

Journal of Entrepreneurship, Business and Economics

ISSN 2345-4695

2019, 7(1), 106–132

## ANALYZING THE RELATIONSHIP BETWEEN ECONOMIC PROSPERITY, LAW AND DEMOCRACY

Ali Kahramanoğlu<sup>1</sup>; Ahmet Mesut Büyüksarıkulak<sup>2</sup>

<sup>1</sup> *Bafra Faculty of Business Administration, Ondokuz Mayıs University, Samsun, Turkey*

<sup>2</sup> *Doğanhisar Vocational High School, Selçuk University, Konya, Turkey*

E-mail: [ali.kahramanoglu@omu.edu.tr](mailto:ali.kahramanoglu@omu.edu.tr)

*Received April 2018; accepted June 2019*

### Abstract

In line with economic prosperity and its spread to the society, it is essential that the economy complement each other with law and democracy. In this study, the development levels of countries and the relationship between law and/or democracy will be examined. After the Eview analysis, it was observed that the democracy and geography indexes were not enough alone, and a more comprehensive model was formed by adding some geographic, religious, cultural and dummy variables reflecting the history of countries. At the end of modelling, it is seen that geographic features and natural resources are extremely important for prosperity. Moreover, the fact that countries have historical/corporate identity does not yield any meaningful results in terms of human development

### Research paper

**Keywords:** Economic Prosperity; Law; Democracy; Human Development Index; World Justice Index

**Reference** to this paper should be made as follows: Kahramanoğlu, A., & Büyüksarıkulak, A. M. (2019). Analyzing the Relationship between Economic Prosperity, Law and Democracy, *Journal of Entrepreneurship, Business and Economics*, 7(1), 106–132.

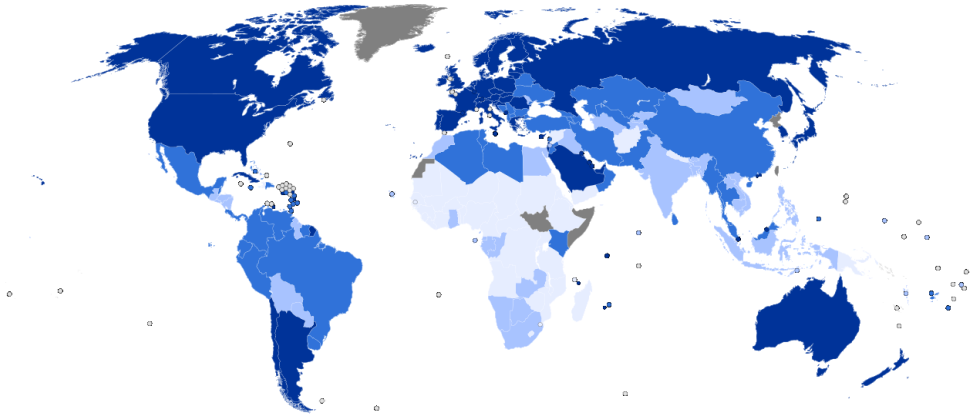
## **Introduction**

In line with economic prosperity and its spread to the society, it is essential that the economy complement each other with law and democracy. Besides the fulfilment of the needs, the healthy functioning of the economic system also depends on the existence of an effective legal system and the full implementation of democratic values in social life. The role of law in the economy is to designate the legal framework that will ensure the safe and orderly functioning of the market. With pluralistic governance to be established through democracy, individuals have a say in economic policies (Baykal, 2008).

In the study, “Human Development Index”, prepared by the United Nations, will be used in order to state economic prosperity and its spread to the society. Basically, this index is calculated by measuring

- Average life span,
- Educational level,
- Income per capita/purchasing power parity

in a country (Masdjojo, 2010).



**Figure1.** Countries by Human Development Index

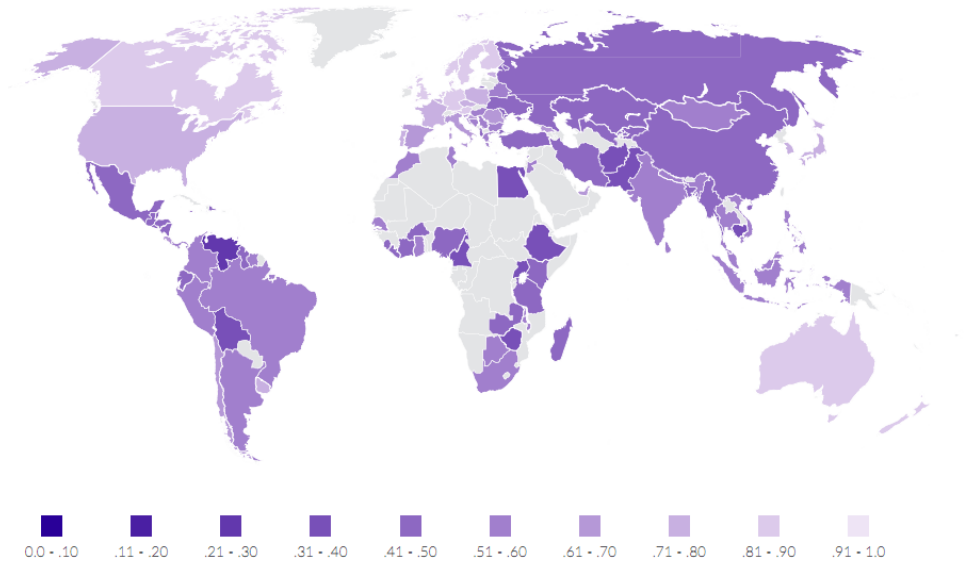
In the study, data of “World Justice Index” prepared by “World Justice Project” and “Democracy Index” prepared by “The Economist” are utilised to express the relation between law and democracy.

When examining the importance given to the law in countries, the following issues are considered in the index to be used(Masdjojo, 2010):

- Independence of legislative and judicial bodies
- Equitable distribution of justice
- Accountability of government and bureaucracy before the law
- Protection of the basic rights of individuals by law
- Ensuring the safety of individuals
- Enforcement of laws on paper
- Civil justice, criminal prosecution and informal justice

According to this index, the status of world countries is given as follows. The range of 0.91 to 1.0 indicates the countries most advanced in law. The range of 0.0 to 0.10 indicates the countries most underdeveloped in

this context. No data could be received from countries listed in grey. Note that this index could not receive data from most African and Middle Eastern countries. A data set including these countries may lead to more accurate results.



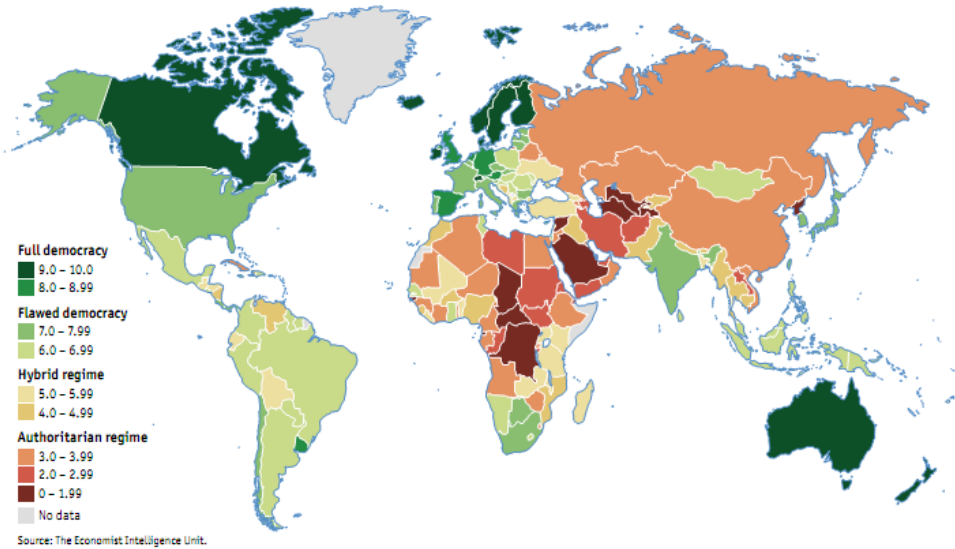
**Figure2.** Countries by World Justice Index

To express the level of democracy in countries, such criteria are taken into account;

- Justice and security of the election
- Pluralism
- The functioning of governments
- Political culture and participation in politics
- Existence and functioning of non-governmental organizations in the country

According to the democracy index in the journal “The Economist”, the status in the world is shown in the figure below. Countries are divided into four groups as a full democracy, flawed democracy, hybrid regime (a regime fluctuating between democracy and authoritarian regime), an authoritarian regime, and are ranked according to the criteria above with points from 0-10.

Democracy Index 2016



**Figure3.** Countries by Democracy Index

As seen in Figure 3, in order to determine the development level of a country, there is not any direct parameter regarding the importance of the law and democracy the country is emphasizing. With the economic modelling to be formed, it is aimed to show the relationship between the importance of the law and democracy the country is emphasizing and the development level.

When we look at the given world maps, there are certain countries in the upper and lower ranks of the indices. It is noteworthy that the countries in the same group have similar historical and cultural characteristics, especially in geography. For this reason, we tried to emphasize these similarities by extending the data sets and introducing a more comprehensive model.

Developed countries in the world are generally in the middle latitude zone. Europe and North America, which are considered to be at the top in terms of development, are in this latitude zone. The tropical belt, 30° north and south of the equator, covers most of Africa, Central America, and most of South America and Southeast Asia, and it is seen that the countries in this geography are struggling with poverty and their peoples are generally more distant from prosperity and health. In order to emphasize the latitude effect, the absolute latitudes of the countries are included in the democracy and law index as a data set (Flexer, 2006).

In addition to the data sets, various dummy variables were added and the scope of the study was expanded. The dummy variables used are listed below and short explanations are given. The dummy variables used can be classified as geographical, historical and religious/cultural.

In this study, Data sets were collected for 104 countries and Human Development Index was used as the dependent variable. As independent variable, Law Index, Democracy Index and Absolute Latitude were used. Dummy variables used as dependent variables are; Geographical,

Historical / Institutional and Religious / Cultural. The dependent, independent and dependent variable data sets were analyzed.

## **Literature Review**

Barro(1996) Growth and democracy (subjective indexes of political freedom) are analyzed for a panel of about 100 countries from 1960 to 1990. The favorable effects on growth include maintenance of the rule of law, free markets, small government consumption, and high human capital. Once these kinds of variables and the initial level of real percapita GDP are held constant, the overall effect of democracy on growth is weakly negative. There is a suggestion of a nonlinear relationship in which more democracy enhances growth at low levels of political freedom but depresses growth when a moderate level of freedom has already been attained. Improvements in the standard of living--measured by GDP, health status, and education--substantially raise the probability that political freedoms will grow. These results allow for predictions about which countries wilt become more or less democratic over time.

Zhang(1999) focused on democracy, which is one of the factors that are allegedly correlated with economic prosperity. Attempts are made to use regression analysis to test the democracy relationship and explore its nature. As a conclusion, it is found that democracy has some influence on per capita income, but on the other hand, economic development does not seem to foster democracy.

Tang and Young(2005) examined the direction of causality between growth and democratization for the high performing Asian economies using a new time-series technique called autoregressive distributive lag. They find that for all eight of such economies, the direction of causality runs consistently from democratization to growth and not the other way around. Rapid growth in the high performing economies appears to have little effect on democratization. They also find that the net effect of democratization on growth is not always positive. Against the widely-held view that growth enhances democratization, their evidence suggests that rapidly developing countries under authoritarian rule are unlikely to improve their democratic institutions.

### **1) Geographical Dummy Variable**

**A) Continental Dummy Variable:** This is a dummy variable formed to find the answer to the question that “Does the continent that a country is in having any impact on the level of human development?”.It can be said that roughly Europe is advanced and Africa is underdeveloped in terms of human development over the world. The authenticity of this impact is studied via these variables. Europe, America, Africa and Asia + Australia dummy variables are formed by dividing countries into four categories (Campino and oth.,2003).

**B) Petroleum/Natural Gas Dummy Variable:** Another discourse, which is told by looking at the geography of the Middle East, is



that the natural sources of energy caused disaster for those countries. In addition, many developed countries have no petroleum and natural gas. In this study, we have assigned the dummy variable to the countries having an export list in which petroleum and/or natural gas are at the top three. These countries are Indonesia, Iran, Kazakhstan, Nigeria, Norway, Russia, Saudi Arabia, United Arab Emirates and Venezuela (Campino and oth.,2003).

**C) Landlocked Dummy Variable:** It can be said that the landlocked countries are dependent on other countries for import and export. Hence, it is very significant to have a reach to seas for an independent foreign trade. Although the importance of aviation in transportation is increasing nowadays, the most efficient way for this work is sea transportation. It is generally thought that the countries with a coast are more developed, and the countries surrounded completely with neighbours are undeveloped. Historical events provide evidence to support this idea. Afghanistan, Austria, Bolivia, Botswana, Burkina Faso, Czech Republic, Ecuador, Ethiopia, Hungary, Kazakhstan, Kyrgyzstan, Macedonia, Malawi, Moldova, Mongolia, Serbia, Uganda, Uzbekistan, Zambia, Zimbabwe are the landlocked countries to which this dummy variable is assigned.

**2) Historical/Corporate Dummy Variable:** When the former colonial African countries, which gained their independence in the 1960s after the end of World War II, are examined, it is seen that they have not been able to achieve economic progress over time, even some of them have gone backwards than the colonial period. The same situation can be seen in many South American countries which have gained their independence one or more centuries ago. The initial reason for this backwardness is that Europeans built colonist and authoritarian establishments across these geographies (Matsios, 2007). After they left, local administrators took over these establishments as they were. In other words, the privileges of the white man in this geography were continued by local groups and the riches of the country were not spread to the public. Due to this reason, old European colonialism is still at the root of today's authoritarian/military regimes.

This question is important at this point: “Countries such as the US and Australia are former European colonies and their human development levels are high. How is that possible?”. These countries have historical and geographical differences. When Europeans first came to these countries, they neither encountered a critical population nor faced any barriers like forests and tropical illnesses that they faced in Africa and South America before. These barriers prevented immigration from Europe. While colonial establishments were formed in these overpopulated countries experiencing less immigration, no such establishments were formed in the USA and

Australia. Instead, they placed immigrants from Europe, and they established institutions similar to Europe and experienced similar social dynamics as in Europe on the stage of history(Hasanov, 2009).

The same situation outlined above was also experienced in the Soviet Union. In the Soviet Union, the country's resources were shared by a certain mass/party group. After the dissolution, authoritarian regimes took over this heritage in countries like Azerbaijan, Uzbekistan and Kazakhstan. The dominance of these masses still continues today (Hasanov, 2009).

The dummy variables in this regard were assigned to the former British, French and Spanish colonies and former Soviet Union countries.

- 3) Religious/Cultural Dummy Variable:** This is a dummy variable created with the intent of answering the question of whether cultural and religious identity has any impact on the development of countries. We have three dummy variables named as Christian, Muslim and Buddhist-Hindu. Countries with more than half of the population believing in religion are categorized under this dummy variable.

### **Establishing the Econometric Model and Various Analyses Performed**

Horizontal-cross sectional data are the data sets created by being organized at a certain point in time(Yalta,2011).

In this study, these data sets were collected for 104 countries.

The dependent variable in the model ( $Y_i$ );

- Human Development Index (HDI)

Independent variable data sets;

- World Justice Index (WJI)
- Democracy Index (DI)
- Absolute Latitude (ABS(LAT))

Dummy variables to be used as dependent variables (Matsios, 2007);

1) Geographical Dummy Variables

- Europe Dummy
- Africa Dummy
- America Dummy
- Asia & Australia Dummy
- Petroleum & Natural Gas (Oil) Dummy
- Landlocked Dummy

2) Historical/Corporate Dummy Variables

- British Colony
- French Colony
- Spanish Colony
- Former Soviet Countries

3) Religious/Cultural Dummy Variables

- Christian
- Muslim
- Buddhist & Hindu
- Other Religions

As the model contains three independent variables, multiple regression model will be applied. The first analysis to be made is to create the correlation matrix between the data sets that we refer to as independent variables(Flexer, 2006). Since cross-correlation value between two data sets is too high, it roughly means that these two data will have similar contents in the analysis. In this case, it will be not suitable to explain another parameter using these two together. If the correlation is high, one of these variables needs to be chosen and used in the multiple regression model (Flexer, 2006).

	Absolute Latitude	Democracy Index	Justice Index
Absolute Latitude	1.000000	0.259400	0.441445
Democracy Index	0.259400	1.000000	0.767776
Justice Index	0.441445	0.767776	1.000000

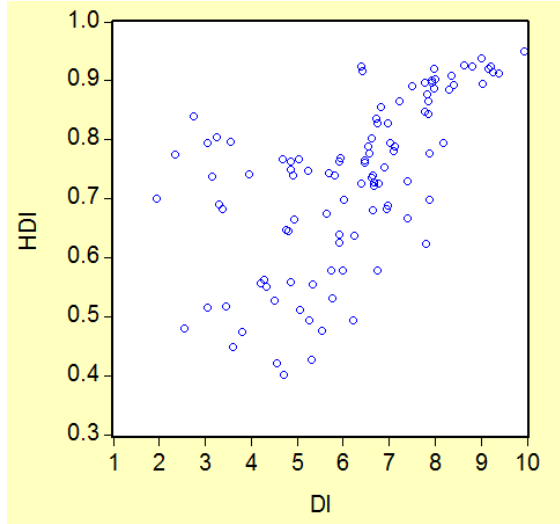
**Table 1.** Multiple Regression Model between Justice and Democracy

#### Indices

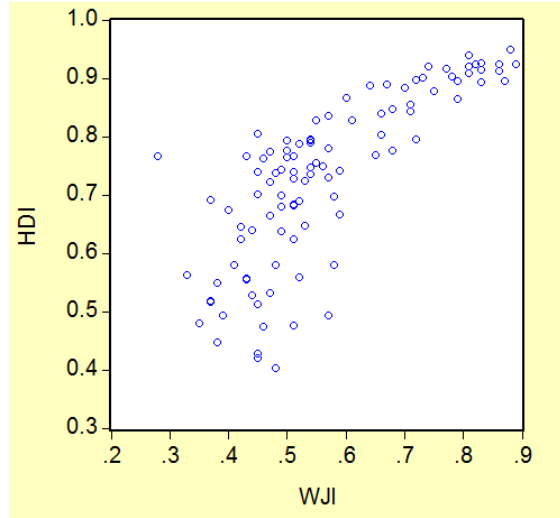
As seen above, the cross-correlation between Justice and Democracy Indices is 0.767776. This value indicates that there is a correlation between them, and it will not form any critical problem to use both sets together.

The following graphs may help to see the Human Development Index (HDI), Democracy Index (DI), Legal Index (WJI) and Absolute Latitude Relationships before regression. Although the DI and WJI indices increase in general with the increase of HDI level, there is a critical distribution, especially in DI. The relation between HDI and WJI is a concave function. Even though there isn't any direct relation monitored when examining the absolute latitude and HDI level, the distribution is completely at the top isosceles triangle. While there is a country in every

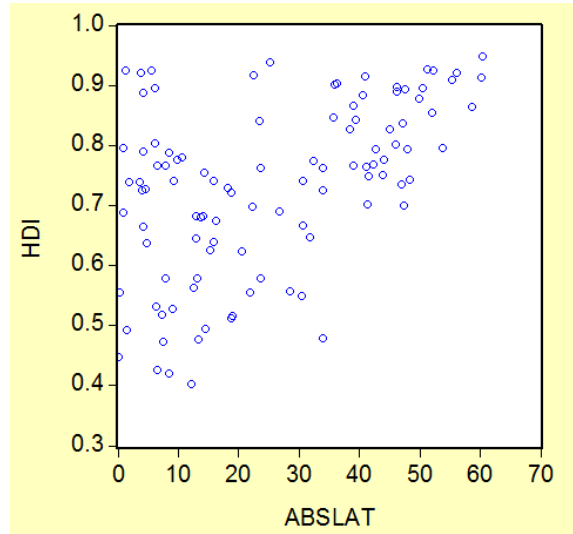
latitude with high levels of HDI, there is none at low levels of HDI (Kian, 2010).



**Figure 4.** Relation Between Human Development and Democracy Index



**Figure 5.** Relation Between Human Development and World Justice Index



**Figure 6.** Relation Between Human Development Index and Absolute Latitude

With  $Y_i$  is the dependent variable,  $X_i$ s are independent variables,  $u_i$  is the error term and  $\beta_i$  are model parameters,

A regression model will be established in the form of  $Y_i = f(X_i)$  and  $\beta_i$  values will be found with the least squares method. Some assumptions are used at this point. These are(Yalta,2011);

- 1)  $f(X_i)$  is linear.
- 2)  $X_i$  values do not change in repeating samples.
- 3)  $u_i$  expected value is zero  $E(X_i) = 0$ .
- 4)  $u_i$ 's variance is constant ( $var(X_i) = \sigma^2$ ).
- 5) There is no autocorrelation between the error terms.
- 6) The covariance of  $u_i$  and  $X_i$  is zero ( $cov(u_i, X_i) = 0$ ).

- 7) The number of observations should be more than the number of parameters.
- 8)  $X$  values in a given sample cannot all be the same.
- 9) There is no absolute multiple co-linearity.
- 10) The model must be specified correctly. The model should be built logically.

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$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + u_i \quad (\text{Taylor, 1986})$$

The confidence interval of the given regression model is 95%. Then  $\alpha = 0.05$ . At this point, we need to mention about null hypothesis and type I and II errors. With the tests of hypothesis, compatibility between estimated  $\hat{\beta}$  and real  $\beta$  is tested. If our null hypothesis ( $H_0$ ) is rejected while it is actually true, this is called “type I error”, and if not rejected while it is wrong, this is called “type II error”.  $\alpha$  shows the probability of type I error (Pfannerstill, 2010). In our project, there will be two tests of hypothesis.

**Test of Hypothesis for Error Terms:** As mentioned above, the normal distribution of error terms is assumed. Here, our null hypothesis is that the error terms are distributed normally. The “Jarque- Bera” test is performed for the normality test. JB is calculated with skewness and kurtosis values and according to this test result, it can be decided whether the error term is normally distributed. After the JB test, if the probability is over 5%, the normality hypothesis of the error terms cannot be rejected. So, shortly we can say that the error terms are normally distributed (Stock and Watson, 2003).



**Test of Hypothesis for Regression Parameter Terms:** After testing the hypothesis above, whether  $\beta_i$ s in the regression model cover zero should be studied. In a word, our hypothesis here is  $\beta_i = 0$ . At the end of the analysis, if the probability value is lower than 5%, the null hypothesis can be rejected. Thus, it can be said that the model is confidential for the confidence interval of 95%.

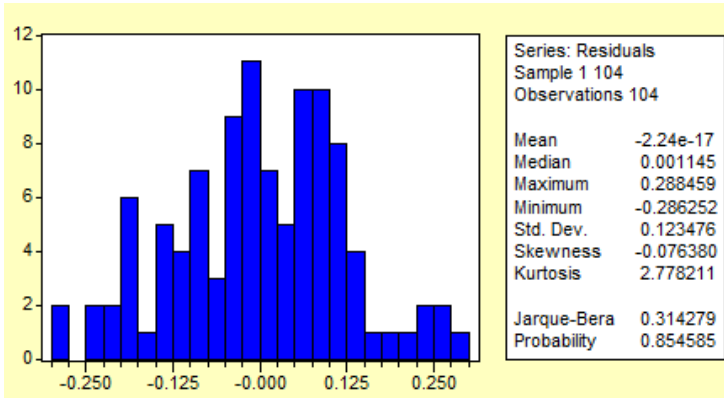
**Durbin-Watson Statistics:** This parameter is expected to be around 2 at the end of the estimation. In that case, we can say that there is no autocorrelation between the error terms. In other words, the error terms are independent of each other.

We have tended to keep the regression model of the study method low at the start, then to enlarge. A kind of inductive approach was implemented. Many model tests were performed with the independent data set and dummy variables given above. In most of these, the model failed to pass the null hypotheses. Here we explained a model that passed the hypotheses, have a Durbin-Watson Statistics close to 2 and have an R-square value of 0.70 (Stock and Watson, 2003).

In general, our methodology was to explain the geographical effects and human development first, then to increase the adjusted R-square parameter by adding the democracy and justice indices. With the numerous tests performed, it is seen that democracy and justice indices together cannot reject the  $\beta_i = 0$  hypothesis.

**Induction Steps**

**Step I:** In this step, only the relation between HDI and absolute latitude is examined. The probability of the JB test is found as 0.85. Accordingly, the hypothesis that the error terms are normal cannot be rejected. The probabilities of model coefficients are less than the confidence interval of 5%. Hereunder the hypotheses  $C(1)=0$  and  $C(2)=0$  can be rejected. It is seen that  $C(2)$  parameter is quite small, in short, 100 units of change in absolute latitude increase HDI by 0.3 unit. Durbin-Watson was found around 1.80, and R-square was found as 0.24.

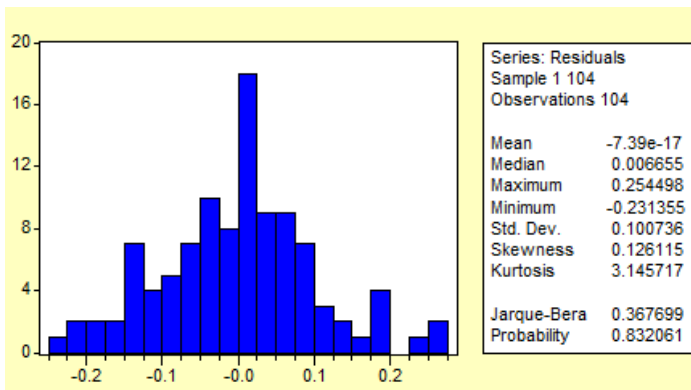


Included observations: 104

$$HDI = C(1) + C(2) * ABSLAT$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.631201	0.021187	29.79207	0.0000
C(2)	0.003950	0.000683	5.783173	0.0000
R-squared	0.246927	Mean dependent var		0.731510
Adjusted R-squared	0.239544	S.D. dependent var		0.142286
S.E. of regression	0.124079	Akaike info criterion		-1.316746
Sum squared resid	1.570363	Schwarz criterion		-1.265892
Log-likelihood	70.47077	Durbin-Watson stat		1.804478

**Step II:** It is aimed to not to lose statistical significance and to increase the adjusted R-square value by adding various variables to the model at the first step. DI and WJI indices are required to be added to the model before adding the dummy variables. With the numerous tests performed, it is seen that democracy and justice indices together cannot reject the  $\beta_i = 0$  hypothesis. Thus, only DI is added to the model. As a result, it is seen that both hypotheses are checked. t statistics was declined for absolute latitude but in general, Durbin-Watson rose to 2.02 and the adjusted R-square value rose to 0.48. That C(2) and C(3) parameters are positive is compatible with the graphs given in Figures 4, 5 and 6.

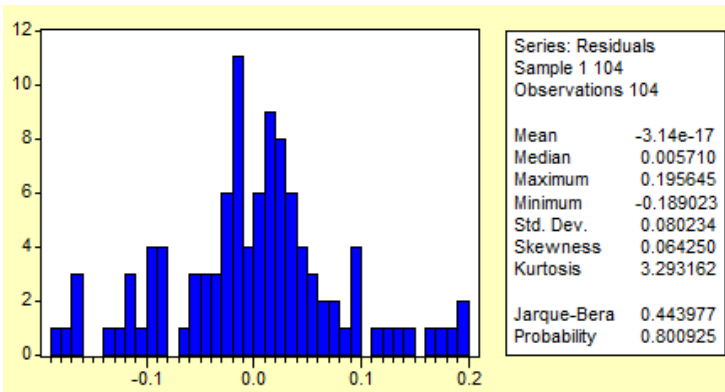


Included observations: 104

$$\text{HDI} = \text{C}(1) + \text{C}(2) * \text{ABSLAT} + \text{C}(3) * \text{DI}$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.405189	0.036171	11.20194	0.0000
C(2)	0.002878	0.000580	4.964497	0.0000
C(3)	0.041051	0.005763	7.123524	0.0000
R-squared	0.498761	Mean dependent var		0.731510
Adjusted R-squared	0.488835	S.D. dependent var		0.142286
S.E. of regression	0.101729	Akaike info criterion		-1.704593
Sum squared resid	1.045221	Schwarz criterion		-1.628313
Log-likelihood	91.63884	Durbin-Watson stat		2.026074

**Step III:** The purpose of this step is to use the dummy variables. After many different model tests performed with the dummy variables, it has been found that Africa dummy variable is crucial to define the model (Pagan, 1996). Again, for the 5% significance level, it was seen that the error terms were normally distributed and the model parameters were not zero. The presence of a country in Africa appears to cause 0.16 negative effects in the HDI sense. This is a serious effect considering that the HDI index is in the range of 0.0-1.0. The adjusted R-square value with Africa dummy variable has increased to 0.67.

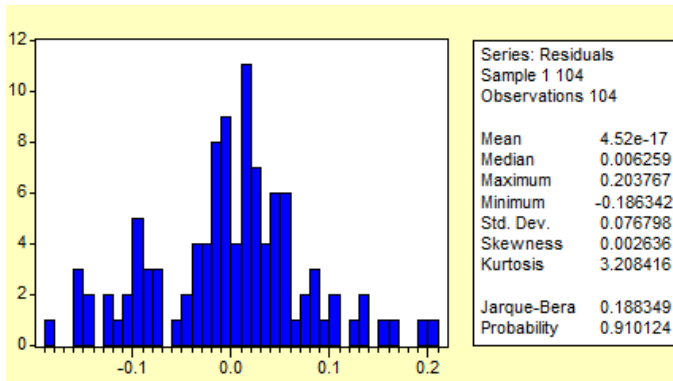


Included observations: 104

$$\text{HDI} = C(1) + C(2)*\text{ABSLAT} + C(3)*\text{DI} + C(4)*\text{DUM\_AF}$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.508595	0.031997	15.89491	0.0000
C(2)	0.001805	0.000485	3.720865	0.0003
C(3)	0.034219	0.004700	7.281134	0.0000
C(4)	-0.160778	0.021178	-7.591712	0.0000
R-squared	0.682024	Mean dependent var		0.731510
Adjusted R-squared	0.672484	S.D. dependent var		0.142286
S.E. of regression	0.081429	Akaike info criterion		-2.140469
Sum squared resid	0.663068	Schwarz criterion		-2.038761
Log-likelihood	115.3044	Durbin-Watson stat		1.895073

**Step IV:** It has been monitored that statistical significance is virtually lost in every test performed by adding religious/cultural dummy variables and historical/corporate dummy variables to the regression model. Again the adjusted R-square value has increased to 0.70 in the estimation done by adding petroleum/natural gas (oil) dummy variable, which is included in geography dummy variables. For  $C(5)=0.09$ , that a country is a petroleum/natural gas exporter has a positive effect in the HDI sense. Although the Durbin-Watson value declines to 1.81, it is still reasonable (Pagan, 1996).



Included observations: 104

$$\text{HDI} = C(1) + C(2)*\text{ABSLAT} + C(3)*\text{DI} + C(4)*\text{DUM\_AF} + C(5)*\text{OIL}$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.477165	0.032504	14.68013	0.0000
C(2)	0.001817	0.000467	3.892313	0.0002
C(3)	0.037870	0.004681	8.090226	0.0000
C(4)	-0.152813	0.020544	-7.438209	0.0000
C(5)	0.090146	0.029951	3.009791	0.0033
R-squared	0.708680	Mean dependent var		0.731510
Adjusted R-squared	0.696910	S.D. dependent var		0.142286
S.E. of regression	0.078334	Akaike info criterion		-2.208794
Sum squared resid	0.607481	Schwarz criterion		-2.081660
Log-likelihood	119.8573	Durbin-Watson stat		1.815682

## **Analysis of the Model in Terms of Variance and Variance Inflation Coefficient**

In order to observe the effects of changing variance, the estimation method was solved with “White” by changing the variance (heteroskedasticity consistent coefficient covariance) with the assumption of constant variance. The estimation chart is given below. When we look at the “t-statistics” pillar, we see that all values get smaller together with variable variance solution. This shows that there is a changing variance (Taylor, 1986).

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White Heteroskedasticity-Consistent Standard Errors & Covariance  
HDI = C(1) + C(2)\*ABSLAT + C(3)\*DI + C(4)\*DUM\_AF + C(5)\*OIL

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.477165	0.038203	12.49040	0.0000
C(2)	0.001817	0.000461	3.942713	0.0002
C(3)	0.037870	0.005579	6.788348	0.0000
C(4)	-0.152813	0.023008	-6.641651	0.0000
C(5)	0.090146	0.036930	2.440976	0.0164
R-squared	0.708680	Mean dependent var		0.731510
Adjusted R-squared	0.696910	S.D. dependent var		0.142286
S.E. of regression	0.078334	Akaike info criterion		-2.208794
Sum squared resid	0.607481	Schwarz criterion		-2.081660
Log-likelihood	119.8573	Durbin-Watson stat		1.815682

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We have to check the variance inflation coefficient since the multiple regression model is used. This parameter is important for indicating the relation between the independent variables and that this value is greater than 10 means the model is flawed, or the independent variables have multiple linear connections.

### Some Failed Trial Examples

A statistically successful model is formed in step 4. At this point, some unsuccessful model trials will be briefly mentioned. For example; It is impossible for C(6) parameter to pass the hypothesis test when the Christian dummy variable is added; the probability value (0.92) is very close to 1.0. This value is 0.63 for Muslim and 0.68 for Buddhist&Hindu.

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Included observations: 104

$$\text{HDI} = \text{C}(1) + \text{C}(2)*\text{ABSLAT} + \text{C}(3)*\text{DI} + \text{C}(4)*\text{DUM\_AF} + \text{C}(5)*\text{OIL} + \text{C}(6)*\text{CHR}$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.476994	0.032723	14.57682	0.0000
C(2)	0.001814	0.000470	3.858025	0.0002
C(3)	0.038064	0.005167	7.366854	0.0000
C(4)	-0.152520	0.020898	-7.298249	0.0000
C(5)	0.090043	0.030123	2.989127	0.0035
C(6)	-0.001611	0.017737	-0.090849	0.9278
R-squared	0.708705	Mean dependent var		0.731510
Adjusted R-squared	0.693843	S.D. dependent var		0.142286
S.E. of regression	0.078729	Akaike info criterion		-2.189647
Sum squared resid	0.607430	Schwarz criterion		-2.037086
Log-likelihood	119.8617	Durbin-Watson stat		1.812839

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Additions to far-reaching models may in some cases mislead the study. Hence, HDI and historical/corporate dummy variables are tried to be predicted in a quite simple model like  $Y_i = \beta_0 + \beta_1 X_{1i}$ . It is noteworthy that the probabilities for British and Spanish colonies are close to 1.0. In this case, it can be thought that different structures of the former British colonies were effective. In order to see this effect, more comprehensive analyzes should be made. At 5% significance level, only the French Colony dummy variable yielded a significant result. This dummy is the same as the Africa dummy to a great extent.

	Coefficient	Probability
British Colony	-0.018	0.59
French Colony	-0.200	0.00
Spanish Colony	0.001534	0.96
Former Soviet Countries	0.065	0.0686

## **Conclusion**

At the end of the study, a statistically significant model, as shown below, is found.

$$\text{HDI} = 0.477 + 0.0018 * \text{ABSLAT} + 0.037 * \text{DI} - 0.15 * \text{DUM\_AF} + 0.09 * \text{OIL}$$

According to this model, the level of human development is defined with two data sets and two dummy variables. Increment of the absolute latitude value, in other words, a country's being located not in the tropical belt but in the middle belt, positively contributes in terms of human development. However, the fact that this parameter is considerably smaller than the others indicates that it is relatively insignificant. The Democracy Index also makes a positive contribution and is 20 times more effective than the latitude. According to our model, whether a country, which we define as a dummy variable, is in Africa or not is the most important factor that determines the level of human development. The coefficient of this dummy variable affects the latitude and democracy index more seriously. But this effect is negative in contrast to the others. The fact that a country is an exporter of oil and gas makes a positive contribution to human development.

According to these results, we can easily say that geography is effective at the level of development of countries. But it is very difficult to say that countries with natural resources cannot benefit from these and bring



harm to themselves instead of benefits. It is even possible to assume that some oil-exporting countries may turn into sub-Saharan African countries if they did not have this resource.

Countries' colonial history and religious structures have no importance in terms of human development, according to the model. These results seem distant from historical truths with some aspects. In order to achieve more accurate results, it may be necessary to extend the scope of this data. As mentioned earlier, the historical background of the British colony, the US and Uganda, is quite different. Expressing this situation with the dummy variables that are better selected can give more accurate results.

Barro (1996), Zhang (1999) and Tang and Young (2005) concluded that there is a positive relationship between democracy and economic development. In this study; In addition, geographical conditions, historical development of countries, religious choice and natural resources were analyzed. To think religion with human development together may seem incompatible with the historical truths. The superiority of Islamic civilization in the past against the Christian world can be an example in this regard. It is foreseen that countries like China and India will continue to increase the economic level they have reached now. If this trend can be maintained, it can be said that there will be great progress in terms of human development

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