

Democracy and Human Development in Former Socialist countries

Giorgio Liotti*

Marco Musella*

Federica D'Isanto[^]

Abstract

Over the decades, many scholars have tried to study the relationship between democracy and human development, even though the results are not unique. According to this context, and considering the political changes occurred in the early '90s in the former socialist countries, the aim of this paper is to evaluate – empirically - whether and to what extent, the level of democracy affected the level of HD in these countries. Using data on Polity II and HDI, we find evidence of a positive relationship between democracy and HD. The results are robust also when we checked for a set of control variables as growth rate, unemployment, the degree of openness trade and log population. Moreover, descriptive statistics shows that the impact of democracy on HD was higher effects on HD in the first fifteen years of democracy, after that, as these countries became consolidated democracies, this effect was less evident.

Keywords: Democracy, Human Development, Eastern European Countries, Panel Data

JEL classification: D74, O15, O52, C2

* Dr. Giorgio Liotti, University of Naples Federico II, Department of Political Sciences, Via Rodinò 22, 80138, Naples (Italy). Mail address: giorgio.liotti@unina.it

* Prof. Marco Musella, University of Naples Federico II, Department of Political Sciences, Via Rodinò 22, 80138, Naples (Italy). Mail address: marmusel@unina.it

[^] Dr. Federica D'Isanto, University of Naples Federico II, Department of Political Sciences, Via Rodinò 22, 80138, Naples (Italy). Mail address: federica.disanto@unina.it

1. Introduction

The political changes that occurred in former socialist countries at the end of the 1980s were unexpected (Bandelj and Radu 2006) and, at least initially, the transition period was very costly and not easy. The need to create a new democratic political system and the transition towards a market economy required both policymakers and the population to deal with new political and economic challenges (Ekiert, Kubik, and Vachudova 2007). In the first phase of transition, the economy of these countries was characterized by a low growth rate, high inflation, and a strong increase in unemployment (Brada 2001). Despite the initial difficulties, however, the implementation of economic and political reforms generated – mainly in the second half of the 1990s – improvements in living conditions.

According to some scholars (Lipset 1959; Huntington 1968), having a democratic political system is a preliminary condition for increasing the level of citizens' wellbeing as, in general, the quality of life is higher in democratic countries than autocratic ones. Improvements in the people's wellbeing (understood as improvements in public health, education, income, and so on) correspond to a country's higher level of human development (HD).

The idea of a positive relationship between the level of democracy and HD is not new and, over time, it has been investigated both theoretically and empirically (Boone 1996; Sen 1991, 1999a, 1999b; Ming-Chang Tsai 2006; Gerring, Thacker, and Alfaro, 2012; Gerring et al. 2016). Following Sen's theory, democracy can be considered the final step of a political process which allows the participation of the different social classes in the government of society and, at the same time, promotes an increase in the people's wellbeing (Sen, 1999a, 1999b). Moreover, democracy, protecting the interests of poorest, enables people to increase their capability space (Muller 1988; Dreze and Sen, 1989; Przeworski, Alvarez, Cheibub, and

Limongi 2000; Brown and Mobarak 2009; Boix 2011) and improve the population's living conditions.

One of the mechanisms through which democracy could positively affect HD is the fact that democratic governments, mainly in the electoral period (Castro and Martin 2017), unlike dictatorial regimes, must be accountable and get public support to hold political power. For this reason, policymakers are incentivized to adopt policies that guarantee both a more equal distribution of resources and a wider range of public services to improve people's quality of life. National governments can achieve these results by increasing the quantity of public services and goods offered and, therefore, public spending is larger and more generous in democratic countries than dictatorships.

The focus of this paper is to contribute to the debate on the effects of democracy on human development. According to the general context, a study of the increase of HD in former socialist countries since 1989 represents a useful way to analyse the impact of democracy on HD. Indeed, through the analysis of the transition period, we can individuate whether these two variables are correlated. Focus on this group of countries is very useful as there are differences in the level of democracy among former socialist countries and not all of these countries were able to complete the transition towards a consolidated democracy. In some countries, the transition failed (leading to new forms of authoritarian regimes) or was incomplete (leading to a partial democracy). This phenomenon occurred (with the exception of the Baltic states) mainly in the former Soviet republics that were less economically developed and had widespread corruption (Ekiert et al. 2007).

Although it is not the aim of the paper to examine why some countries were able to complete the transition towards a democratic political system while others failed to achieve this objective, the literature indicates a set of factors that have affected the success of transition. These include: a) the opportunity for some countries to join the European Union,

which was a stimulus for some countries to implement political reforms in a democratic sense; b) historical geographical factors (i.e. sharing borders with democratic countries is useful establishing a democratic political system); c) the electoral political system; d) the lack of ethnic conflict or war; and e) the attention of policymakers towards implementing social policies and more equity.

At the first stage of analysis of the relationship between democracy and HD, studies have focused on the positive impact of democracy on development in an economic sense (Alesina and Perotti 1996; Przeworski 2000). This view has been rejected, as the evaluation of people's quality of life using only economic indexes is limited and unsatisfactory. In this context, despite strong criticism, the introduction in 1991 of the Human Development Index (HDI) – which captures three dimensions of human development – has been useful. Indeed, through this index, it has been possible to give at least an approximate evaluation to the state of human development of each country.

Regarding the concept of democracy, scholars are used to thinking that it can be considered a dichotomous variable; in other words, it is possible to classify each country as democratic or autocratic. Distinguishing and classifying countries into these two categories seems to be clear and easy. Indeed, this approach – adopted mainly in empirical work – enables researchers to analyse the effect of political regimes on a set of economic and social variables (e.g. growth, inequality, life expectancy).

Unfortunately, this attitude is too simplistic as the concept of democracy is not static but evolves over time. In our opinion, it is more realistic to talk about the existence of different levels of democracy. Countries do not enjoy of the same level of democracy, and it is not sufficient to define as free a country that allows competition among political parties. Other important characteristics that affect and strengthen democracy are: a) the level of

political rights, b) civil liberties, and c) the years of democratic reforms on which depends the effective functioning of the political system.

For this reason, the distinction between old and new democracy always has represented an important issue regarding the relationship between democracy and HD. According to these assumptions, the aim of this study was to analyse whether, and to what extent, the level of democracy affects HD in former socialist countries (new democracies). The results show that the level of democracy positively affects the level of HD mainly in the first fifteen years; after that, the relationship is less evident and it seems that socialist countries have experienced a threshold effect of democracy on HD after this period.

An important issue in the analysis of the relationship between democracy and HD, regards the causality problem (Shandra, Nobles, London, and Williamson 2004; Ross 2006): Does an increase in democracy positively affect HD or does an increase in HD lead to a higher level of democracy? There are two opposing views: on one hand, Spaiser, Ranganathan, Mann and Sumpter (2015) argue that over the past decades many countries have experienced rapid changes in their economies, their democratic institutions and the values of their citizens. They show that the level of Human Development Index (HDI) in a country drives first democracy and then higher emancipation of citizens. However, this change occurs once the countries pass a certain threshold in HDI. On the other hand, other authors claim that it is the democracy that affects human development (Dahl 1998). Indeed, according to Welzel and Inglehart (2005), and Olson (2003), a democratic political system, guarantying individual rights and civil and political freedoms, makes the conditions for fostering human development through the increase of people's capability space. Moreover, other scholars see civil society as key to democratization of the political system. In this view, pressure from civil society forces democratization of the state. However, this disregards the

fact that changes in civil society's behaviour require changes in political society: changes are reciprocal (Choup 2003). Finally, the debate about the causality effect is still open.

However, in the case of former socialist countries, our hypothesis is that democracy drives human development. Indeed, considering at the end of Socialism, the level of HDI in almost all socialist countries was low, but with the start of transition period, human development increased quickly. We believe that the implementation reforms created those favourable conditions for economic and social growth indispensable for increasing the human development. The empirical results show that democracy positively affected the human development in former socialist countries. In any case, we highlight some limits of the econometric analysis: the limited number of observations does not allow implementing a more sophisticated econometric analysis and verifying the long-run effect of democracy on human development (Annaka and Higashijima 2017). However, despite the limitations, the paper contributes to the debate on democracy and human development studying the relation between these two variables in a country groups that represent the most important example of transition to dictatorships to democracy.

In the second section of this paper, we present a short review of the literature on the relationship between democracy and HD. In the third section, we analyse the data and empirical strategy, while in the fourth section, we show the econometric results. Finally, in the fifth section, we offer our main conclusions.

2. A short review of literature about the effect of democracy on HD

Many studies have tried to investigate the relationship between democracy and development using several points of view. Several authors, including Knack and Keefer (1995) and Acemoglu and Robinson (2001), have highlighted how political regime-type can affect economic development. Based on the idea of development in an economic sense, these

authors claimed that economic growth is a necessary condition to improve the population's wellbeing (and therefore the level of HD). Higher economic growth produces positive effects for the entire population, as the wealth produced is distributed in such a way that the most disadvantaged social groups can improve their social and economic conditions. Although this view may appear correct, there is no consensus among scholars. Indeed, although growth in per capita income is faster in a democracy (Przeworski 2004), it seems that political regime does not affect economic growth (Przeworski 2004; Rodrik and Wacziarg 2005; Persson and Tabellini 2006).

Another stream of research studied the effect of democracy on inequality but the effects here also were ambiguous. On one hand, authors such as Metzeld and Richard (1981) highlight that the impact of democracy on the redistribution of resources is positive as democracy improves HD by reducing inequality via an increase of real wages and by a more equal distribution of wealth (Rubinson and Quinlan 1977; Stack 1978; Muller 1988; Rodrik 1999). These results are based on the median voter theory that supports the need to redistribute wealth when the median income is less than the mean income.

On the other hand, this view has been rejected because some mechanism could hinder redistributive policies. Indeed, as shown by Acemoglu and Robinson (2006) and Acemoglu, Naidu, Restrepo, and Robinson. (2013), the elite can control the political process in such way that the redistribution of de jure is not followed by a redistribution de facto and also because the empirical results are not robust. When this situation occurs, democracy fails to determine a more equal distribution of wealth.

Moreover, other authors (Sirowy and Inkeles 1990; Gradstein and Milanovic 2004; Scheve and Stasavage 2009, 2010) have not found evidence that democracy reduces inequality. In any case, one major criticism to the exclusive use of economic indices is that they cannot provide complete information about the situation of less advantaged people if, in

the analysis of relationship between democracy and HD, non-monetary aspects of human life (e.g. education, health) are excluded (Sen 1999a,1999b; UNPD 2003; Philipsen 2015).

According to this critique, several authors (Brown and Mobarak 1999; Boix 2001; Franco, Alvarez-Dardet, and Ruiz 2004; Besley and Kudamatsu 2006; Hanson 2015; Altmann and Castiglioni 2009) have highlighted the importance of considering how a democratic regime can increase the wellbeing of the population by acting mainly on the non-monetary aspects of HD.

One of the most important problems in the analysis of the relationship between democracy and HD arises regarding the choice of democracy index (given that many indices that evaluate the country level of democracy) and what specific aspect of HD is to be analysed (because definitions of HD include many aspects of human life).

To evaluate the impact of democracy on HD, one of the indices used most by scholars as a proxy of human development is the infant mortality rate. Gerring et al. (2012, 2016) showed that reducing the infant mortality rate depends both on the stock of democracy accumulated by countries in past years and on the level of electoral competition, incentivising policymakers to increase the public goods supplied to the population. For this reason, countries with a long democratic tradition generally show a higher level of HD. Ming-Chang Tsai (2006) – analysing the effect of democracy on six HD indices – also found that democratic countries favouring political competition show a higher level of HD than autocratic ones, even though the relationship is less robust when using the rate of change in HD as a dependent variable. The problem with use of the infant mortality rate as a proxy of HD is that this index enables us to capture only one dimension of human development, neglecting other dimensions that contribute to the people's wellbeing.

Other authors raise doubts about both the validity of a relationship between democracy and HD (Gauri and Khaleghian 2002; McGuire 2004; Ross 2006) and the

mechanism through which a higher level of democracy corresponds to a higher level of HD. In particular, Ross (2006) highlighted that public policy (as determined by the increase of government health spending) does not affect people belonging to lower-income groups.

Furthermore, other authors have claimed that a robust correlation between democracy and HD does not exist or that people can spend more attention on economic performance than improvements in human development in a Senian sense (Gerring, Thacker, and Alfaro 2012; Gerring et al. 2016).

Therefore, despite theoretical and empirical analyses in the literature on the relationship between democracy and HD, the issue remains open. Starting from this context, and because of the particularity of historical economic and political situations, the evolution of political systems in former socialist countries since the 1990s represents a good opportunity to study whether, and to the extent, the transition towards a democratic political system has contributed to improving people's quality life. It is worth noting that unlike previous works studying a set of heterogeneous countries, we focused on countries that, at the end of a communist regime, started with general economic and social conditions that were more or less similar. The main hypothesis was that the different levels of democracy achieved by the countries affected the HD during the transition period.

3. Data

In the analysis of the evolution of HD over time, a fundamental problem arises: How can we measure it? What kind of index should be used? Unlike previous studies that usually focused on only one aspect of HD, to evaluate the trend of HD in 18 former socialist

countries¹ from 1990 to 2014², we used HDI data drawn by the Human Development Program³. This index considers three different dimensions (economic, health, and education) of human development. In the past, the use of this index has been strongly criticized (Kovacevic 2011). Authors such as Lind (1992), Dasgupta and Weale (1992), and Srinivasan (1994) have said the HDI would be unable to reflect the human development idea as accurately as its founder thought. Indeed, this index tends to oversimplify the concept of HD as it considers only few variables often drawn from data of low quality (Murray 1993; Srinivasan 1994). Moreover, additional critics have argued that there would be a strong correlation among variables used to calculate the HDI (McGillivray 1991) and, hence, many doubts have arisen regarding the utility of this index to capture people's wellbeing.

The HDI, however, represents a fruitful index and enabled us to step forward with respect to studies that focus on human development based solely on an economic approach (Sagar and Najam 1998; Al-Hilani 2012). Moreover, Noorbakhsh (1998) explained that there is not a high correlation among the variables that compose the HDI, and Booyesen (2002) concluded that, despite criticism levelled at the HDI, the index still can be considered a useful instrument in trying to explain countries' development.

Therefore, despite the criticisms, we believe the HDI can be a useful instrument for understanding how the multidimensional aspects of human life have evolved over time in former socialist countries. Because changes in HD from year to year are very small, we decided to take into account HDI data only every five years. This gap enabled us to capture the changes in HD in the medium term due to the implementation of public policies that usually take time to produce their effects.

¹ Countries included in the analysis are: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovakia and Slovenia.

² There are missing data regarding 1990 for some countries.

³ <http://hdr.undp.org/en/indicators/137506#>

For data on the level of democracy we chose one of the most used indices, the Polity II. This index ranges from -10 (autocracy) to 10 (full democracy), and enables us to capture the difference in the level of democracy among countries. Just as with the HDI, the level of democracy changes slowly over time and we therefore decided to calculate for each country the mean Polity II value for each five-year period.

Because we had six observations⁴ for HD for each country (for some countries there were some missing data), the first observation available regarding the level of democracy was its mean value for the period between 1985 and 1989. This means that, in each of the six periods, the mean Polity II value was calculated following equation 1:

$$LD_{i,T} = \sum X_T / 5 \quad (1)$$

where $LD_{i,T}$ is the mean level of democracy in the country i and $t = 1, 2, \dots, 6$ represents the six periods. To avoid reverse causality problem, the mean Polity II value associated with HD presents a lag. For example, the mean LD in 1989 that we associated to the HDI value in 1990 is given by the sum of variables X in the period from 1985 to 1989 divided by 5 (i.e. divided by the years of observations).

Figures 1 and 2 show the evolution of human development and democracy in former socialist countries during the periods considered.

[Figure 1 HDI in Former Socialist countries from 1990 to 2014]

[Figure 2 Level of Democracy in Former Socialist countries from 1990 to 2014]

Looking at these two figures, it is possible to note two things. First, in the period 1990–2014, there was a strong increase in the level of HD in many countries; in particular, the increase in HD was evident in countries such as Croatia (+0.148), Estonia (0.164), Hungary (0.125), and Poland (+0.130), while in countries such as Moldova, Romania, and the Russian Federation, the rate of change was very slow.

⁴ The time span is divided in six periods with a lag of five years for each. This means that we have the observations for 1990, 1995, 2000, 2005, 2010, and 2014.

Second, although some countries (e.g. Albania, Estonia, Latvia, Lithuania, the Russian Federation, and Moldova) showed a reduction in the quality of life during the first phase of the transition (due to social and economic difficulties caused by the end of socialism), the increase in the level of HD was concentrated mainly in the period of 1990–2005; after that, the slope flattened out. This could lead one to think that there is a threshold effect, i.e. in the first phase of transition to democracy, the effect of democracy on HD is stronger than when the country becomes consolidated democracy and other economic and social variables are likely to have a higher impact on HD.

The link between democracy and HD also can be analysed by putting in relation the mean values of the two variables for the considered period. Figure 3 describes the relation between the mean HDI and the mean level of democracy for 1990–2014. In general, we note that countries having a consolidated democratic political system enjoyed a higher level of HD. If we exclude some outlier countries such as Belrus and Moldova, we can see that countries that showed higher level of democracy are associated with a higher level in HD. In particular, the Czech Republic, Estonia, Slovenia, Slovakia, and Lithuania are countries in which this relationship seemed to be robust.

[Figure 3 Relationship between HDI and level of Democracy]

This result suggests a relationship between the level of democracy and HD that is worth being investigated empirically, taking into account a set of control variables that have contributed to the increase of HD.

4. Econometric Analysis

We used a panel approach to estimate the impact of democracy on HD in former socialist countries. The main hypothesis is that the level of HD in time t is correlated both

with the past values of HD and the present and past values of the level of democracy. The use of the lagged dependent variable is useful because it is probable that a good part of the HD value at time t depends on its value in the previous period. Moreover, this hypothesis enabled us to avoid endogeneity as this kind of problem can arise in the estimation of the model. On the other hand, the use of the lag regarding the level of democracy depends not only on the actual level of democracy but also on its historical values (or stock). According to this, the basic model is an ARDL (1, 1):

$$HDI_{i,t} = \alpha_i + \beta_1 HDI_{i,t-1} + \beta_2 LD_{i,t} + \beta_3 LD_{i,t-1} + \sum_{p=0}^1 \rho_{ij} X_{i,t-p} + \varepsilon \quad (2)$$

where i represents the country and t the time, X is the set of control variables, ρ_{ij} are the scalars, β_i are the coefficients, α_i is country fixed effect, and ε is the error term. Time effects can be added to the model. The use of fixed effects enabled us to capture all unobserved time-invariant country heterogeneity, while time effects were useful to capture aggregate shocks that affected countries at different times.

Because countries exhibit cross-sectional dependence among entities due to common unobserved factors (De Hoyos and Sarafidis 2006), and given that the number of entities is greater than the panel time dimensions, the standard errors of regression were corrected following the method proposed by Discroll and Kraay (1998). The first step of the empirical analysis, however, investigated the properties of our panel data. In doing so, we applied first-generation tests of panel unit using the following tests: Dickey–Fuller (ADF 1979), Maddala Wu, Pearson (PP 1999), Breitung (2000), Hadri, (HAD, 2000), Levin, Lin and Chu, (LLC 2002), and Im, Pesaran, and Shin (IPS 2004). The PP test was adopted as it is the most heterogeneous unit root test, while the LLC test was employed given its high power in small samples. Test results are reported in Table 1.

In the model, we used the following four control variables: growth rate, unemployment, openness to trade, and log of total population. It was expected that growth

rate and unemployment affect HD in opposite ways; on one hand, growth is assumed to increase the population's wellbeing (McGillivray 1991; Srinivasan 1994; Ravallion 1997) through the increase of income per capita, while unemployment hinders people in broadening the space of their capabilities both in a material and non-material sense.

Openness to international trade is a phenomenon that has characterized the economic sectors of many former socialist countries for all of the 1990s, and it is assumed to have a positive effect on long-run growth (Musila and Yiheyis 2015; Pilinkiene 2016). If this is true, the degree of international trade should improve indirectly the economic condition of the population and it therefore cannot be excluded from the model as a control variable. The last control variable we chose was the log of population because the greater the size of the population, the harder it is for the government to provide all facilities necessary to improve the welfare of the population (Ross 2006).

To implement panel data estimation techniques, we needed to investigate whether or not the variables were non-stationary at a level and stationary at first differences and cointegration. The cointegration process is fundamental to estimating the long-run relationship among variables used in the model. From these tests, it can be concluded that there is clear evidence that democracy and HD levels are non-stationary. The majority of first-generation tests show evidence of non-stationarity at first differences both for democracy and for HD. Moreover, Pedroni (2004) and Kao's (1999) cointegration tests show that the two variables are cointegrated. Tables 1 and 2 show the results.

[Table 1 Panel Unit root test]

The non-stationarity of HD was confirmed by the HAD, Breitung, IPS, and ADF tests. Democracy was non-stationary according to the HAD, LLC, Breitung, PP, and ADF tests. The stationarity at first differences for HD and democracy was confirmed, respectively, by the Hadri, Breitung, IPS, ADF, and PP tests and the LLC, PP, IPS, and ADF tests.

[Table 2 Cointegration test]

Kao and most of Pedroni's tests reject the null hypothesis of no cointegration among democracy and HD. Therefore, we estimated equation (2) for the period 1990–2014. Because some countries show missing data, the number of observations varied between 78 and 42, depending on the time span used in the analyses. Econometric analysis provided some useful results; Table 3 shows the results for the whole sample.

We started with a simple panel regression between HD and the level of democracy and then added further control variables. As shown in column 1, both the coefficients of HDI_{t-1} and the present and past values of democracy positively affect the level of HD. Because the level of HD changes slowly, the positive impact of its lagged value was expected. Regarding the level of democracy, the implementation of political reforms allows the participation of citizens in the democratic life of a country and therefore political choice through free elections. This creates a link between policymakers and the people's needs (through the provision of public goods and services) and leads to improvements in the level of HD. The level of r -squared is high, about 0.84, and this means that the model explains a good part of relationship.

Time effects are included in the model as shown in column 2. The results show that the level of HD depends both on HD at $t-1$ and by the level of democracy at time t . When we include time effects, the effect of democracy at time $t-1$ vanishes. Column 3 presents the results for the period 1990–2005. Although the number of observations is low, it is possible to note that the effect of the level of democracy on HD in this period increases; this might suggest that the first years of democracy have a fundamental role in the development of human capability. To check the validity of previous results, we added a set of control variables at the basic model through recursive estimation. Column 4 shows that a higher degree of openness of trade improves the level of HD. This effect probably depends on the

fact that the international trade positively affects economic growth. In columns 5–7, we include growth rate, unemployment, and log of population in the basic model.

[Table 3 The impact of democracy on HDI in former socialist countries].

The results confirm the positive relationship between level of democracy and HD, and among the control variables added, only growth rate affected the level of HD. The unemployment rate and the log of population did not show a significant effect on HD. In conclusion, the econometric analysis shows that the transition from autocratic regime to a democratic political system – in which policymakers' choices are subject to the judgment of voters – leads to improvements in population's wellbeing. It seems, however, that a threshold effect exists; that is, up to a certain point the increase in the level of democracy increases the level of HD, after which, it is likely that the incidence of institutional factors are less important in determining the population's wellbeing in favour of other social and economic factors that we did not examine.

5. Concluding remarks

Over time, scholars have tried to study the impact of democracy on human development. Although it seems logical to suppose – from a theoretical point of view – that a positive relationship between democracy and HD exists, empirical analysis has yielded discordant results. In this study, we tried to investigate whether, and what to extent, democracy contributed to an increase in human development in the former socialist countries. This group of countries, which during the 1990s adopted political reforms to establish a democratic political system, offer a useful example for this field of study. The theoretical mechanism through which democracy should lead to improvements in the wellbeing of the population consists of a democratic political system that makes policymakers responsible for their political choices towards citizens, who can punish them in the electoral period by not re-electing them. Obviously, the way by which the government can improve the welfare of the

population is by increasing the supply of public goods and making a certain range of social services accessible to the poor.

On one hand, descriptive analysis showed that in all former socialist countries the level of human development grew during the period from 1990 to 2014. In particular, the relationship seemed to be strongest in the first phase of transition after which, once the democratic system reached a certain level, the effect was less evident. It is likely that, when a country becomes a consolidated democracy, other economic and social factors affect the level of HD.

On the other hand, econometric analysis – using a panel data approach – showed a positive relationship between democracy and HD. The empirical results showed that the level of HD depends both on its past value and from current and past levels of democracy. The results were confirmed when we added to the basic model the control variables of growth rate, unemployment, openness to trade, and log of population.

Finally, from this study it is possible to draw two important conclusions. The first is that the level of democracy contributes to an increase in the level of HD in former socialist countries. This result confirms Sens' theory that having a consolidated democratic political system is vital to expanding the people's space of capability. The second is that it seems there is a threshold effect of democracy on HD, i.e. at the first phase of transition, democracy strongly affects HD but that when country becomes a consolidated democracy, this relationship tends to be less robust.

In terms of policy implications, adopting a democratization system seems a reasonable strategy in order to increase the HD in the less mature economies; in fact when the level human development is lower, the democracy has a strong impact on it. However, the democracy is a dynamic phenomenon that changes according the values and the development of each country and once that the democracy has achieved the threshold effect -this happens

mostly in the more mature economies- it does not have any effect on HD; the policies in this second case should focus mostly on the cultural values of the society in order to increase del HD level or at least to maintain the ethical awareness among the citizen.

References

- Acemoglu, Daron, and James A. Robinson. 2001. "A Theory of Political Transitions." *American Economic Review* 91:938-963.
- Acemoglu, Daron, and James A. Robinson. 2006. "Economic Origins of Dictatorship and Democracy." *Cambridge, UK: Cambridge University Press*.
- Acemoglu, Daron, Suresh Naidu, Pascual Restrepo, and James A. Robinson. 2013. "Democracy, Redistribution and Inequality." *Handbook of Income Distribution* edited by Anthony Atkinson and Francois Bourguignon
- Alesina, Alberto, and Roberto Perotti. 1996. "Income distribution, political instability, and investment." *European Economic Review* 40(6):1203-1228.
doi:10.1016/0014-2921(95)00030-5
- Altman, David, and Rossana Castiglioni. 2009. "Democratic Quality and Human Development in Latin America: 1972-2001." *Canadian Journal of Political Science* 42:297-319.
- Al-Hilani, Hasan. 2012. "HDI as a Measure of Human Development: A Better Index than the Income Approach?" *Journal of Business and Management* 2(5):24-28
- Altman, David and Rossana Castiglioni. 2009. "Democratic Quality and Human Development in Latin America: 1972-2001." *Canadian Journal of Political Science* 42(2):297-319.
- Bandelj, Nina, and Bogdan Radu. 2006. "Consolidation of Democracy in Postcommunist Europe." Center for the Study of Democracy, Paper 06-04.
- Barro, Robert J. 1996. "Democracy and Growth." *Journal of Economic Growth* 1:1-27.
- Besley, Timothy, and Masayuki Kudamatsu. 2006. "Health and Democracy." *AEA Papers and Proceedings* 96(2):313-315.
- Boix, Carles. 2001. "Democracy, Development and the Public Sector." *American Journal of Political Science* 45 (January):1-17.
- Booyens, Frederik. 2002. "An Overview and Evaluation of Composite Indices of Development." *Social Indicators Research* 59(2):115-151.
- Boone, Peter. 1996. "Politics and the Effectiveness of Foreign Aid." *European Economic Review* 40(2):289-329.
- Brada, Josef. 2001. "Economic transition in Eastern Europe: how much political support does it have?" In *Liberalization and its Consequences. A Comparative Perspective on Latin America and Eastern Europe* Edited by Werner Baer and Joseph L. Love
- Breitung, Jörg. 2000. "The local power of some unit root tests for panel data in Nonstationary Panels, Panel Cointegration, and Dynamic Panels". In B. H. Baltagi, *Amsterdam, Elsevier*.
- Brown, David S., and Ahmed M. Mobarak. 2009. "The Transforming Power of Democracy: Regime Type and the Distribution of Electricity." *American Political Science Review* 103 (May): 193-214.
- Choup, Anne Marie. 2003. "Limits to democratic development in civil society and the state: The case of Santo Domingo." *Development and Change* 34(1):25-44.
- Dahl, Robert A. 1998. "On Democracy." *New Haven: Yale University Press*
- Dasgupta, Partha, and Martin Weale. 1992. "On Measuring the Quality of Life." *World Development* 20(1):119-131.
- De Hoyos, Rafael, and Vasilis Sarafidis. 2006. "Testing for Cross-Sectional Dependence in Panel-Data Models." *Stata Journal* 6(4):482-496
- Dickey, David A, and Wayne A. Fuller. 1979. "Distribution of the Estimators for Autoregressive Time Series with a Unit Root." *Journal of the American Statistical Association* 74 (366): 427-431

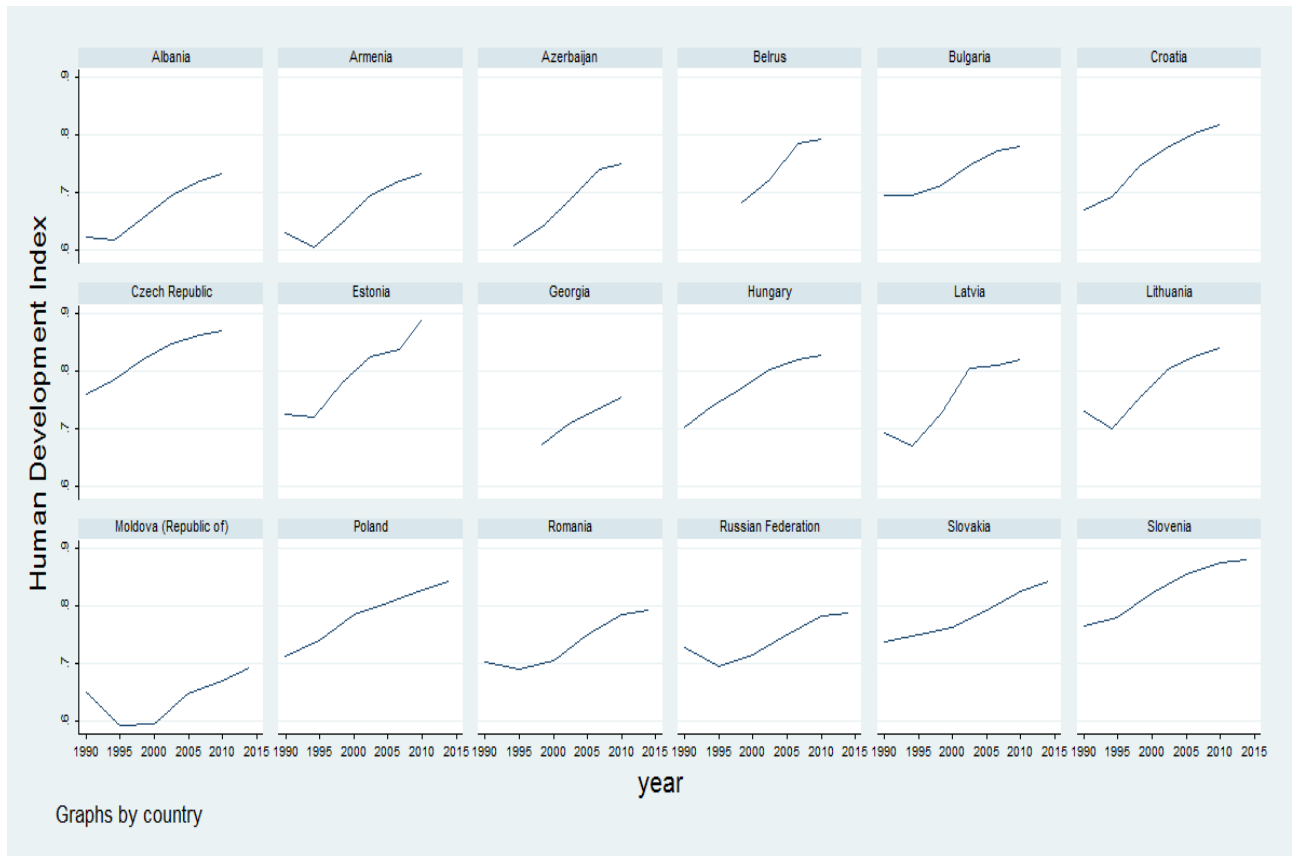
- Driscoll, John, and Aart Kraay. 1998. "Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data." *Review of Economics and Statistics* 80: 549–560.
- Dreze, Jean, and Amartya Sen. 1989. *Hunger and Public Action*. Oxford: Clarendon Press.
- Franco, Alvaro C., Carlos Álvarez-Dardet, and Maria Teresa Ruiz. 2004. "Effect of democracy on health: ecological study." *BMJ (British Medical Journal)* 329(7480): 1421–1423
- Ekiert, Grzegorz, Jan Kubik, and Milada Anna Vachudova. 2007. "Democracy in the Post-Communist World: An Unending Quest?" *East European Politics and Societies* 21(7):7-30
- Gauri, Varun, and Peyvand Khaleghian. 2002. "Immunization in Developing Countries: Its Political and Organizational Determinants." *World Development* 30 (December): 2109–32.
- Gerring, John, Strom C. Thacker, and Rodrigo Alfaro. 2012. "Democracy and Human Development." *The Journal of Politics* 74(1):1–17
- Gerring John, Carl Henrik Knutsen, Svend-Erik Skaaning, Jan Teorell, Matthew Maguire, Michael Coppedge, and Stafan I. Lindberg. 2016. "Electoral Democracy and Human Development." Working Paper SERIES 2015:9 NEW VERSION THE VARIETIES OF DEMOCRACY INSTITUTE.
- Gradstein, Mark, and Branko Milanovic. 2004. "Does Libert´e=´egalit´e? A Survey of the Empirical Evidence on the Links between Political Democracy and Income Inequality." *Journal of Economic Surveys* 18(4):515-537
- Kao, Chihwa 1999. "Spurious regression and residual based tests for cointegration in panel data." *Journal of Econometrics* 90(1): 1–44.
- Knack, Stephen, and Philip Keefer. 1995. "Institutions and Economic Performance: Cross Country Tests Using Alternative Institutional Measures." *Economics and Politics* 7(3):207-227.
- Kovacevic, Milorad. 2011. "Review of HDI Critiques and Potential Improvements." In Human Development Reports Research Paper 2010/33, United Nations Development Programme.
- Hadri, Kaddour. 2000. "Testing for stationarity in heterogeneous panel data." *Econometrics Journal* 3:148–61.
- Hanson, Jonathan K. 2015. "Democracy and State Capacity: Complements or Substitutes?" *Studies in Comparative International Development* 50(3):304–330
- Hausman, Jerry. 1978. "Specification Tests in Econometrics." *Econometrica* 46 (6):1251-1271.
- Huntington, Samuel P. 1968. "Political Order in Changing Societies." *New Haven and London, Yale University Press*
- Im Kyung So, Hashem M. Pesaran, and Shin Yongcheol. 2003. "Testing for unit roots in heterogeneous panels." *Journal of Econometrics* 115:53–74.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Cristian Pop-Eleches, and Andrei Shleifer. 2004. "Judicial Checks and Balances." *Journal of Political Economy* 112:445-470.
- Levin, Andrew, Chien-Fu Lin, and Chia-Shang James Chu. 2002. "Unit root tests in panel data: Asymptotic and finite sample properties." *Journal of Econometrics* 108:1–22.
- Lind, Niels C. 1992. "Some thoughts on the Human Development Index". *Social Indicators Research* 27:89–101.
- Lipset, Simon M. (1959). "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *The American Political Science Review* 53(1):69-105.
- Maddala, G. S., and Shaowen Wu. 1999. "A comparative study of unit root tests with panel data and a simple new test." *Oxford Bulletin of Economics and Statistics* 61:631–52.
- McGuire, James W. 2004. "Democracy, Health Care, and Under-5 Mortality: A Cross-National Study of Developing Countries." In Ms Department of Government, *Wesleyan University*.

- McGuire, James W. 2010. "Wealth, Health, and Democracy in East Asia and Latin America." Cambridge: *Cambridge University Press*
- McGillivray, Mark. 1991. "The human development index: yet another redundant composite development indicator?" *World Development* 19(10): 1461-1468
- Meltzer, Allan H., and Scott F. Scott. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89: 914-927
- Ming-Chang, Tsai. 2006. "Does Political Democracy Enhance Human Development in Developing Countries? A Cross-National Analysis." *The American Journal of Economics and Sociology* 65(2):233-268
- Minier, Jenny. 1998. "Democracy and Growth: Alternative Approaches." *Journal of Economic Growth* 3(3):241-66.
- Muller, Edward N. 1988. "Democracy, Economic Development, and Income Inequality." *American Sociological Review* 53 (February): 50–68.
- Murray, Christopher J.L. 2004. "The Future of Public Health." Presented at Center for the Study of Population and Development, Harvard University (March 18).
- Musila, Jacob W., and Zelealem Yiheyis. 2015. "The impact of trade openness on growth: The case of Kenya." *Journal of Policy Modeling* 37(2):342-354
- Noorbaksh, Farhad. 1998. "A modified Human Development Index." *World Development* 26 (3):517-528
- Olson, Mancur, 2003. "Dictatorship, Democracy, and Development." In Knack, Stephen (ed.), *Democracy, Governance, and Growth*. Ann Arbor *University of Michigan Press*.
- Pedroni, Peter. 2004. "Panel cointegration, asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis." *Econometric Theory* 20(3): 597–625.
- Persson, Torsten, and Guido Tabellini. 2006. "Democracy and Development: The Devil in Details." *AEA Papers and Proceedings* 96(2):319-320.
- Philipsen, Dirk. 2015. "The Little Big Number: How GDP Came to Rule the World and What to Do about It." *Princeton: Princeton University Press*.
- Pilinkiene, Vaida. 2016. "Trade Openness, Economic Growth and Competitiveness. The Case of the Central and Eastern European Countries." *Inzinerine Ekonomika-Engineering Economics* 27(2):185–194
- Przeworski, Aam, Michael E. Alvarez, Jose Antonio Cheibub, and Fernando Limongi. 2000. "Democracy and Development: Political Institutions and Well-Being in the World: 1950-1990." Cambridge: *Cambridge University Press*.
- Przeworski, Adam. 2004. "Democracy and Economic Development." In Edward D. Mansfield and Richard Sisson (eds.). *The Evolution of Political Knowledge*. Columbus: *Ohio State University Press*.
- Ravillion, Martin. 1997. "Can high Inequality developing countries escape absolute poverty?" *Economic Letters* 56:51-57
- Rodrik, Dani. 1999. "Democracies Pay Higher Wages." *Quarterly Journal of Economics* 114:707-738.
- Rodrik, Dani, and Romain Wacziarg. 2005. "Do Democratic Transitions produce Bad Economic Outcomes." *AEA Papers and Proceedings* 95(2):50-54.
- Ross, Michael. 2006. "Is Democracy Good for the Poor?" *American Journal of Political Science* 50 (October): 860–74
- Rubinson, Richard, and Dan Quinlan. 1977. "Democracy and Social Inequality: A Reanalysis." *American Sociological Review* 42:611-23.
- Sagar, Ambuj, and Adil Najam. 1998. "The Human Development Index: A Critical Review." *Ecological Economics* 25 (1):249-264.

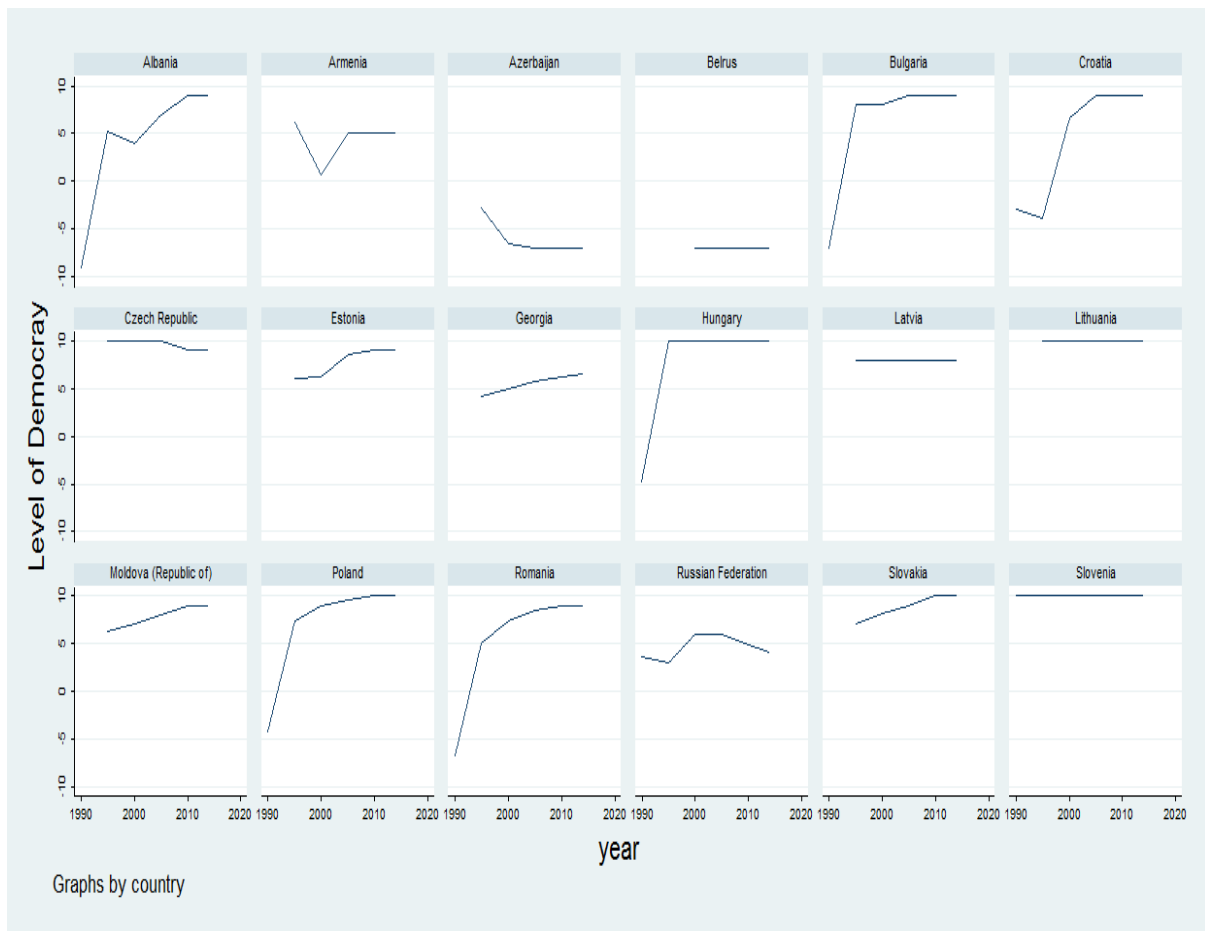
- Scheve, Kenneth, and David Stasavage. 2009. "Institutions, Partisanship, and Inequality in the Long Run." *World Politics* 61:215-253.
- Sen, Amartya K. 1991. "Capability and Well-Being." In: M. Nussbaum and A. K. Sen (eds.): *The Quality of Life, Oxford: Clarendon Press. 1991.*
- Sen, Amartya K. 1999a. "Development as Freedom." *Oxford: Oxford University Press.*
- Sen, Amartya K. 1999b. "Democracy as a Universal Value." *Journal of Democracy* 10(3):3-17.
- Shandra, John M, Nobles Jenny, Bruce London, John B. Williamson. 2004. "Dependency, Democracy, and Infant Mortality: A Quantitative, Cross-National Analysis of Less Developed Countries." *Social Science and Medicine* 59 (July):321–33.
- Sirowy, Larry, and Alex Inkeles. 1990. "The Effects of Democracy on Economic Growth and Inequality: A Review." *Studies in Comparative International Development* 25:126-157.
- Sisson, Richard. 2004. "The Evolution of Political Knowledge." In DEMOCRACY, AUTONOMY, AND CONFLICT IN COMPARATIVE AND INTERNATIONAL POLITICS EDWARD D. MANSFIELD AND RICHARD SISSON, EDS. *Columbus: Ohio State University Press.*
- Spaiser, Viktoria, Shyam Ranganathan, Richard P. Mann, and David J. T. Sumpter 2015. "The dynamics of democracy, development and cultural values." *PLOS ONE* 10(3): e0118878.
- Srinivasan, T.N. 1994. "Human development: A new paradigm or reinvention of the wheel?" *American Economic Review (Papers and Proceedings)* 84:238–243
- Stack, Steven. 1978. "Internal Political Organization and the World Economy of Income Inequality." *American Sociological Review*, 43:271-72.
- Tavares, Jose, and Romain Wacziarg. 2001. "How democracy aspects growth." *European Economic Review* 45:1341-1378.
- UNDP (United Nations Development Programme). 2003. "Human Development Report 2003."
- Millennium Development Goals: A Compact among Nations to End Human Poverty. *New York: Oxford University Press.*
- Vollmer, Sebastian, and Maria Zieglery. 2009. "Does Democracy Fulfill its 'Constructive' and 'Instrumental' Role?" Policy research Working paper 4818.
- Welzel, Christian, Inglehart, Ronald. 2005. "Democratization as the Growth of Freedom: The Human Development Perspective." *Japanese Journal of Political Science* 6(3):313-343.

Figures and Tables

[Figure 1 HDI in Former Socialist countries from 1990 to 2014]



[Figure 2 Level of Democracy in Former Socialist countries from 1990 to 2014]



[Figure 3 Relationship between HDI and level of Democracy]

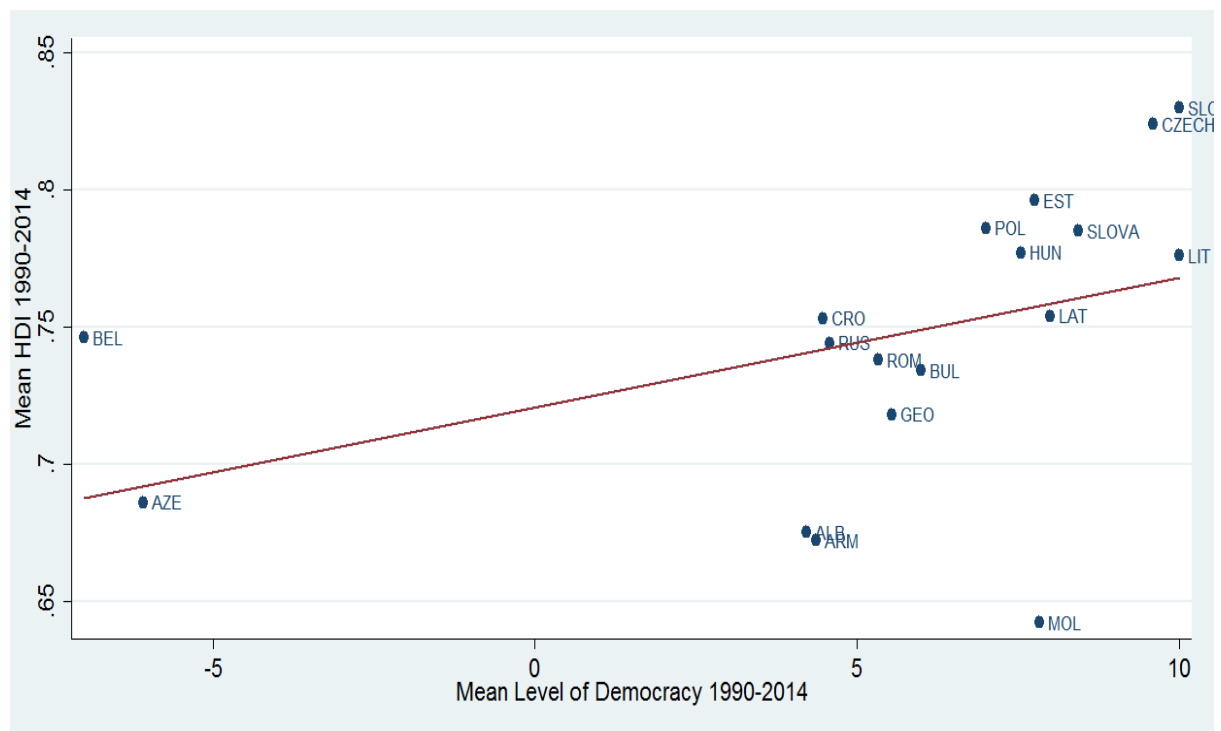


Table 1. Panel Unit Root Test

Test						
Variables	HAD	LLC	IPS	ADF	PP	Breitung
HDI	49.976	-12.221	0.676***	64.307***	124.972	4.969***
Democracy	52.584	1.80099***	-2.6E+14	19.156***	23.198***	23.198***
Growth	42.8198	-7.86727	0.33079***	19.2333***	36.8852	3.87582***
Trade openness	19.6362	-8.50799	-0.53337***	0.4981***	37.4932*	1.62596***
Unemployment	40.2715	40.2715	-2.23836*	47.6151	89.9264	-7.6E-14***
Log Pop	34.5518	-20.2533	-1.87125*	51.2107	100.973	2.46446***
First Differences						
HDI	60.171***	-61.011***	-19.614	157.840	124.972	9.8E-14
Democracy	41.314	-106.079	-50.104	109.322	109.375	109.375***
Growth	33.6293	-5.78039	-6.26439	36.1895	53.0257	-1.8E-14***
Trade openness	38.5759	-9.22957	-0.51566	99.7719	101.460	5.0E-14***
Unemployment	28.2144	-13.8330	0.12148***	127.316	133.887	8.7E-13***
Log Pop	11.7279	12.0674***	-2.15658	61.4866	65.1592	2.3E-13

Notes: The tests are: Hadri, 2000 (HAD); Levin, Lin and Chu, 2002 (LLC); Im, Pesaran and Shin, 2003 (IPS); ADF Fisher χ^2 (ADF); PP Fisher χ^2 (PP) due to Maddala and Wu, 1999 and Breitung, 1999). In Hadri the null is that the variable is stationary. ***, **, and * reject the null at 1%, 5% and 10% respectively

Table 2. Cointegration tests

Pedroni Residual Test Cointegration		
	Statistic	Prob.
Panel v-Statistic	-58.806	1.000
Panel rho-Statistic	-0.881	0.189
Panel PP-Statistic	-10.352***	0.000
Panel ADF-Statistic	-10.037***	0.000
Group rho-Statistic	2.356	0.990
Group PP-Statistic	-12.196***	0.000
Group ADF-Statistic	-14.531***	0.000
Kao Residual Cointegration Test		
ADF	-3.350***	0.0004

Note: In Pedroni and Kao residual cointegration test, Null Hypothesis is that all variables is not cointegrated. *, **, *** respectively represent the reject of null hypothesis at 1, 5 and 10%

Table 3 The effect of democracy level on HDI in Eastern Countries.

Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HDI_{t-1}	0.6819*** (0.0383)	0.2126** (0.088)	0.7815*** (0.153)	0.6206 *** (0.037)	0.6491*** (0.0156)	0.598*** (0.211)	0.6776*** (0.030)
$Democracy_t$	0.0030*** (0.002)	0.0015* (0.001)	0.0034*** (0.001)	0.0059* (0.001)	0.0022*** (0.0007)	0.0056*** (0.009)	0.0299*** (0.002)
$Democracy_{t-1}$	0.0014*** (0.002)	-0.0005 (0.001)	0.0013*** (0.470)	0.0011* (0.002)	0.0006** (0.000)	0.0012** (0.000)	0.0140*** (0.002)
$Openess Trade_t$				0.0001* (0.000)			
$Growth rate_t$					0.0026*** (0.0002)		
$Growth rate_{t-1}$					0.006*** (0.0004)		
$Unemployment_t$						-0.0011 (0.007)	
$Unemployment_{t-1}$						0.0011 (0.007)	
$Log Pop_t$							-0.0011 (0.024)
Observations	78	78	42	76	72	67	78
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Effects	No	Yes	No	No	No	No	No
R-Squared	0.8391	0.6071	0.5926	0.8746	0.9530	0.8838	0.8745

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1