

## *Effects of Income Distribution on Democratic Regimes<sup>1</sup>*

*Gelir Dağılımının Demokratik Rejimler Üzerine Etkisi*

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### ABSTRACT

This study investigates effects of the income inequality on democratic regimes levels of the nations. Democratic regime levels are measured by the Economist Intelligence Unit's Index of Democracy which is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Based on their scores on a range of indicators within these categories, each country is then categorized as one of four types of regime: "full democracies"; "flawed democracies"; "hybrid regimes"; and "authoritarian regimes". In the study, income inequality levels of the nations are measured by considering their GINI index values. A cross-country regression analysis was performed in order to see whether any significant relation exist between the democratic regimes levels of the nations and their income inequality levels.

**Keywords:** Democracy index, Economic Inequality, GINI index, Cross-country regression analysis

### ÖZET

Bu çalışmada, ülkelerin gelir dağılımlarındaki eşitsizliğin, demokratik rejim düzeyleri üzerine etkisi araştırılmaktadır. Demokratik rejim düzeylerini gösteren Demokrasi Endeksi, Economist Intelligence Unit's kurumunun hesapladığı "Index of Democracy" skorlarına göre beş demokrasi bileşeni (seçim süreci ve çoğulculuk, sivil özgürlükler, hükümetin işleyişi, siyasi katılım ve siyasi kültür) dikkate alınarak değerlendirilmektedir. Bu bileşenlerin ortalama skorlarına göre, her ülke dört farklı kategoriden birine ayrılmaktadır; "tam demokrasiler", "kusurlu demokrasiler", "melez rejimler" ve "otoriter rejimler". Ülkelerin gelir dağılım düzeyleri ise GINI indeksi göz önüne alınarak ölçülmektedir. Ülkelerin GINI indeksi değerleri ile demokrasi skorları arasında regresyon analizi gerçekleştirilerek, ülkelerin demokratik rejim düzeyleri ile gelir dağılım düzeyleri arasında anlamlı bir ilişki olup olmadığı araştırılmıştır.

**Anahtar Kelimeler:** Demokrasi indeksi, Ekonomik eşitsizlik, GINI indeksi, Ülkeler-arası regresyon analizi

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## 1. Introduction

Income distribution is a crucial policy issue for the nations' economies. Economic inequality may create serious socio-economic problems and adverse effects on nations' political regimes. Many experts have argued that increasing extreme income inequality is undermining the democracies. Recent important studies in the relevant literature, investigated the causes and consequences of economic inequality. Huber et al (2006) investigated the impact of politics and policy on inequality in Latin America and the Caribbean. The authors build on models consisting of sociological and economic variables, adding the strength of the democratic tradition, long-term legislative partisan political power distribution, and social spending to explain variation in inequality. They analyzed an unbalanced pooled time series data set for income distribution in 18 Latin American and Caribbean countries from 1970 to 2000. They showed that the political variables add explanatory power. A strong record of democracy and a left-leaning legislative partisan balance are associated with lower levels of inequality, as are social security and welfare spending under democratic regimes. Thus, they replicate some and modify other well-established findings from studies of Organization for Economic Cooperation and Development (OECD) countries in the very different context of Latin America and the Caribbean. They confirm that the partisan composition of government matters, and show that, in contrast to OECD countries, where social security and welfare spending consistently reduce inequality, such spending reduces inequality only in a democratic context in Latin America and the Caribbean. Subsequently, Huber et al (2014) tested the generalizability of the Goldin-Katz hypothesis that inequality has increased in the USA because the country failed to invest sufficiently in education. They analyzed the determinants of market income distribution and governmental redistribution. The dependent variables were Luxembourg Income Study data on market income inequality (measured by the Gini index) for households with a head aged 25-59 years and the per cent reduction in the Gini index by taxes and transfers. They stated that the main determinants of redistribution are (in order of magnitude) left government, family structure, welfare state generosity, unemployment and employment levels; redistribution rises mainly because needs rise (that is, unemployment and single mother households increase), not because social policy becomes more redistributive. Acemoglu et al (2008) analyzed economic performance under different political regimes. They stated that "An "oligarchic" society, where political power is in the hands of major producers, protects their property rights but also tends to erect significant entry barriers against new entrepreneurs. Democracy, where political power is more widely diffused, imposes redistributive taxes on producers, but tends to avoid entry barriers. When taxes in democracy are high and the distortions caused by entry barriers are low, an oligarchic society achieves greater efficiency." Jesuit (2010) et al offered an alternative to the conventional measure of government redistribution that seeks to address problems of second-order effects whereby income guarantees arising from public pensions make it less necessary for people to save for their retirement, rendering the "pre-government" counterfactual to the observed post-government distribution unrealistic. They suggested that alternative method be used in addition to the conventional method in cross-national research, in an effort to achieve a more complete understanding of government

redistribution in the developed countries. Mahler & Vincent A. (2010) offered an empirical assessment of a number of aspects of the reduction of market income inequality as a result of government taxes and transfers, and of the distributive effect of wage-bargaining institutions and minimum wages, in thirteen developed countries over the last twenty five years. The article founded consistent positive relationships between direct government redistribution and four variables: the extent of pre-government inequality; the level of electoral turnout; the share of the labor force that is unionized; and the presence of proportional representation electoral systems. Moller et al (2009) investigated the causes of economic inequality in the United States. The authors build a model of within-county income inequality that assumes that distribution processes involving labor market and sociodemographic variables operate primarily at the county level and those involving the political and institutional context operate primarily at the state level. In the study, multi-level methods were used to distinguish county cross-sectional, state cross-sectional, and longitudinal effects on inequality. The authors found that, when features of the state-level institutional and political context are associated with inequality, these effects are larger longitudinally than cross-sectionally. A range of other factors, including economic development, labor force changes, shifts in the racial/ethnic and gender composition of the labor force, educational expansion, and urbanization are found to have comparatively large effects, both longitudinally and cross-sectional. Lee et al (2007) investigated interrelationship among income inequality, global economy and the role of the state using an unbalanced panel data set with 311 observations on 60 countries, dated from 1970 to 1994. They find that most traditional measures of trade dependence have inconsistent or weak positive effects on inequality, while export commodity concentration has a negative effect; the effects of foreign direct investment on inequality is positive at low to intermediate levels of government size, but that this effect is substantially attenuated or negative in societies with a larger public sector. They conclude that distributional outcomes are dependent upon how the state reacts to growing globalization-related pressures. Chong et al (2007) presented theory and evidence on the relationship between inequality and institutional quality. They empirically established double causality between institutional strength and a more equal distribution of income using dynamic panel and linear feedback analysis. Gradstein (2007) stated that under the economic inequality democratization would not take place; institutional quality, such as strong property rights, for economic performance, he argued that the support for such protection is greater the more equal income distribution and the smaller political bias. When these conditions initially hold, the politically influential rich elite may prefer to relinquish its power through democratization in order to commit future policy makers to the enforcement of property rights, thus ensuring larger investment and faster growth. Benhabib and Przeworski (2006) found that democracies survive in wealthy societies. They stated that if redistribution is insufficient for the poor or excessive for the rich, they may turn against democracy. If no redistribution simultaneously satisfies the poor and the wealthy, democracy cannot be sustained. Roemer (2004) conceived of democracy as ruthless electoral competition between groups of citizens with different interests, who are organized into parties. He inquired whether such competition, which he assumed to be concerned with distributive matters, would be engendering economic equality in the long run. He showed that, whether the limit distribution of human capital is an equal one depends upon the nature

of intra-party bargaining and the degree of inequality in the original distribution. Przeworski (2005) explained the pattern that while democracy is fragile in poor countries, it is impregnable in developed ones. The author developed a model in which political parties propose redistributions of incomes, observed the result of an election, and decided whether to comply with the outcome or to launch a struggle for dictatorship and stated that democracy prevails in developed societies because too much is at stake in turning against it; more income can be redistributed in developed than in poor countries without threatening democracy, a democratic culture characterizes the equilibrium.

In this study, we investigated the effects of the income inequality on democratic regimes levels of the nations. Democratic regime levels are measured by the Economist Intelligence Unit's Index of Democracy is based on four categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Based on their scores on a range of indicators within these categories, each country is then categorized by the Economist Intelligence Unit's as one of four types of regime: "full democracies"; "flawed democracies"; "hybrid regimes"; and "authoritarian regimes". In the study, income inequality levels of the nations are measured by considering their GINI index values.

## **2. Definitions of sample and variables**

In the study, the data covers the period of 2011-2013 and democratic regime levels are measured by the Economist Intelligence Unit's Index of Democracy which is based on four categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Each score of these components is measured by a continuous interval from 0 to 10 ( $0 \leq \text{score} \leq 10$ ). Income inequality levels of the nations are measured by considering their GINI index values.

**Table 1: Definitions of regime categories**

<b>Regime types</b>	<b>Definition</b>	<b>% of World population</b>
<i>Full democ.</i>	Democracy in which the power is exercised directly by the people rather than through representatives. *	12.5
<i>Flawed democ.</i>	These countries also have free and fair elections and even if there are problems (such as infringements on media freedom), basic civil liberties will be respected. However, there are significant weaknesses in other aspects of democracy, including problems in governance, an underdeveloped political culture and low levels of political participation. **	35.5
<i>Hybrid regimes</i>	This is also called a pseudo democracy, partial democracy, low intensity democracy, empty democracy or delegative democracy. It is a governing system in which, although elections take place, citizens are cut off from knowledge about the activities of those who exercise real power because of the lack of civil liberties and so there is no open society in this regime. The rulers may centralize powers between branches of the central government and local government. The rulers may centralize powers between branches of the central government and local government. Country is neither free nor not free and falling somewhere between democratic and nondemocratic regimes. ***	14.4
<i>Authoritarian regimes</i>	Authoritarianism is characterized by highly concentrated and centralized power maintained by political repression and the exclusion of potential challengers. It uses political parties and mass organizations to mobilize people around the goals of the regime. ****	37.6

Source: \*merriam-webster.com \*\*Kekic, 2007; \*\*\*<http://en.wikipedia.org>; \*\*\*\*.

Based on their scores on a range of indicators within these categories, each country is then categorized by the Economist Intelligence Unit as one of four types of regime: “full democracies”; “flawed democracies”; “hybrid regimes”; and “authoritarian regimes” Table 1 gives the definitions of the four regime categories and % of World population living under the category. The democracy index scores are used to place countries within one of four types of regimes. The index also shows that although almost half of the world’s countries can be considered to be democracies, the number of “full democracies” is relatively low and only 30 countries while 50 countries are rated as “flawed democracies”. Countries, placed in flawed democracy have free and fair elections and even if there are problems (such as infringements on media freedom), basic civil liberties will be respected. However, there are significant weaknesses in other aspects of democracy, including problems in governance, an underdeveloped

political culture and low levels of political participation (Economist Intelligence Unit's Index of Democracy", 2014).

### 3. Methodology

#### a. Comparison of regimes

In this study we first calculated average values of democracy scores and GINI index values for the four types of regimes. Figure 1 compares the average democracy score and GINI index values according to the four democracy categories for the nations. Here, it can be observed that most inequality exists in hybrid regimes and least inequality exists in full democracies. Interestingly, the average value of GINI index of the authoritarian regimes (which have the least democracy score) is closer to the average value of the full democracies than the other two regime types (flawed democracies and hybrid regimes).

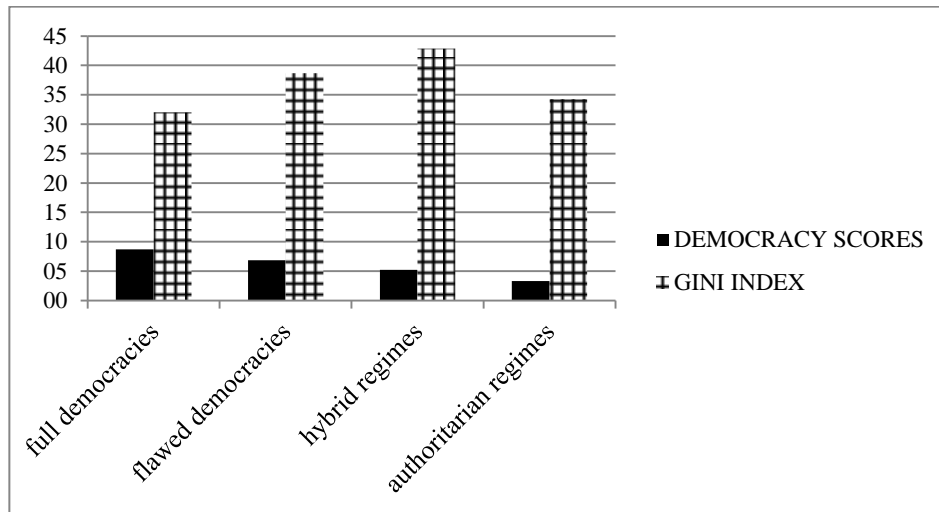


Figure 1: Average democracy scores and GINI index values for the regime categories

#### b. Cross-country regression analysis

In this section we investigated the effects of the income inequality on democratic regimes levels of the nations. A cross-country regression analysis was performed in order to see whether any significant relation exist between the democratic regimes scores of the nations and their income inequality levels. As stated before, democratic regime scores are measured by the Democracy index is based on five components: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Based on their average scores within these categories, each country is then categorized as one of four types of regime: "full

democracies”; “flawed democracies”; “hybrid regimes”; and “authoritarian regimes” (Table 1). In the study, income inequality level of the nation is measured by considering their GINI index.

**Table 2: Results of the regression analysis for the full democracies**

<i>Regime type</i>	<i>Model Statistics</i>			<i>Statistics of std. Coefficients</i>		
	<i>F Stat.</i>	<i>Sig. F</i>	<i>Adj. R<sup>2</sup></i>	<i>Std. Coef.</i>	<i>t Stat.</i>	<i>Sig. t</i>
Political Culture	37.04	.000**	.419	-.656	-6.07	.000
Electoral Process and Pluralism	16.52	.000**	.237	-.502	-4.06	.000
Political Participation	16.37	.000**	.235	-.500	-4.05	.000
Functioning of Government	10.99	.002**	.167	-.428	8.25	.000
Civil liberties	8.72	.005**	.134	-.389	-2.95	.005

**Table 3: Impact of one standard deviation increase in GNI index values on of the democracy components**

<b>Democracy Components</b>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Std.Dev.</i>	<i>Std.Coeff.</i>	<i>Impact Fac.</i>
Political Participation	6.00	10.00	7.33	1.24	-.500	-.62
Political Culture	6.86	10.00	8.48	.89	-.656	-.58
Functioning of Government	6.43	9.64	8.48	.98	-.428	-.42
Civil Liberties	9.00	10.00	9.50	.37	-.389	-.14
Electoral Process and Pluralism	9.00	10.00	9.68	.23	-.502	-.12
GINI index	25.54	48.61	32.00	<b>5.74</b>	-	-

Table 2 gives the results of the cross-country regression analysis. First, second and forth columns of Table 2 give F statistics, significance of F statistic and adjusted R square of the model respectively. Results showed very strong negative relations between GINI index values and each category of democracy components only for the full democratic regimes. We did not observe any meaningful relationship between the income inequality and components of the democracy for the other regime types: flawed democracies, hybrid regimes and the authoritarian regimes. Standard coefficients are calculated in the regression analysis which can be used to unfold and compare the effects of the independent variable (GINI index) on the dependent variables (scores of

democracy components), and refer to how many standard deviations a dependent variable will change, per standard deviation change in the independent variable.

Table 3 gives minimum, maximum, mean, standard deviation and standard coefficients of democracy components respectively. In the last column of Table 3, the impact effect of one standard deviation (5.74) increase in GNI index value on each of the components are given. The impact effects are calculated multiplying standard deviation of democracy component (forth column) by its standard coefficients (fifth column). According to these statistics the most significant negative impact could be observed in political participation component. This means that one standard deviation (5.74) increase in GNI index value is expected to be cause -.62 unit decrease in political culture component score (or vice versa). Similarly, political culture (-.58), functioning of government (-.42) civil liberties (-.14), electoral process and pluralism (-.12) are coming next respectively.

As stated previously, empirical results of this study showed that very strong negative relations exist between GINI index values and each category of democracy component scores only for the full democratic regimes. Also, we did not observe any meaningful relationship between the income inequality and components of the democracy for the other regime types: flawed democracies, hybrid regimes and the authoritarian regimes.

#### 4. Conclusion

Empirical results of the study show that the income inequality is expected to be creating significant adverse effects in full democratic regimes. In another words, increasing income inequality is undermining the democracies. In this study, the most significant effect is observed in political participation and political culture component. Subsequently, functioning of government, civil liberties, electoral process and pluralism are coming respectively.

A more equitable distribution of income may help promote the democracy, economic development and also accelerate growth. Distribution of wealth and income is the way in which the wealth and income of a nation are divided among its population. More equitable distribution of income refers to distribution of income that is 'fair', but the concept of 'fair' is subjective<sup>4</sup>. However, in the case of high level of inequality, the short run policy implication for the governments would be a progressive tax system with transfer payments, such as subsidies, unemployment benefits and disability benefits. By taxing higher income groups more than lower-income groups, the income can be redistributed from the rich to the poor. Long run policy would be to improve the access to education and healthcare, create more jobs and lower corruption. Hence the poor will be able to access healthcare and education, which will improve the quality and quantity of factors of production in the long run.

<sup>4</sup> <https://www.intelligenteconomist.com/equitable-distribution-of-income/>



Finally, in the long term democracy and income inequality can dynamically reinforce each other and a double causality could exist between them. Better democracy could promote a more equal distribution of income, but also the latter may dominate the former.

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