

Democracy and Human Development Case Study: OPEC member countries

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Abstract

Democracy is a concept that encompasses people's participation in decision-making in their community to determine whether political, economic, social and cultural structure, freedom of expression, freedom to create coalitions, right to protest and so on. What is more important than others in this area is that in every country, the will of the people must be the foundation of state power that will be stated through periodic and genuine elections with universal suffrage and equal held on free voting procedures.

Wealth and income effects of natural resources on a country's political institutions and democracy have always been sources of the important issues at the intersection of political science and economics. "Polity2" index which refers to the type of regime in countries is considered as a representative of the level of democracy.

But could the sovereignty of the countries affected by fluctuations, shocks and changes of oil prices and graded in the interval between democracy and tyranny of hereditary monarchy, absolute calibration is in the interval between democracy, autocracy and absolute hereditary monarchy, be a reason of the quality of life and social welfare of individuals?

This paper follows using a panel data approach in the period 1996-2010 to assess the impact of democracy on human development index as a yardstick of the level of development in OPEC member countries. Estimation results indicate a positive and significant relationship between democracy and its subsets, including the political competitions, administrative regulations and recruitment through free elections, and the human development level of the mentioned countries.

Key Words: Democracy, Human development, Panel data, OPEC member countries

JEL Classification: H11, H19, O15

I. Introduction

Democracy is defined as "institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by

means of a competitive struggle for the people's vote" (Schumpeter 1942).

Dahl (1971) identifies seven essential criteria for democracy as:

1. Control over governmental decisions about policy constitutionally vested in elected officials
2. Relatively frequent, fair and free elections
3. Universal adult suffrage
4. The right to run for public office
5. Freedom of expression
6. Access to alternative sources of information that are not monopolized by either the government or any other single group
7. Freedom of association (i.e. the right to form and join autonomous associations such as political parties, interest groups, etc).

Development includes various elements such as economic growth, income distribution, human development etc. Human development refers to aggregate welfare of societies, with particular attention to less advantaged citizens that its cross-national and historical measure of human development is relied on the infant mortality rate (IMR), i.e., the number of deaths prior to age one per 1,000 live births (Gerring et al., 2012). In the first human development report (HDR) proposed by Mahbub Ul Haq in 1990, the first human development index was composed of three fundamental dimensions and according to United Nation Development Program it includes: GDP per capita, life expectancy and literacy rate of individuals. Menocal (2007) believes that much of the answer to the question about the linkage between democracy and development will depend on how one defines 'development'. If one follows Sen (1999b) and adopts a definition of development as 'freedom' – a suitably broad definition that incorporates not only economic indicators but also freedoms like human and political rights, social opportunities, transparency guarantees and protective security, then by definition democracy must lead to development.

An extremely high correlation between aspects of social structure, such as income, education, religion, on the one hand, and democracy, on the other, is not to be anticipated even on theoretical grounds, because to the extent that the political sub-system of the society operates autonomously, a particular political form may persist under

conditions normally adverse to the emergence of that form. Or, a political form may develop because of a syndrome of fairly unique historical factors, even though major social characteristics favor another form. Germany is an example of a nation in which the structural changes growing industrialization, urbanization, wealth, and education-all favored the establishment of a democratic system, but in which a series of adverse historical events prevented democracy from securing legitimacy in the eyes of many important segments of society, and thus weakened German democracy's ability to withstand crisis (Lipset,1959). Opponents of a positive nexus between democracy and human development believe that growth is a prerequisite for development that requires economic surplus for more investment and this is emerged only when there is stable, regular and strong political governance. They generally disagree with people's participation in political issues (Sorensen, 1997). Of course, necessity of democratic investments to meet the basic needs of humans for development cannot be ignored, but does development only depend on this?

Most of the East Asian developmental states may have reached their developmental goals under undemocratic conditions, yet in South Africa, a constitutional democracy, the delivery of the developmental state will not only have to take place in the economic and social spheres, but must also deepen democracy. Some scholars remain deeply skeptical that the East Asian developmental-style reforms can be copied elsewhere. Many more are unconvinced that developmental states can be replicated under democratic conditions. Developmental states have mostly been authoritarian, or managed in dominant party democratic systems. The authoritarian ones usually had a 'weak and subordinated civil society', with states pursuing a 'varying balance of repression, legitimacy, and performance which appears to succeed by offering a tradeoff between such repression as may exist and the delivery of regular improvements in material circumstances' (Leftwich, 1996)

Within the human development paradigm, people are considered as active subjects of their own destiny and not passive spoon-fed patients of social welfare institutions. Development rests on 'the ability of people to help themselves and to influence the world. Democratic practice is not only valuable for its own sake, but also for instrumental reasons. Given the open-endedness and the multi-dimensionality of human well-being, the practice of democracy enables to specify the dimensions of human well-being which are worth being promoted. The role of public discussion and interactions in the emergence of shared values and

commitments is essential in specifying a society's underlying values and in choosing the ends of policies (Sen, 1999b).

Autocrats ruling over oil-rich states and controlling oil resources may find it easier to sustain political power when oil prices are high. When oil prices are high, more resources are available to purchase political support by offering transfers to citizens, more resources are also available to carry out repressive actions in order to quell opposition through coercive means (Wacziarg, 2011). Markus et al. (2012) identify the effect of natural resource wealth and income on political institutions as a central issue at the intersection of economics and political sciences. They state that Countries with greater net oil exports over GDP see improvements in democratic institutions following upturns in international oil prices. For example, positive oil price shocks lead to improvements in the Polity democracy score as well as the sub scores for executive constraints, executive recruitment, political competition and a higher probability of a democratic transition. Hence, this study aims to test, evaluate the relationship between democracy and human development index in OPEC member countries. The rest of the paper is organized as follows:

In section two an overview of researches conducted around the world will be discussed; Section three models and variables and methodology used in this study are presented; In section four which is the most important part of the current study the estimation results are offered and finally section five concludes the paper.

II. Review of Research

Vollmer and Ziegler (2009) study the impact of political institutions on non-income dimension of human development evaluating their theory based on the empirical facts in the period 1970-2003 through panel data approach. They eventually confirm a positive relationship between democratic system and human development. Eliasson (2006) acknowledges development, human right and human security as three factors that are counteracted at higher levels and mentions "lack of respect for human rights" as one of the fundamental problems in this regard and "making relationship between people and governments based on honesty, accountability" as the only solution to improve democracy.

Based on much recent work, it is found out that democracy will improve the quality of life for citizens in every country. However, some studies show some contradictions about this. Gerring et al (2012) develop a series of causal pathways through which democracy might improve social welfare, and tests two hypotheses: (a) that a country's level of democracy in a given year affects

its level of human development and (b) that its stock of democracy over the past century affects its level of human development. Using infant mortality rates as a core measure of human development, they conduct a series of time-series—cross-national statistical tests of these two hypotheses and find only slight evidence for the first proposition, but substantial support for the second. Thus, they argue that the best way to think about the relationship between democracy and development is as a time-dependent, historical phenomenon.

Cohen (1993) mentions that Marxists are very sensitive to the importance of democracy on economic conditions. They believe all political and social configurations are determined by the economic foundations. Certainly, these purely economic prospects of Marxists cannot be logical, but what is certain is that a definite and positive relationship exists between democracy and economic issues. Lecturer (2008) states there are many differences between nations with authoritarian system of governance and those that have established human rights and democracy. He exemplifies Nigerians who after spending painful years due to accomplishing a non-democratic army have found democracy and human rights necessary for growth and development.

The study of Heo et al. (2012) shows that the primary focus on new democratic governments in Asia is quite similar to administrative economies. After quantitative reviews they conclude in the early stages of democratization, its impact on economic growth is negative and certainly insignificant that this result contradicts the linkage between democracy and economic growth in Asian countries. Przeworski et al. (2005) also state that there is no more probability of transition to democracy for more economically developed countries, but what happened about the wealthy and oil-rich countries in the Persian Gulf, questioned their findings and views. In this regard, Acemoglu (2005) mentions that democracy does not necessarily guarantee economic growth, even in the short term. In the view of Lipset (2002), economic development has a higher degree in democratic countries and it provides the field of increase in income, security and spread of education.

Some of the popular patterns of compatibility between democracy and economic development indicate that if we consider democracy a prerequisite of efficient market, then it may underlie the development in the form of economic growth and lead to realization of development indexes i.e. improvement of quality of life or level of human development (Leftwich, 1996). Libman (2011) carried out a case study in Russia about democracy, bureaucracy, and

economic growth and found a nonlinear relationship between these variables and also found that concentrated governments have ever outperformed the compound and decentralized governments. Finally, according to views of Leite & Weidmann (1999), inefficient and non-democratic governments use oil revenues to cover up the expertise and competence in society. In political economy this tactic is called “Modernization Effect”.

III. Model

In order to test whether democracy affects the human development index of the oil producing countries, we apply following model:

$$HDR_{it} = \alpha + \mu_i + \lambda_t + \beta_1 LNlif_{it} + \beta_2 POL2_{it} + \beta_3 RCO_{it} + \beta_4 COR_{it} + V_{it} \quad (1)$$

Where α , λ_t , μ_i and V_{it} represent intercept, time, cross-section specification and error term respectively. HDR_{it} is human development index of countries which includes the process of enlarging people's choices. These choices are unlimited and will vary over time but at all levels of development, three necessary and vital cases of them include having a healthy and long life, obtaining education and access to resources for having the decent living conditions (Human Development, Research Paper, 2011). $LNlif_{it}$ represents the Neperian logarithm of people's life expectancy at birth which includes the average number of years that an individual expects to live with regard to the current rate of mortality. $POL2_{it}$ represents the way of governance and administration of countries used as a representative of the level of democracy of countries (Polity IV Project Home Page, 2012). This variable includes the simultaneous quality of democratic and authoritarian power in governmental institutions and that does not merely show pure governance. Many people mistake in distinguishing concepts of polity2 and governance and use them interchangeably, while governance is “a series of individual, institutional, public and private actions for planning and managing of affairs or a continuous process of creating understanding between different and contradictory interests that moves in form of participatory and consistent measures including formal institutions, informal arrangements and social capital of citizens (UN-HABITAT, 2002). Polity2 index which is calculated by subtracting two indexes of democracy and autocracy, includes values between -10 (hereditary monarchy) and +10 (consolidated democracy). COR_{it} is control of corruption index as one of governance indicators is defined as “reduction of public power to obtain private benefits” (Kaufmann et al. 2009). RCO_{it} is a weighted index made up of 3 elements of Regulation of Chief Executive Recruitment

(XRREG), Competitiveness of Executive Recruitment (XRCOMP) and Openness of Executive Recruitment (XROPEN) which generally indicates rules and regulations, competitiveness and right to opine and selection of senior executives and administration officials in countries through elections. It is ranging from 0 to 10 and sometimes -66 , -77 and -88 that are used for cessation periods of government of occupied countries by other countries, war and internal dissension and reduction of influence of central government and establishment of new institutions in time of constitutional convention and referendum, respectively (Polity IV Project, 2011).

Hypothesis

According to the literature reviewed above, following hypothesis is formulated:

A direct nexus exists between democracy and human development in OPEC member countries.

IV. Model Estimation

In this section we offer the results of different tests on the model. It should be noted that estimations in this study are done based on Baltagi (2008). But before every step it is required to ensure a long term equilibrium relationship between variables. To this purpose, Kao co-integration test is utilized. The obtained t-statistic and P_value in Kao test are 1.946 and 0.02 respectively that confirms human development index and other explanatory variables in the model are co-integrated in long term.

4.1. Ordinary Least Squares and One -Way Error Component Model

In ordinary least squares estimate, the specific fixed or random effects of cross sections and times are not considered and estimations are only derived from variables regression, but in one way error element model the effects are considered only in one dimension. In fixed effects model, model estimation is considered with regard to countries or times as fixed and with no special distribution. In other words, in this method of estimation, the specific features of countries are assumed constant. As observed in Table 1, the significance of only the variable (RCO) is shown in form of within (fixed effect) regression.

In random effect estimation, the cross-sectional and time characteristics are distributed over time and unlike fixed effects, are not considered as fixed parameters. The result of this estimation that is based on generalized least squares (GLS) method is presented in the form of three estimators Swami - Arora (Swar), Wallace - Hussein (Walhus) and Vensik - Captain (Amemiya) . As observed all

variables are significant at level 0.95 in these three models.

Table1. Estimation results of OLS and one-way fixed and random effects model

variable	OLS	Fixed (within)	effect Walhus	Amemiya	SWAR
LNlif	0.14 (34.15)	0.10 (1.37)	0.47* (7.70)	0.18* (2.44)	0.46* (9.10)
POL	0.009 (6.15)	0.007 (1.29)	0.03* (7.39)	0.01* (2.33)	0.03* (8.74)
RCO	0.12 (2.35)	0.10* (4.49)	0.11* (4.46)	0.10* (4.72)	0.11* (5.47)
COR	0.002 (9.52)	0.0001 (0.33)	0.001* (3.18)	0.0003* (0.89)	0.001* (3.77)
R ²	0.61	0.94	0.48	0.14	0.46

4.2. Two -Way Error Component Model

In the case of two-way fixed effects, the effect of each country over time and also the time effect for all countries are considered to be fixed. In this model, individual and time characteristics that are μ_i and λ_t respectively will not distribute over time

and behave as fixed parameters. As shown in Table 2, the result confirms the significance of all coefficients of model except β_4 by t- statistic 0.66 at the level 0.95.

Table 2. Estimation results of two-way fixed model

	Lnlif	Pol	RCO	COR
Within	(2.70)	0.009* (2.71)	0.11* (8.26)	0.0001 (0.66)
R ² = 0.98				

4.3. Hausman Test

In “m₁” Hausman test, the statistic χ^2 is obtained 49.97 and rejects the null hypothesis of presence of random effect in the model. In other words, GLS estimators (related to random effects) and within estimators (related to fixed effects) are not compatible and also the explanatory variables

cannot be considered independent from the error terms over time. Also in “m₂” Hausman test, compatibility of GLS and between estimators is rejected too at the confidence level of 0.95. Thus, both tests confirm no random effects in the model.’

Table3. Estimation Result of Hausman Test (m₁ and m₂ statistics)

Variable	Consistent Coefficient (m ₁)		Efficient Coefficient (m ₂)	
	(m ₁)	Coefficient	(m ₂)	Coefficient
Lnlif	0.10	0.46	0.72	0.46
POL	0.007	0.03	0.05	0.03
RCO	0.10	0.11	-0.24	0.11
COR	0.0001	0.001	0.001	0.001
Chi2 (4) statistics	49.97 (0.000)		157.35 (0.000)	

of individual and time effects or in other words having pool model instead of panel. The calculated statistics χ^2 (equals to 108.23) rejects H₀^a i.e. one

4.4. Breusch- Pagan (BP) Test, F (chow) Test and Likelihood- Ratio LR Test

In Breusch- Pagan test three hypotheses are used: H₀^a: lack of cross effects in the model, H₀^b: lack of time effects in the model and H₀^c: lack

way model with individual effects is confirmed. Also, the χ^2 value of 22.25 accepts H₀^b and existence of time effects in model. F_{Chow} and LR test (LR: based on maximum likelihood estimation) were also utilized to assure the correctness of the achieved results. All tests confirm a two way model

with fixed effects in which Polity2 positively affects human development index. In addition, Lnlf and RCO have positive and significant

effects on the dependent variable, but COR is not significant. R² of the model equals to 0.98.

¹ - Zero hypothesis in Hausman test is as follows (See Baltagi, 2008)

$$H_0: E(U_{it} | X_{it}) = 0$$

$$m_i = \hat{q}' [\text{var}(\hat{q}_i)]^{-1} \hat{q}_i \sim \chi^2_q$$

Table 4. Estimation Result of BP, F and LR Tests

	$H_0^a: \sigma_\mu^2=0$	$H_0^b: \sigma_\lambda^2=0$	$H_0^c: \sigma_\lambda^2=0$	$\sigma_\mu^2=$	$H_0^d: \sigma_\mu^2=0$ $\sigma_\lambda^2>0$	$H_0^e: \sigma_\lambda^2=0$ $\sigma_\mu^2>0$
BP	108.23 (3.84)	22.25 (3.84)	130.48 (5.99)	-	-	-
F	19.22 (1.86)	3.73 (1.86)	39.08 (2.06)	55.45 (2.43)	21.75 (2.43)	
LR	26.01 (2.70)	285.24 (2.70)	518.46 (4.60)	-	-	

Table 5. Serial Correlation Tests of Residuals results

variable	coefficient	Z-statistics	Std. Err.	P> Z
Lnlf	0.54	9.12	0.05	0.000
Pol	0.03	8.80	0.004	0.001
RCO	0.10	3.69	0.02	0.006
COR	0.001	3.55	0.000	0.005

modified Bhargava et al
Durbin – Watson = 1.46
Baltagi – Wu LBI = 1.98

V. Conclusion

This study examines the impact of democracy of OPEC member countries on human development index in 15-year period (1996-2010). The type of model is two way with fixed effects. Positive and significant effect of the main explanatory variable (Polity2) on human development index is confirmed, so the hypothesis of the study cannot be rejected. To ensure more with the results, serial correlation test of disturbing elements was used that with Baltagi-Wu statistic 1.98 confirms a very weak serial correlation among cross sections. Democracy, development and respect the human rights and fundamental freedoms are highly interdependent and mutually reinforce each other. In general, democracy is based on people free will in expression and choice of political, economic, social and cultural system and full participation in all aspects of life. Polity2 variable that in this study is as a representative of government regime (from absolute monarchy to democracy) in oil-rich countries determines the level of human development in the community. In

other words, the values of freedom, respect the human rights and holding safe periodic elections with universal suffrage are inevitable results of democracy in these countries. By democracy, a natural environment for protection and realization of human rights which is an integral part of human development in communities will be provided. As Friedman (2006) and Wacziarg (2011) prove, there exists an inverse relationship between crude oil prices, level of democracy and political freedoms in oil-rich countries. So based on mentioned studies and results of the current paper, it is evident that by increasing the oil price levels, the degree of democracy in oil-rich countries will decrease and this will negatively impacts people' quality of life and social welfare.

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