	.01	.00	.00	.24	.13	.06	.00	.00	.01	.00	.00	.01
	6	.798	2.182	.00	.04	.02	.00	.02	.12	.19	.01	.02	.00	.00	.01	.03
	7	.661	2.399	.00	.00	.00	.00	.06	.03	.00	.00	.27	.00	.00	.00	.63
	8	.526	2.689	.00	.01	.04	.00	.04	.19	.09	.14	.05	.08	.00	.01	.00
	9	.320	3.446	.00	.15	.01	.09	.11	.02	.01	.01	.10	.22	.00	.02	.03
	10	.164	4.812	.00	.02	.02	.10	.25	.26	.08	.75	.20	.03	.01	.09	.00
	11	.138	5.240	.01	.03	.01	.06	.10	.13	.00	.01	.08	.59	.00	.64	.04
	12	.036	10.258	.52	.52	.54	.54	.03	.01	.38	.04	.08	.02	.01	.15	.02
	13	.018	14.577	.46	.20	.33	.20	.11	.02	.07	.01	.00	.00	.98	.07	.01

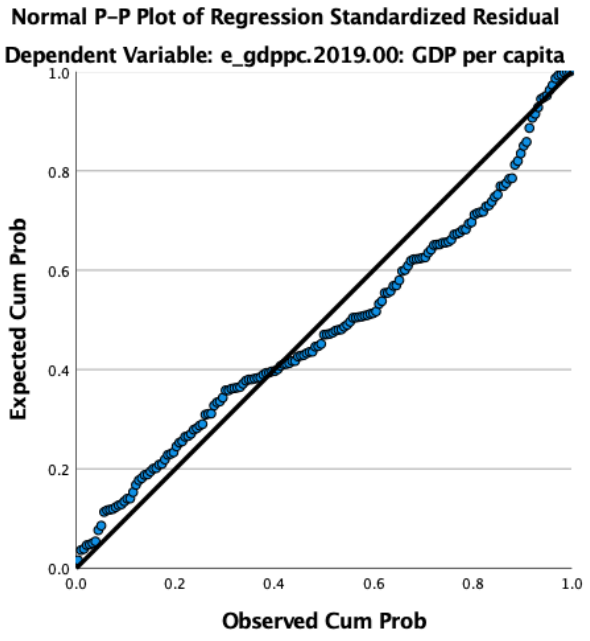
a. Dependent Variable: e_gdppc.2019.00: GDP per capita

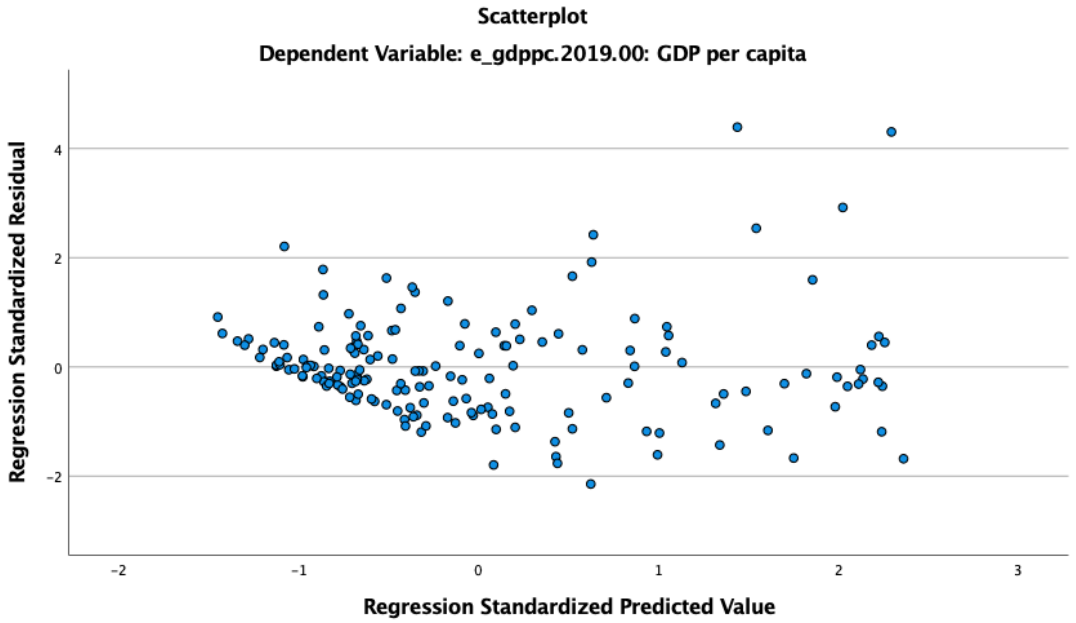
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-4.3412	53.5293	17.6669	15.18504	171
Std. Predicted Value	-1.449	2.362	.000	1.000	171
Standard Error of Predicted Value	1.571	6.645	2.473	.641	171
Adjusted Predicted Value	-5.0957	54.3505	17.7124	15.20593	171
Residual	-19.84724	40.68440	.00000	8.93115	171
Std. Residual	-2.142	4.392	.000	.964	171
Stud. Residual	-2.246	4.716	-.002	1.011	171
Deleted Residual	-21.82061	46.91617	-.04553	9.83871	171
Stud. Deleted Residual	-2.276	5.072	.003	1.034	171
Mahal. Distance	3.896	86.473	11.930	8.961	171
Cook's Distance	.000	.262	.008	.024	171
Centered Leverage Value	.023	.509	.070	.053	171

a. Dependent Variable: e_gdppc.2019.00: GDP per capita







Coefficients for Model 2-4:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.820	.985		1.848	.066		
	dummy_electoral_democracy.2018.00	.672	.486	.134	1.383	.169	.500	1.998
	dummy_liberal_democracy.2018.00	.187	.788	.034	.238	.812	.233	4.289
	dummy_closed__autocracy.2018.00	-.002	.680	.000	-.003	.998	.492	2.032
	e_gdppc.2018.00: GDP per capita	-.025	.018	-.190	-1.418	.158	.260	3.842
	Dummy_Eastern_Europe_Central_Asia	1.711	.583	.275	2.935	.004	.533	1.878
	Dummy_Latin_America_Caribbean	-.948	.570	-.141	-1.665	.098	.652	1.535
	Dummy_Middle_East_North_Africa	-2.289	.764	-.308	-2.997	.003	.443	2.258
	Dummy_Western_Europe_North_America	.098	.851	.014	.115	.909	.292	3.426
	Dummy_Asia_Pacific	.829	.548	.127	1.514	.132	.659	1.517
	e_wbgi_pve.2018.00: Political stability --- estimate	-.694	.304	-.281	-2.284	.024	.307	3.255
	v2xcl_prpty.2018.00: Property rights	-.874	1.333	-.078	-.656	.513	.334	2.994
	e_wbgi_cce.2018.00: Control of corruption --- estimate	1.066	.391	.451	2.725	.007	.170	5.881
	e_pop.2018.00: Population	3.651E-7	.000	.003	.033	.973	.835	1.198

a. Dependent Variable: Growth_Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.492	1.103		2.258	.025		
	dummy_electoral_autocracy.2018.00	-.672	.486	-.135	-1.383	.169	.491	2.037
	dummy_liberal_democracy.2018.00	-.484	.676	-.087	-.716	.475	.317	3.157
	dummy_closed__autocracy.2018.00	-.674	.816	-.096	-.825	.410	.341	2.929
	e_gdppc.2018.00: GDP per capita	-.025	.018	-.190	-1.418	.158	.260	3.842
	Dummy_Eastern_Europe_Central_Asia	1.711	.583	.275	2.935	.004	.533	1.878
	Dummy_Latin_America_Caribbean	-.948	.570	-.141	-1.665	.098	.652	1.535
	Dummy_Middle_East_North_Africa	-2.289	.764	-.308	-2.997	.003	.443	2.258
	Dummy_Western_Europe_North_America	.098	.851	.014	.115	.909	.292	3.426
	Dummy_Asia_Pacific	.829	.548	.127	1.514	.132	.659	1.517
	e_wbgi_pve.2018.00: Political stability --- estimate	-.694	.304	-.281	-2.284	.024	.307	3.255
	v2xcl_prpty.2018.00: Property rights	-.874	1.333	-.078	-.656	.513	.334	2.994
	e_wbgi_cce.2018.00: Control of corruption --- estimate	1.066	.391	.451	2.725	.007	.170	5.881
	e_pop.2018.00: Population	3.651E-7	.000	.003	.033	.973	.835	1.198

a. Dependent Variable: Growth_Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.008	1.254		1.601	.111		
	dummy_electoral_autocracy.2018.00	-.187	.788	-.038	-.238	.812	.186	5.365
	dummy_electoral_democracy.2018.00	.484	.676	.096	.716	.475	.258	3.875
	dummy_closed__autocracy.2018.00	-.189	1.001	-.027	-.189	.850	.227	4.402
	e_gdppc.2018.00: GDP per capita	-.025	.018	-.190	-1.418	.158	.260	3.842
	Dummy_Eastern_Europe_Central_Asia	1.711	.583	.275	2.935	.004	.533	1.878
	Dummy_Latin_America_Caribbean	-.948	.570	-.141	-1.665	.098	.652	1.535
	Dummy_Middle_East_North_Africa	-2.289	.764	-.308	-2.997	.003	.443	2.258
	Dummy_Western_Europe_North_America	.098	.851	.014	.115	.909	.292	3.426
	Dummy_Asia_Pacific	.829	.548	.127	1.514	.132	.659	1.517
	e_wbgi_pve.2018.00: Political stability --- estimate	-.694	.304	-.281	-2.284	.024	.307	3.255
	v2xcl_prpty.2018.00: Property rights	-.874	1.333	-.078	-.656	.513	.334	2.994
	e_wbgi_cce.2018.00: Control of corruption --- estimate	1.066	.391	.451	2.725	.007	.170	5.881
	e_pop.2018.00: Population	3.651E-7	.000	.003	.033	.973	.835	1.198

a. Dependent Variable: Growth_Rate

Coefficients for Model 6-8:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	18.722	4.102		4.564	<.001		
	dummy_closed__autocracy. 2018.00	2.730	3.008	.052	.908	.365	.495	2.020
	dummy_electoral_democracy. 2018.00	-1.248	2.152	-.033	-.580	.563	.502	1.993
	dummy_liberal_democracy. 2018.00	8.774	3.431	.210	2.557	.011	.242	4.129
	Dummy_Eastern_Europe_Central_Asia	10.179	2.467	.217	4.126	<.001	.585	1.708
	Dummy_Latin_America_Caribbean	3.831	2.507	.076	1.528	.129	.662	1.511
	Dummy_Middle_East_North_Africa	14.957	3.159	.268	4.734	<.001	.509	1.964
	Dummy_Western_Europe_North_America	18.965	3.472	.375	5.461	<.001	.345	2.899
	Dummy_Asia_Pacific	1.819	2.426	.037	.750	.455	.661	1.512
	e_wbgi_pve.2018.00: Political stability --- estimate	3.380	1.318	.183	2.563	.011	.321	3.117
	v2xcl_prpty.2018.00: Property rights	-11.673	5.837	-.138	-2.000	.047	.343	2.918
	e_wbgi_cce.2018.00: Control of corruption --- estimate	5.899	1.671	.333	3.531	<.001	.183	5.455
	e_pop.2018.00: Population	2.815E-5	.000	.026	.583	.561	.836	1.196

a. Dependent Variable: e_gdppc.2019.00: GDP per capita

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	17.474	4.692		3.724	<.001		
	dummy_closed__autocracy. 2018.00	3.977	3.606	.076	1.103	.272	.344	2.904
	dummy_electoral_autocracy. 2018.00	1.248	2.152	.033	.580	.563	.492	2.032
	dummy_liberal_democracy. 2018.00	10.022	2.896	.239	3.461	<.001	.340	2.942
	Dummy_Eastern_Europe_Central_Asia	10.179	2.467	.217	4.126	<.001	.585	1.708
	Dummy_Latin_America_Caribbean	3.831	2.507	.076	1.528	.129	.662	1.511
	Dummy_Middle_East_North_Africa	14.957	3.159	.268	4.734	<.001	.509	1.964
	Dummy_Western_Europe_North_America	18.965	3.472	.375	5.461	<.001	.345	2.899
	Dummy_Asia_Pacific	1.819	2.426	.037	.750	.455	.661	1.512
	e_wbgi_pve.2018.00: Political stability --- estimate	3.380	1.318	.183	2.563	.011	.321	3.117
	v2xcl_prpty.2018.00: Property rights	-11.673	5.837	-.138	-2.000	.047	.343	2.918
	e_wbgi_cce.2018.00: Control of corruption --- estimate	5.899	1.671	.333	3.531	<.001	.183	5.455
	e_pop.2018.00: Population	2.815E-5	.000	.026	.583	.561	.836	1.196

a. Dependent Variable: e_gdppc.2019.00: GDP per capita

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	27.496	5.119		5.371	<.001		
	dummy_closed__autocracy.2018.00	-6.044	4.416	-.115	-1.369	.173	.230	4.357
	dummy_electoral_autocracy.2018.00	-8.774	3.431	-.234	-2.557	.011	.194	5.165
	dummy_electoral_democracy.2018.00	-10.022	2.896	-.265	-3.461	<.001	.277	3.610
	Dummy_Eastern_Europe_Central_Asia	10.179	2.467	.217	4.126	<.001	.585	1.708
	Dummy_Latin_America_Caribbean	3.831	2.507	.076	1.528	.129	.662	1.511
	Dummy_Middle_East_North_Africa	14.957	3.159	.268	4.734	<.001	.509	1.964
	Dummy_Western_Europe_North_America	18.965	3.472	.375	5.461	<.001	.345	2.899
	Dummy_Asia_Pacific	1.819	2.426	.037	.750	.455	.661	1.512
	e_wbgi_pve.2018.00: Political stability --- estimate	3.380	1.318	.183	2.563	.011	.321	3.117
	v2xcl_prpty.2018.00: Property rights	-11.673	5.837	-.138	-2.000	.047	.343	2.918
	e_wbgi_cce.2018.00: Control of corruption --- estimate	5.899	1.671	.333	3.531	<.001	.183	5.455
	e_pop.2018.00: Population	2.815E-5	.000	.026	.583	.561	.836	1.196

a. Dependent Variable: e_gdppc.2019.00: GDP per capita

References

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review, 91*(5), 1369–1401.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as the fundamental cause of long-run growth. In P. Aghion & S. Durlauf (Eds.), *Handbook of Economic Growth, 1*, 385-472.

Almond, G. A., & Powell, G. B. (1966). *Comparative Politics: A Developmental Approach*. Little, Brown.

Alesina, A., & Perotti, R. (1996). Income distribution, political instability, and investment. *European Economic Review, 40*(6), 1203-1228.

Andrade, C. (2018). Internal, external, and ecological validity in research design, conduct, and evaluation. *Indian Journal of Psychological Medicine, 40*(5), 498–499. https://doi.org/10.4103/ijpsym.ijpsym_334_18

Barro, R. J. (1991). Economic growth in a cross-section of countries. *The Quarterly Journal of Economics, 106*(2), 407-443.

Barro, R. J. (1996). Democracy and growth. *Journal of Economic Growth, 1*(1), 1-27.

Besley, T., & Ghatak, M. (2010). Property rights and economic development. In *Handbook of Development Economics* (pp. 4525–4595). https://doi.org/10.1016/b978-0-444-52944-2.00006-9

Bhagwati, J. (1982). Directly unproductive profit-seeking (DUP) activities. *Journal of Political Economy, 90*(5), 988–1002.

Chan, Y. (2001). Democracy or Bust. *Harvard international review*, 23, 36.

Chaudhry, A., & Mazhar, U. (2018). *Political competition and economic performance: Empirical evidence from Pakistan* (No. 2018-27). *Economics Discussion Papers*.

Cook, R. D. (1977). Detection of influential observation in linear regression. *Technometrics, 19*(1), 15-18.

Cook, R. D., & Weisberg, S. (1982). *Residuals and Influence in Regression*. Chapman and Hall.

Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Teorell, J., Altman, D., ... Ziblatt, D. (2024). *V-Dem Codebook v14*. Varieties of Democracy (V-Dem) Project.

Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Skaaning, S. E., Teorell, J., ... & Wilson, S. (2011). Conceptualizing and measuring democracy: A new approach. *Perspectives on Politics, 9*(2), 247-267.

Dahl, R. A. (1971). *Polyarchy: Participation and Opposition*. Yale University Press.

Diamond, L. (2002). Thinking about hybrid regimes. *Journal of Democracy, 13*(2), 21–35.

Diamond, L., Lin, J., & Martin Lipset, S. (1990). Introduction: Comparing Experiences with Democracy. In L. Diamond, J. Linz & S. Lipset (Eds.), *Politics in Developing Countries: Comparing Experiences with Democracy* (pp. 1-38). Lynne Rienner Publishers.

Diamond, L., Linz, J., & Lipset, S. M. (Eds.). (1995). *Politics in Developing Countries: Comparing Experiences with Democracy*. Lynne Rienner Publishers.

Durham, J. B. (1999). Economic Growth and Political Regimes. *Journal of Economic Growth*, *4*(1), 81–111.

Feng, Y. (1997). Democracy, political stability, and economic growth. *British Journal of Political Science, 27*(03), 391-418.

Field, A. P. (2018). *Discovering statistics using IBM SPSS*. Sage Publications.

Findley, M. G., Kikuta, K., & Denly, M. (2021). External validity. *Annual Review of Political Science, 24*(1), 365–393.

Gandhi, J., & Przeworski, A. (2007). Authoritarian institutions and the survival of autocrats. *Comparative Political Studies, 40*(11), 1279-1301.

Gandhi, J. (2008). Dictatorial institutions and their impact on economic growth. *European Journal of Sociology, 49*(3), 3–30.

Gasiorowski, M. J. (1996). An Overview of the Political Regime Change Dataset. *Comparative Political Studies, 29*(4), 469-483. https://doi.org/10.1177/0010414096029004004

Gerschewski, J. (2013). The three pillars of stability: legitimation, repression, and co-optation in autocratic regimes. *Democratization*, *20*(1), 13–38. https://doi.org/10.1080/13510347.2013.738860

Gill, I., & Kharas, H. (2007). *An East Asian Renaissance: Ideas For Economic Growth*. Washington, DC: World Bank.

Gerring, J., Thacker, S. C., & Moreno, C. (2005). Centripetal democratic governance: A theory and global inquiry. *American Political Science Review*, *99*(4), 567-581.

Gerring, J., Thacker, S. C., Alfaro, R., Bernhard, M., Fish, M. S., Fish, S. A., ... & Seligson, M. A. (2006). Democracy and economic growth: A historical perspective. *World Politics, 58*(3), 323-364.

Huntington, S. P. (1968). *Political order in changing societies*. Yale University Press.

International Monetary Fund. (2021). *World Economic Outlook: Managing Divergent Recoveries*. https://www.imf.org/en/Publications/WEO/issues/2021/03/23/world-economic-outlook-april-2021

Gopinath, G. (2019, October 15). *The World Economy: Synchronized Slowdown, precarious outlook*. IMF. https://www.imf.org/en/Blogs/Articles/2019/10/15/the-world-economy-synchronized-slowdown-precarious-outlook

Halperin, M. H., Siegle, J. T., & Weinstein, M. M. (2005). *The Democracy Advantage: How Democracies promote prosperity and peace*. Routldege.

Kaplan, R. D. (2000). *The coming anarchy : shattering the dreams of the post Cold War*. Random House.

Kim, J. H. (2019). Multicollinearity and misleading statistical results. *Korean Journal of Anesthesiology, 72*(6), 558–569. https://doi.org/10.4097/kja.19087

Knutsen, C. H. (2012). Democracy and economic growth: A survey of arguments and results. *International Area Studies Review, 15*(4), 393-415. https://doi.org/10.1177/2233865912455268

Khrapak, M. (2023). *Autocracy and Economic Growth: Has the Effect of Regime Type on Economic Growth Changed After the Onset of the Third Wave of Autocratization?* (Doctoral dissertation).

Keefer, P., & Knack, S. (1997). Why don't poor countries catch up? A cross-national test of an institutional explanation. *Economic Inquiry, 35*(3), 590–602. https://doi.org/10.1111/j.1465-7295.1997.tb02035.x

Lani, J. (2021, August 11). Heteroscedasticity. *Statistics Solutions*. https://www.statisticssolutions.com/heteroscedasticity/

Lührmann, A., & Lindberg, S. I. (2019). A third wave of autocratization is here: what is new about it? *Democratization, 26*(7), 1095-1113.

Lührmann, A., Tannenberg, M., & Lindberg, S. I. (2018). Regimes of the world (RoW): Opening new avenues for the comparative study of political regimes. *Politics and governance*, *6*(1), 60-77.

Macridis, R. C. (1986). *Modern political regimes: Patterns and institutions*. Little Brown.

Magee, C. S. P., & Doces, J. A. (2015). Reconsidering Regime Type and Growth: Lies, Dictatorships, and Statistics. *International Studies Quarterly, 59*(2), 223–237. http://www.jstor.org/stable/43868268

Marquardt, K. (n.d.). V-DEM methodology. V-Dem. https://v-dem.net/about/v-dem-project/methodology/

Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics, 110*(3), 681–712.

Mesquita, B. B., Smith, A., Siverson, R. M., & Morrow, J. D. (2023). *Political competition and economic growth*. Journal of Democracy. Retrieved from https://www.journalofdemocracy.org/articles/political-competition-and-economic-growth/

Mill, J. S. (1946). *On liberty and considerations of representative government*. Oxford: Blackwell. (Original work published 1861).

Miller, M. K. (2015). Electoral authoritarianism and human development. *Comparative Political Studies, 48*(12), 1526-1562. https://doi.org/10.1177/0010414015582051

Nahhas, R. W. (n.d.). Introduction to Multiple Linear Regression. Retrieved from https://www.bookdown.org/rwnahhas/RMPH/mlr-influence.html

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

North, D. C., Wallis, J. J., & Weingast, B. R. (2009). Violence and social orders: A conceptual framework for interpreting recorded human history. Cambridge University Press.

Pateman, Carole. (1970). *Participation and democratic theory*. Cambridge University Press.

Pemstein, D., Meserve, S. A., & Melton, J. (2010). Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type. *Political Analysis, 18*(4), 426–449. https://doi.org/10.1093/pan/mpq020

Plümper, T., & Martin, C. W. (2003). Democracy, Government Spending, and Economic Growth: A Political-Economic Explanation of the Barro-Effect. *Public Choice, 117*(1/2), 27–50. http://www.jstor.org/stable/30025887

Przeworski, A., et al. (2000). Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990. Cambridge University Press.

Przeworski, A., & Limongi, F. (1993). Political Regimes. *The Journal of Economic Perspectives, 7*(3), 51-69.

Rodrik, D. (1999). Where did all the growth go? External shocks, social conflict, and growth collapses. *Journal of Economic Growth, 4*(4), 385-412.

Rodrik, D.. (2000). Institutions for high-quality growth: what they are and how to acquire them. *Studies in Comparative International Development, 35*, 3–31.

Saleh, J. (2004). *Property rights institutions and investment* (Vol. 3311). World Bank Publications.

Schedler, A. (2002). The menu of manipulation. *J. Democracy*, *13*, 36.

Schedler, A. (2013). The politics of uncertainty: Sustaining and subverting electoral authoritarianism. Oxford, UK: Oxford University Press.

Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Paris: OECD.

Todaro, M. P., & Smith, S. C. (2020). *Economic Development* (13th ed.). Pearson.

Wang, H. C. (2021). Venezuela in unprecedented crisis. *Tamkang Journal of International Affairs, 24*(3).

World Bank. (2023). *World Development Indicators*. [online] Available at: https://data.worldbank.org/indicator [19.04.2024]

World Bank. (n.d.). Gross Domestic Product (GDP). In *World Bank Statistical Capacity Indicators Dictionary*. Retrieved from

https://databank.worldbank.org/metadataglossary/statistical-capacity-indicators/series/5.51.01.10.gdp

Wu, C. (2012). When is democracy better for economic performance and when is it not: The interaction between polity and structural factors. *Studies in Comparative International Development, 47*(3), 365–388. https://doi.org/10.1007/s12116-012-9118-3

Zakaria, F. (2003). *The future of freedom : illiberal democracy at home and abroad*. Norton.