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Democracy and Human Development

A Cross-National Analysis

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Abstract

This thesis analyses the effects of democracy and democratisation on human development levels and growth. Theoretically, the idea of development as freedom is incorporated into the classical debate of democracy's impact on development. Empirically, this is tested in a number of cross-sectional and pooled panel multiple linear regression models, covering the period 1980-2010. Democracy is measured by Freedom House's political rights and civil liberties, while human development is measured by the HDI. The same regressions are also performed with GDP per capita and economic growth as the dependent variable. In its largest sample, this study covers 146 countries. The results of this study generally support the hypothesis that democracy and democratisation are more important for human development than for economic development. Moreover, the results indicate that democracy and democratisation have positive effects on changes in human development, while they may still have negative effects on economic growth rates. This finding strongly supports the claim that human development is compatible with, and even strengthened by, human freedom and political democracy. Finally, these findings also have some important policy implications, suggesting that democratisation and democracy promotion are important as long as human development, rather than economic growth, is the ultimate developmental goal.

Keywords: democracy, human development, freedom, growth, democratisation
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Abbreviations

FIW	Freedom in the World
GDP	Gross Domestic Product
HDI	Human Development Index
HDR	Human Development Report
OLS	Ordinary Least Squares
PPP	Purchasing Power Parity
UNDP	United Nations Development Programme
VIF	Variance Inflation Factor
WDI	World Development Indicators

1 Introduction

While recent decades have seen a rapid increase in the levels of economic and human development around the world, many countries still remain poor. As such, social scientists from different academic disciplines have long searched for the causations of development. In political science, the theoretical and empirical links between democracy and development have often been of particular interest. While democracy may be seen as a goal in itself, a more general argument for the importance of democracy would probably claim that political democracy improves the livelihoods of a country's citizens. Empirically, however, the effects of democracy on development are much more debated. While this area of research can be dated back as far as to the seventeenth century (Hobbes 1651; Harrington 1656), it has more recently experienced a revival following the so-called "third wave of democratization" (Huntington 1991, p. 13).

Despite the relatively vast amount of research previously conducted on this topic, the overall findings still remain largely inconclusive, at least as long as development is measured by *economic growth* (Sirowy and Inkeles 1990; Przeworski and Limongi 1993). This thesis, however, takes a somewhat different approach to this research problem by instead focusing on the potential effects of democracy on *human development*. The concept of human development has been largely promoted by economists such as Mahbub ul Haq (1995) and Amartya Sen (1999), arguing that more encompassing measurements of development, such as the human development index (HDI), are better indicators of countries' well-being and general development than pure economic concepts, such as the gross domestic product (GDP) per capita. This thesis will combine these two academic debates by taking a cross-national, empirical approach to the research problem of analysing the potential effects of democracy on human development.

1.1 Statement of Purpose and Research Question

The main research questions of this thesis are:

- 1) *What are the country-level effects of democracy on human development?*
- 2) *How do these effects differ from those on economic development?*

While it is now widely accepted that development encompasses more than only economic growth, very few previous empirical studies analysing the developmental effects of democracy have taken this human development perspective into account (Przeworski *et al.* 2000). Moreover, this is an important

question since (i) we still know relatively little about the causes of human development (Przeworski and Limongi 1993), and since (ii) we still know relatively little about the developmental effects of democracy (Sirowy and Inkeles 1990). As such, this thesis aims to combine the two academic fields of political science and development studies in order to investigate this research problem. The findings of this study will also have some important policy implications, if governments, international institutions and development agencies are to promote democracy as a means for development and increased well-being in the world. Finally, by contrasting the effects of democracy on *human* development to its impact on *economic* development, this thesis also aims to contribute to the debate on HDI and GDP per capita as different measurements of development.

1.2 Method and Material

The methodology used to empirically analyse these research questions is a quantitative, statistical/econometric approach. More specifically, a number of cross-national multiple linear regressions are performed in order to analyse the effects of democracy on (i) human development and on (ii) economic development. As a robustness check, a number of pooled panel multiple linear regressions are also performed by combining time-series and cross-sectional data.

Country-level data on democracy is collected from Freedom House's (2012b) database *Freedom in the World* (FIW), by combining the two indicators of political rights and civil liberties. Data on human development is collected from the United Nations Development Programme's (UNDP) database *International Human Development Indicators* (2011), and measured by the HDI. Finally, data on economic development is collected from the World Bank's (2012) database *World Development Indicators* (WDI), together with control variables for income inequality, as measured by the Gini index, and regional dummy variables. All in all, this gives a sample of 146 different countries with data available for all the included variables during the time period of 2005-2010. For somewhat smaller samples, data is also available for the full 1980-2010 period covered in this study. Finally, it should also be noted that this study makes no claims on using a random sample, but rather applies a purposively selected sample chosen on the criteria of data availability. Nevertheless, the relatively large data samples included in this study ought to limit the risk of any severe selection bias.

1.3 Limitations

A first limitation of this study is due to the choice of definitions. As both democracy and human development are complex and subjective concepts (Przeworski *et al.* 2000), a number of different definitions could be applied. The

Freedom House (2012b) and UNDP (2011) definitions used in this study, however, are generally accepted definitions that are also commonly applied in previous empirical studies (Johansson 2002). Moreover, previous studies have found different definitions and measurements of democracy to be highly correlated (Dahl 1998). Second, another limitation of this study is due to the difficulties of quantifying concepts such as democracy and development. This debate, however important, is left out of the content of this paper, which instead builds on previous empirical traditions such as those analysing the impact of democracy on the cross-national variation in economic development (Przeworski *et al.* 2000). Finally, a third limitation of this study is due to the choice of methodology. As in all quantitative studies, a particular difficulty is the risk of only determining correlation rather than causality (Bryman 2008). While this study analyses the effects of democracy on development, the relationship between democracy and development is likely to be more complex in the sense that a country's level of democracy also affects its probability of being a democracy (Przeworski and Limongi 1993). As such, an important suggestion for future research following this study will be complementing studies using qualitative methods and case studies in order to further investigate this issue of causality. Despite this shortcoming of a quantitative approach, the relatively high level of generalisability implied by this aggregated method still merits its use and supports the importance of a study such as this one (Hadenius 1992).

1.4 Disposition

The disposition of this paper is as follows. In Chapter 2, the theoretical framework of this study is presented and discussed. This primarily includes the theoretical fields analysing (i) *human* development as an alternative concept to *economic* development, and (ii) democracy's impact on development. Included in this chapter are also some discussions on previous empirical literature analysing the effects of democracy on development. Chapter 3 thereafter outlines and discusses the methodology and data used in this study. In Chapter 4, the empirical results are then presented and analysed. This includes analyses of correlations, as well as the cross-sectional and pooled panel regression results. Finally, Chapter 5 sums up the findings of this study in a concluding discussion, together with some policy implications and suggestions for future research.

2 Theoretical Framework

The theoretical framework of this paper is built upon two large fields within the academic disciplines of political science and development studies. First, this study builds on theories contrasting human versus economic development as indicators of development. Second, this study also builds on theories and previous empirical findings on the developmental effects of democracy.

2.1 The Human Development Paradigm

Theories of human development are to a large extent built upon Sen's (1999) argument that development should focus on people's capabilities, rather than solely on their resources or welfare. With this broader perspective on development, Sen (2008) also argues that human and socioeconomic development differ from economic growth. Regarding the determinants of human development, Sen (2008) especially emphasises the importance of government choices and policies, contrasting the developments of the two largest developing countries in the world. In China, Sen (2008) argues, economic growth rates have been high but the lack of democracy still limits people's civil and political rights and, consequently, also hampers human development. Despite lower economic growth rates, however, the democratic rights in India have contributed to a relatively high level of human development, at least in certain important aspects (Sen 2008).

Following this capability approach, the HDI was also developed as an alternative to GDP per capita and as a broader indicator of human development and the quality of life (UNDP 1990; Haq 1995). The UNDP, for instance, defines human development as "a process of enlarging people's choices" (1990, p. 10). At the same time, human development "denotes both the *process* of widening people's choices and the *level* of their achieved well-being" (UNDP 1990, p. 10). The HDI, then, is constructed by combining measures of a long and healthy life, access to knowledge and a decent standard of living. Still, however, human "development is incomplete without human freedom" (UNDP 1990, p. 16). While the HDI captures some aspects of human freedom, the political aspects of civil and political liberties are not included in this index. As argued by the UNDP (1990), it is therefore an important empirical task to further analyse the potential relationship between human freedom and development. Consequently, one of the main aims of this study is to test this relationship empirically. Since the HDI applies a broader perspective on development as freedom than the economic measure of GDP per capita, the first hypothesis of this paper is that *democracy is more closely related to human development, as measured by the HDI, than it is to*

economic development, as measured by GDP per capita. As argued by Haq (2008), changes in government that increase civil and political rights expand people's choices and should, as such, promote human development, while not necessarily economic growth.

Finally, it should also be noted that the HDI has not been free from criticism. A main concern with the HDI is its high correlation with the GDP per capita measure, making some sceptics argue that it is virtually redundant (McGillivray 1991; McGillivray and White 1993). Whether this criticism is well-founded or not is further dealt with in the empirical part of this paper.

2.2 Democracy and Development

The second theoretical field of this study is that of democracy and development. As argued by Dahl (1998), democracy has been discussed and debated for about twenty-five centuries. Until the twentieth century, however, "most of the world proclaimed the superiority of nondemocratic systems both in theory and in practice" (Dahl 1998, p. 44). Why, then, should democracy be superior to a nondemocratic system of governing the state? According to Dahl, one of the reasons to support democracy is that it "fosters human development more fully than any feasible alternative" (1998, p. 55). At the same time, Dahl admits that this is a bold and controversial claim, which should be regarded as an empirical "assertion that is highly plausible but unproved" (1998, p. 55).

Empirically, this claim has previously been investigated mainly with the concept of development approximated by *economic* development and growth. Moreover, the overall results from such empirical studies remain largely inconclusive (Sirowy and Inkeles 1990; Przeworski and Limongi 1993). As such, theorists are also "strongly divided with respect to the compatibility of development and political democracy" (Sirowy and Inkeles 1990, p. 127). Regarding the effects of political democracy on economic growth, the theoretical arguments can be divided into the conflict, the compatibility, and the sceptical perspectives (Sirowy and Inkeles 1990). Each of these opposing perspectives has obtained strong support, as well as criticism, in both the theoretical and empirical literature. On the one hand, a main argument for why democracy should hinder economic growth is through its pressure for immediate consumption and a following decline in investment. On the other hand, a main argument for why dictatorships should hinder economic growth "is that authoritarian rulers have no interest in maximizing total output" (Przeworski and Limongi 1993, p. 51). A similar division can also be made with respect to the theoretical and empirical arguments for the effects of democracy on inequality (Sirowy and Inkeles 1990). These inconclusive results from previous literature make Sirowy and Inkeles conclude that it is necessary to move beyond simple measures of economic growth and to supplement income inequality "by other indicators of the general social and economic welfare" (1990, p. 154). Similarly, Elgström argues that the

“traditional emphasis on economic development has to be broadened to include measures of human development” (2002, p. 191)

As such, a small number of recent studies have also aimed to incorporate the human development perspective when studying the developmental effects of democracy. In a replication of Lipset’s (1959) classical study, Diamond analyses the 1990 cross-country correlation between democracy and the HDI, in addition to per capita national income, concluding that “the relationship between democracy and development is even stronger when the HDI is used as the development indicator” (1992, p. 458). Moreover, Diamond argues that compared to GDP per capita the *socioeconomic* HDI has the advantage of “greater validity in indicating real levels of human well-being” (1992, p. 458). Still, the quantitative part of Diamond’s (1992) study only applies a cross-tabulation method of measuring correlation. Thus, while Diamond claims to analyse the effects of development on democracy, he also concludes that “the causal trend *can* be reversed, with democracy leading to development” (1992, p. 488). In another study by Welzel and Inglehart (2005), the relationship between democratisation and human development is analysed by applying data on national values from the *World Values Survey*. A major shortcoming of this data usage, however, is that their study only includes 62 countries and with country values measured at one time point only. The theoretical argument supported by Welzel and Inglehart (2005), however, is that democratisation institutionalises civil and political liberties, which in turn is assumed to promote human development through increased freedom of choice. Similarly, Olson (2003) argues, from a rational self-interest perspective, that the main obstacle to long-run development in autocracies is that individual rights can never be secured. Thus, the second main hypothesis to be tested in this paper is that *democracy and democratisation should affect human development positively*.

To the author’s awareness, the largest previous cross-national empirical study analysing the effects of political democracy on human development is Tsai (2006), which includes 119 developing countries. While Tsai (2006) finds that democracies in the 1980s and 1990s achieved higher *levels* of human development, democracy is not found to be a powerful predictor of *changes* in human development during the same period of time. This differentiation between levels of development and changes in development is crucial and, thus, both of these effects will also be tested in this paper. Similarly, a clear distinction between levels of democracy and changes in democracy, or democratisation, is also of utmost importance. In this study, this differentiation will be analysed by including measures of both democracy levels and democratisation changes. Moreover, this study will also expand Tsai’s (2006) study, by including more countries, both developing and developed, and by covering a longer period of time.

Another concept that is often included in both the theoretical and empirical literature on the relationship between democracy and development is income inequality. Persson and Tabellini (1994), for instance, find that economic growth is significantly and negatively correlated with inequality. According to Persson and Tabellini, however, “this relation is only present in democracies” (1994, p.

600). The theoretical argument for this, from a political economy perspective, is that inequality influences growth through the political redistribution in democracies. If a country's income is highly unequally distributed, the median voter will earn less than the mean income and, as such, support redistributive policies transferring income and wealth from the richer half to the poorer half of the citizens (Knack and Keefer 2003). While such income redistribution may have negative effects on economic growth, as it is assumed to undermine property rights and investment incentives, it may still, however, have a positive impact on human development. Nevertheless, in a replication and extension of Persson and Tabellini's (1994) study, Knack and Keefer find "that inequality's impact on growth does not differ significantly by regime type" (2003, p. 188). While it thus remains uncertain how the relationships between democracy, development and inequality work, income inequality will be included as a control variable in this study, due to its suggested impact on development. Another important reason for this inclusion is that the HDI has been further criticised for not taking inequality into account (Seth 2009).

Finally, some previous empirical studies on the effects of democracy on development have also found this relationship to vary across time and space (Elgström 2002). By analysing the impact of a country's stock of democracy over the past century on its infant mortality rates (as an indicator of human development), Gerring *et al.* conclude "that the best way to think about the relationship between democracy and development is as a time-dependent, historical phenomenon" (2012, p. 1). Taking this possibility into account, this study's empirical analyses are undertaken for a number of different time periods and further controlling for regional differences.

3 Methodology and Data

This study applies a quantitative, statistical/econometric approach to analyse the country-level effects of political democracy on human development. More specifically, a number of cross-sectional multiple linear regressions are performed, using the ordinary least squares (OLS) method. Moreover, to check the robustness of these results, a number of pooled panel OLS regressions are also performed, combining time-series and cross-sectional data.

3.1 Data and Definitions

As the dependent variable, indicators of both human development and economic development are used, respectively. This is done in order to compare the different effects that democracy may have on these two measures of development. Moreover, both the *level* of development and *changes* in development are used, respectively, as the dependent variable. The reason for this is to contrast the effects of democracy when development is defined as a static condition and as a process. Similarly, both levels of democracy and changes in democracy are included.

As an indicator of country-level human development, the HDI is used and collected from the UNDP (2011) database *International Human Development Indicators*. This indicator measures well-being in the world by combining measures of health (life expectancy at birth), education (mean and expected years of schooling) and living standards (gross national income per capita) (UNDP 2011). The country-level indicator of economic development is measured as the natural logarithm of the real GDP per capita, and collected from the World Bank's (2012) database *WDI*. The natural logarithm is applied here in order to use a linear regression method, and following general statistical procedures when dealing with GDP (Barro 1996). As a measurement of changes in human development, the annual percentage growth rate of HDI is computed and applied. Similarly, changes in the level of economic development (that is, economic growth rates) are measured by the annual percentage growth rate in GDP per capita.

As the main independent variable an indicator of political democracy is used. This indicator is measured as the average of Freedom House's political rights and civil liberties country-ratings, collected from the database *FIW* (Freedom House 2012b). By this definition, political rights "are based on an evaluation of three subcategories: electoral process, political pluralism and participation, and functioning of government" (Freedom House 2012a, p. 33). Similarly, civil rights "are based on an evaluation of four subcategories: freedom of expression and

belief, associational and organizational rights, rule of law, and personal autonomy and individual rights” (Freedom House 2012a, p. 33). This democracy index, ranging from 1 to 7, is further inverted so that a higher value indicates a higher level of liberal democracy, and *vice versa*. Moreover, changes in the level of democracy (that is, *democratisation*) in the previous period are also used as another explanatory variable. This indicator is calculated as the annual percentage growth rate in the inverted average of Freedom House’s (2012b) political rights and civil liberties country-ratings, and lagged one time period as recommended by, for instance, Tsai (2006).

Another common measurement of democracy, which could alternatively have been used, is the Polity IV Project (Marshall *et al.* 2012). Comparing these two democracy indicators, Freedom House’s (2012b) data has the advantage of including more countries, while the Polity IV Project (Marshall *et al.* 2012) covers a longer period of time (Muck and Verkuilen 2002). As the HDI is only available from the 1980s onwards anyway, Freedom House’s (2012b) democracy measure was chosen here. Moreover, these and other measures/definitions of democracy are quantitatively found to be very highly correlated (Muck and Verkuilen 2002).

Since income inequality is, at least theoretically, assumed to be an important determinant of human development, this indicator is also included as a control variable in all the regressions. Following common standards, inequality is measured by the Gini index, ranging from 0 (for a perfectly equal income distribution) to 100 (for a perfectly unequal income distribution). Country-level Gini values are also collected from the World Bank’s (2012) database *WDI*. In the regressions using changes in development, or growth rates, as the dependent variable, initial levels of the relevant development indicator are also used as another control variable (Barro 1996). Finally, regional dummy variables are also included as a final control for other regional-specific effects on development. The regional classification generally follows that of the UNDP (2011), but where the industrialised countries of North America (that is, Canada and the United States) and Oceania (that is, Australia and New Zealand) are also included in the “Europe and Central Asia” category. In all the regressions, Latin America and the Caribbean is used as the omitted regional dummy category. The regional categorisation of the included countries, together with their Freedom House (2012b) and human development (UNDP 2011) classifications in 2005-2010 are shown in the Appendix (Table 10).

A description of all the included variables, including definitions and sources, are shown in Table 1 below.

TABLE 1: Variable description

Variable	Definition	Source
HDI	Measure of human development combining indicators of health (life expectancy at birth), education (mean and expected years of schooling) and living standards (gross national income per capita), ranging between 0 (minimum) and 1 (maximum).	UNDP (2011) <i>Human Development Report</i> (HDR)
HDI growth	Annual percentage growth rate of HDI.	UNDP (2011) <i>HDR</i>
(Log) GDP per capita	Natural logarithm of GDP per capita converted to constant 2005 international dollars using purchasing power parity (PPP) rates.	World Bank (2012) <i>WDI</i>
GDP per capita growth	Annual percentage growth rate of GDP per capita.	World Bank (2012) <i>WDI</i>
Democracy	Inverted mean of political rights and civil liberties, ranging from 1 (lowest degree of freedom) to 7 (highest degree of freedom).	Freedom House (2012b) <i>FIW</i>
Democratisation	Annual percentage growth rate of the inverted mean of political rights and civil liberties.	Freedom House (2012b) <i>FIW</i>
Inequality	Gini index measuring “the extent to which the distribution of income ... among individuals or household within an economy deviates from a perfectly equal distribution”, ranging from 0 (perfect equality) to 100 (perfect inequality).	World Bank (2012) <i>WDI</i>
Region	Regional dummy variables including the categories “Sub-Saharan Africa”, “Middle East and North Africa”, “Asia and the Pacific”, “Europe, North America and Oceania”, as well as “Latin America and the Caribbean” as the omitted category.	UNDP (2011) <i>HDR</i>

3.2 Estimation Equation

The basic regression equation takes the following form:

$$HDI_{it} = \alpha + \beta_1(Democracy_{it}) + \beta_2(Inequality_{it}) \\ + \beta_3(Democratisation_{it-1}) + \beta_4(Region_{it}) + \varepsilon_{it}$$

where the level of human development in country i in period t is assumed to be a function of the country's current level of democracy, its current level of inequality, its change in democracy in the previous period, and potentially also the country's regional belonging. The dependent variable is then altered to measure the level of economic development, the change in human development, and the change in economic development, respectively. In the latter two cases, the initial level of human/economic development is also included as another control variable.

In the cross-sectional regressions, the country-level values are averaged over two five-year periods, 2005-2010 and 2000-2005, and two ten-year periods, 1990-2000 and 1980-1990. Thus, in total this study covers the years from 1980 to 2010. In the pooled panel regressions, which combine time-series and cross-sectional data, two different approaches are applied. First, yearly data over the 2005-2010 period is used. Second, five-year averages are used over the full time period from 1980 to 2010. For all the regressions, only countries with available data for all the variables are included. In the largest sample, that is, for 2005-2010, this includes 146 different countries. The data sample is then slightly reduced for each regression corresponding to an earlier period of time. The reason for this is both lack of data and fewer independent nations in the world.

4 Results and Analysis

First of all, the basic regression models are diagnostically tested for heteroskedasticity, normality and multicollinearity. Since the Breusch-Pagan-Godfrey (Godfrey 1978; Breusch and Pagan 1979) test for heteroskedasticity are found to reject the null hypothesis of homoskedasticity in some of the models, White's (1980) heteroskedasticity-consistent standard errors and covariance are used in the following regressions. Checks for non-normal distributions are done by histogram inspections and the Jarque-Bera statistics (Jarque and Bera 1987), which show that all the basic regressions have relatively normal distributions. Finally, the variance inflation factor (VIF) test for multicollinearity shows no strong indications of severe multicollinearity problems in any of the regressions. As mentioned before, all regressions use the OLS method.

The descriptive statistics for the full 1980-2010 sample are shown in Table 2 below.

TABLE 2: Descriptive statistics

1980-2010	Mean	Median	Max.	Min.	Std. Dev.	Obs.
HDI	0.59	0.61	0.94	0.17	0.19	609
HDI growth	0.84	0.74	8.85	-4.53	0.85	609
(Log) GDP per capita	8.51	8.54	11.14	5.56	1.29	609
GDP per capita growth	1.67	1.67	13.05	-12.05	2.77	609
Democracy	4.68	5.00	7.00	1.00	1.87	609
Democratisation	1.63	0.00	53.33	-15.00	6.92	609
Inequality	41.37	40.75	67.40	23.01	9.36	609

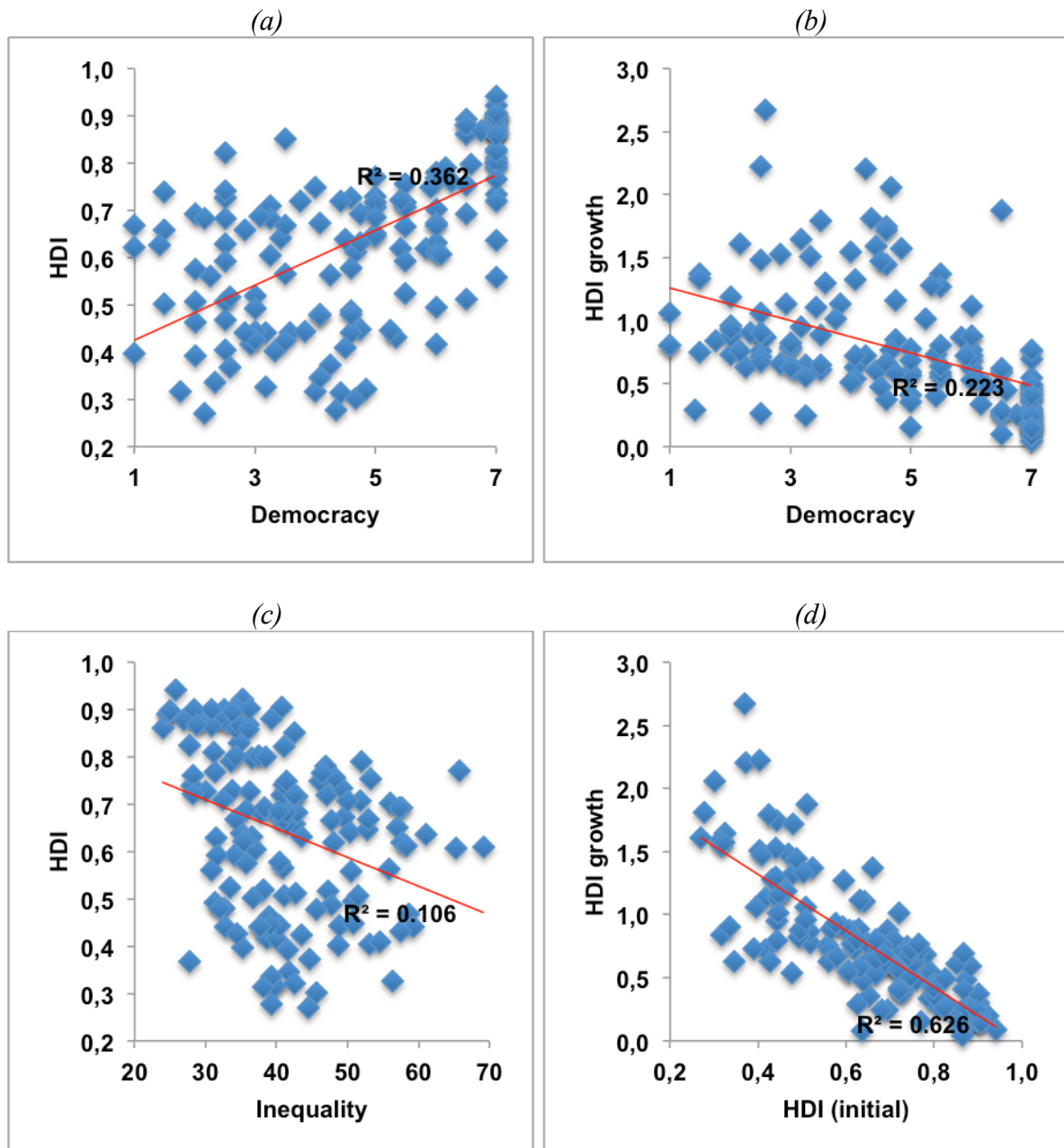
Source: Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

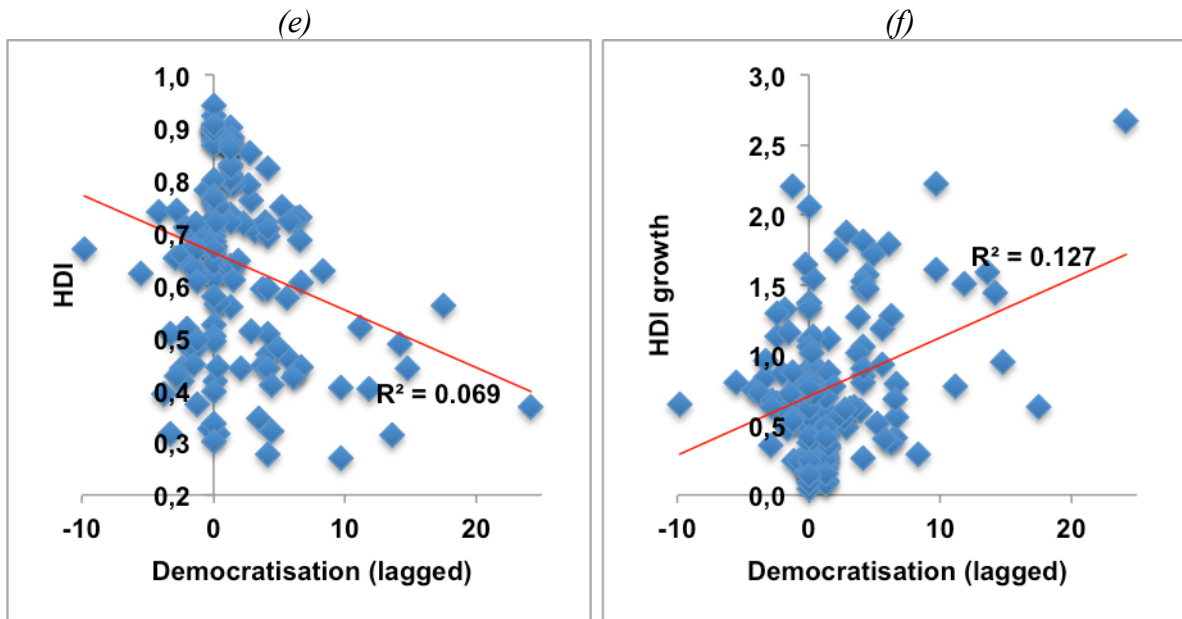
As seen in Table 2, there are relatively large variations in all the included variables. For instance, the HDI varies between 0.17 and 0.94, with a mean of 0.59. The HDI growth rates vary between -4.53 and 8.85 percent per year, with a mean growth rate of 0.84 percent per year. The average democracy value is 4.68, which corresponds to the upper bound of "Partly Free" according to Freedom House's (2012b) classification. As further seen in Table 2, the other variables also show relatively large variations.

4.1 Correlation Analysis

The pairwise correlations between the dependent variables HDI and HDI growth and the main independent variables are plotted in Figure 1 below. These correlations are based on average country-level data for the years 2005-2010.

FIGURE 1: Cross-sectional correlations for 2005-2010





Source: Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Figure 1, this first investigation of the data indicates that a country's level of human development is positively correlated to its level of democracy and negatively correlated to its level of inequality. In other words, this first correlation analysis suggests that more democratic and more equal countries tend to have higher levels of human development. Both of these correlations are also in line with the theoretical expectations. An interesting finding here, however, is that a country's growth in HDI seems to be negatively correlated with both its level of democracy and its initial level of human development. These correlations indicate that more democratic and humanly developed countries tend to have lower HDI growth rates. As such, this also gives some initial support to the possibility of a convergence effect in human development, where less developed countries tend to "catch-up" with the more humanly developed countries (Easterlin 2000). Another interesting finding is that democratisation in the previous period, that is, the preceding *change* in level of democracy, seems to have opposing effects on HDI and HDI growth rates, compared to the *level* of democracy. In other words, countries that become more democratic in one period are found to have lower levels of HDI, but higher HDI growth rates, in the following period.

The correlations for the full sample period of 1980-2010 are further shown in Table 3 below. In this and all the following tables, * indicates significance at the 10 percent level, ** significance at the 5 percent level, and *** significance at the 1 percent level.

TABLE 3: Correlations

1980-2010	HDI	HDI growth	(Log) GDP per capita	GDP per capita growth	Democracy	Democratisation
HDI growth	-0.397*** (609)					
(Log) GDP per capita	0.952*** (609)	-0.360*** (609)				
GDP per capita growth	0.201*** (609)	0.323*** (609)	0.106*** (609)			
Democracy	0.724*** (609)	-0.227*** (609)	0.704*** (609)	0.132*** (609)		
Democratisation	-0.154*** (609)	0.085** (609)	-0.155*** (609)	-0.088** (609)	0.064 (609)	
In-equality	-0.301*** (609)	0.047 (609)	-0.299*** (609)	-0.096** (609)	-0.197*** (609)	0.042 (609)

Note: Pairwise samples. Included observations in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. *Source:* Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Table 3, the correlations found for the 2005-2010 period also seem to hold for the full 1980-2010 sample. It should also be noted that there is a very high positive and statistically significant correlation between a country's level of HDI and its level of GDP per capita. Despite this, however, the correlation between a country's HDI growth rate and its growth rate in GDP per capita is not nearly as strong. In fact, all the explanatory variables of democracy, inequality and lagged democratisation seem to have opposing effects on a country's growth in human development versus its economic growth. As such, the criticism of the HDI as being a redundant development indicator (McGillivray 1991), only finds support when development *levels* are considered, not when development is seen as a *process*. This is an important finding, which will be further analysed in the following sections. These sections will also further analyse the effects of the independent variables on development, when combined in a number of different regression models. All in all, this first correlation assessment of the data emphasises the importance of differentiating between development and democracy as *static* conditions and as *processes*, as well as between *human* and *economic* development.

4.2 Democracy's Effects on Levels of Development

The cross-sectional regression results with human development levels as the dependent variable are shown in Table 4 below.

TABLE 4: HDI cross-sectional regression results

Dependent variable:	HDI			
Time period:	2005-2010	2000-2005	1990-2000	1980-1990
Democracy	0.036*** (0.005)	0.041*** (0.005)	0.045*** (0.008)	0.024*** (0.008)
Inequality	0.002 (0.001)	0.000 (0.001)	0.002 (0.001)	0.001 (0.002)
Democratisation (lagged)	-0.005*** (0.002)	-0.007*** (0.002)	-0.003*** (0.001)	0.000*** (0.001)
Sub-Saharan Africa	-0.175*** (0.022)	-0.150*** (0.022)	-0.130*** (0.029)	-0.166*** (0.033)
Middle East and North Africa	0.053 (0.050)	-0.003 (0.045)	0.028 (0.046)	-0.059 (0.046)
Asia and the Pacific	0.007 (0.035)	0.002 (0.034)	0.021 (0.040)	-0.058 (0.040)
Europe, North America and Oceania	0.144*** (0.028)	0.117*** (0.029)	0.156*** (0.033)	0.161*** (0.045)
Constant	0.403*** (0.078)	0.436*** (0.069)	0.315*** (0.071)	0.432*** (0.091)
Adjusted R-squared	0.745	0.777	0.727	0.728
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Included observations	146	141	109	96

Note: Least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Table 4, the regression results for the four different time periods are relatively similar. In all the regressions, the level of democracy is found to be a *positive* and statistically significant determinant of the level of human development. On the opposite, democratisation (that is, changes in the level of democracy in the previous period) is found to be a statistically significant but *negative* determinant of the level of human development. A possible reason for this finding, however, is the bounded way in which democracy is measured. That is, where countries with already high levels of democracy and HDI cannot

democratise much more. Moreover, some of the regional dummy variables are also found to be statistically significant, indicating that even after taking the other effects into account, the levels of human development are still generally higher in Europe, North America and Oceania and lower in Sub-Saharan Africa. Another interesting finding is that when controlling for democracy and regional effects, the inequality coefficients are found to be non-significant. As such, democracy and democratisation are found to be more important determinants of human development levels than income inequality is. Finally, the adjusted R-squared values suggest that this model explains relatively much, somewhere between 73 and 78 percent, of the cross-national variation in human development levels.

The same regressions are also performed with economic development levels, as measured by GDP per capita, used as the dependent variable instead of the HDI. These cross-sectional regression results are shown in Table 5 below.

TABLE 5: GDP cross-sectional regression results

Dependent variable:	(Log) GDP per capita			
Time period:	2005-2010	2000-2005	1990-2000	1980-1990
Democracy	0.263*** (0.045)	0.325*** (0.048)	0.307*** (0.059)	0.213*** (0.050)
Inequality	0.016 (0.012)	-0.002 (0.012)	0.015 (0.009)	0.010 (0.013)
Democratisation (lagged)	-0.049*** (0.014)	-0.071*** (0.020)	-0.029*** (0.007)	-0.015** (0.010)
Sub-Saharan Africa	-0.872*** (0.202)	-0.583*** (0.209)	-0.659*** (0.224)	-0.796*** (0.220)
Middle East and North Africa	0.828* (0.422)	0.309 (0.297)	0.494* (0.272)	0.090 (0.267)
Asia and the Pacific	0.121 (0.309)	0.020 (0.294)	0.099 (0.286)	-0.481* (0.248)
Europe, North America and Oceania	1.081*** (0.264)	0.715** (0.285)	1.247*** (0.249)	1.174*** (0.279)
Constant	6.587*** (0.697)	7.088*** (0.661)	6.299*** (0.473)	7.018*** (0.524)
Adjusted R-squared	0.602	0.669	0.682	0.721
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Included observations	146	141	109	96

Note: Least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from Freedom House (2012b) and World Bank (2012).

As seen in Table 5, the regression results are very similar when using economic development levels and human development levels as the dependent variable. This is also as expected, due to the high correlation between the HDI and GDP per capita measures of development levels (McGillivray 1991). In other words, as long as development *levels* are considered, it does not seem to be a large quantitative difference between the HDI and GDP per capita as indicators of development. In both cases, development levels are found to be significantly higher in more democratic countries and significantly lower in countries that became more democratic in the preceding period. The adjusted R-squared values, however, indicate that this model (with democracy, inequality, lagged democratisation and regional dummies as the independent variables) explains somewhat more of the cross-national variation in human development levels than in economic development levels. This also gives some initial support to the hypothesis that democracy is more important for human development than it is for economic development.

4.3 Democracy's Effects on Changes in Development

The cross-sectional regression results with human development growth rates as the dependent variable are shown in Table 6 below.

TABLE 6: HDI growth cross-sectional regression results

Dependent variable:	HDI growth			
Time period:	2005-2010	2000-2005	1990-2000	1980-1990
Democracy	-0.001 (0.022)	0.000 (0.042)	0.032 (0.045)	0.085** (0.042)
Inequality	-0.005 (0.005)	-0.024*** (0.009)	-0.016** (0.007)	0.010 (0.006)
Democratisation (lagged)	0.019** (0.009)	0.035** (0.017)	-0.003 (0.007)	0.000 (0.006)
HDI (initial)	-1.993*** (0.268)	-2.844*** (0.555)	-3.157*** (0.488)	-2.628*** (0.665)
Sub-Saharan Africa	0.017 (0.085)	-0.366** (0.173)	-0.586*** (0.136)	-0.306* (0.183)
Middle East and North Africa	-0.144 (0.128)	-0.149 (0.223)	0.164 (0.207)	0.748*** (0.179)
Asia and the Pacific	0.099 (0.107)	-0.150 (0.183)	0.033 (0.159)	0.641*** (0.187)
Europe, North America and Oceania	-0.095 (0.096)	-0.221 (0.194)	0.031 (0.166)	0.345* (0.177)
Constant	2.243*** (0.278)	3.911*** (0.601)	3.477*** (0.448)	1.379*** (0.460)
Adjusted R-squared	0.650	0.543	0.505	0.381
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Included observations	146	141	109	96

Note: Least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Table 6, the regression results are quite different when using *changes* in human development instead of *levels* of human development as the dependent variable. Moreover, these regression results are also found to differ between the different time periods. The only explanatory variable being statistically significant in all the included time periods is the initial level of human

development, which is found to be a negative determinant of the growth rate in HDI. This gives further support to the possibility of a convergence trend in human development across countries (Easterlin 2000). In the two periods covering the years 2000-2010, lagged democratisation is found to be a positive determinant of the HDI growth rate. This suggests that countries that became more democratic in the 1990s and during the first five years of the 2000s had higher growth rates in human development during the first decade of the 2000s, relative to other countries. Over the two periods covering the years 1990-2005, inequality is found to be a negative and statistically significant determinant of HDI growth, thus suggesting that countries with a more equal income distribution experienced higher growth rates in human development than relatively unequal countries. Finally, the level of democracy is found to be a positive and statistically significant determinant of HDI growth rates during the 1980s. As such, the negative correlation previously found between democracy and HDI growth rates turns positive when initial levels of human development are also controlled for. Taken together, these results suggest that democracy and democratisation affect human development growth positively.

Next, the same regressions are performed with economic growth rates used instead of HDI growth rates as the dependent variable. These cross-sectional regression results are shown in Table 7 below.

TABLE 7: GDP growth cross-sectional regression results

Dependent variable:	GDP per capita growth			
Time period:	2005-2010	2000-2005	1990-2000	1980-1990
Democracy	-0.502*** (0.174)	-0.392** (0.187)	0.077 (0.194)	0.072 (0.145)
Inequality	0.027 (0.030)	0.003 (0.033)	0.028 (0.023)	-0.040 (0.027)
Democratisation (lagged)	0.020 (0.051)	0.101* (0.057)	-0.058** (0.029)	0.016 (0.033)
(Log) GDP per capita (initial)	-0.275 (0.221)	0.004 (0.262)	0.257 (0.246)	0.266 (0.318)
Sub-Saharan Africa	-1.303* (0.703)	-0.931 (0.773)	-1.032 (0.624)	0.409 (0.615)
Middle East and North Africa	-1.562* (0.882)	-0.412 (1.014)	0.510 (0.813)	1.286* (0.717)
Asia and the Pacific	0.817 (0.779)	0.938 (0.867)	2.185*** (0.665)	2.654*** (0.908)
Europe, North America and Oceania	0.466 (0.721)	2.351** (0.938)	0.265 (0.711)	1.564** (0.751)
Constant	6.647*** (2.159)	3.654 (2.587)	-1.988 (2.128)	-1.408 (2.617)
Adjusted R-squared	0.197	0.159	0.316	0.381
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Included observations	146	141	109	96

Note: Least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from Freedom House (2012b) and World Bank (2012).

As seen in Table 7, the results for economic growth differ quite substantially from those for the HDI growth rates. First of all, no explanatory variable is found to be statistically significant over all the included time periods. This supports the hypothesis that the effects of democracy on economic growth may be time specific (Elgström 2002). Moreover, neither inequality nor the initial level of GDP per capita is found statistically significant in any of the regressions. Thus, while a relatively high initial level of human development predicts lower HDI growth rates, the initial level of GDP per capita is not found to have any significant effect on economic growth. These results also suggest that human, but not economic, development may be converging across countries. Similarly, low income inequality seems to be associated with higher human development growth, while not significantly affecting economic growth rates. Furthermore, when found

statistically significant, the coefficients on democracy predict more democratic countries to have *lower* economic growth rates. The effects of previous democratisation seem to be ambiguous, as it is found to be a *positive* and marginally significant determinant of GDP per capita growth in 2000-2005 but a *negative* and statistically significant determinant of economic growth rates during the 1990s. Finally, as seen from the adjusted R-squared values in Table 6 and Table 7, this model explains more of the cross-national variation in HDI growth rates than in economic growth. This further supports the idea that democracy and democratisation are more important for human development than for economic development.

4.4 Robustness: Combining Cross-Sectional and Time-Series Data

Finally, as a means for robustness check of the previous results, the full data sample including both cross-national and time-series data is also combined in a number of pooled panel regressions. As mentioned before, the panel regressions are performed using both yearly country-level data over the 2005-2010 period and five-year averages over the full 1980-2010 period. The first pooled panel regression results with levels of human development and GDP per capita as the dependent variable, respectively, are shown in Table 8 below.

TABLE 8: HDI and GDP panel regression results

Dependent variable:	HDI		(Log) GDP per capita	
	2005-2010	1980-2010	2005-2010	1980-2010
Democracy	0.036*** (0.002)	0.038*** (0.003)	0.274*** (0.018)	0.229*** (0.022)
Inequality	0.002*** (0.000)	0.000 (0.001)	0.019*** (0.004)	0.006 (0.004)
Democratisation (lagged)	-0.001*** (0.000)	-0.003*** (0.001)	-0.008*** (0.003)	-0.019*** (0.004)
Sub-Saharan Africa	-0.190*** (0.010)	-0.170*** (0.013)	-0.996*** (0.088)	-0.951*** (0.089)
Middle East and North Africa	0.048*** (0.017)	-0.002 (0.020)	0.636*** (0.147)	0.165 (0.135)
Asia and the Pacific	0.005 (0.012)	-0.041*** (0.015)	0.054 (0.108)	-0.404*** (0.104)
Europe, North America and Oceania	0.149*** (0.012)	0.128*** (0.016)	1.104*** (0.105)	1.170*** (0.112)
Constant	0.370*** (0.025)	0.428*** (0.036)	6.360*** (0.225)	7.222*** (0.242)
Adjusted R-squared	0.765	0.738	0.635	0.731
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Periods included	6	7	6	7
Cross-sections included	143	87	143	87
Total panel observations	858	609	858	609

Note: Pooled panel least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Table 8, these panel regression results generally confirm the previous cross-sectional results. That is, more democratic countries tend to have higher levels of both human and economic development. At the same time, countries that become more democratic in one period tend to have lower levels of human and economic development in the following period. As discussed before, this finding may be due to the fact that countries experiencing democratisation also are generally less developed, with lower initial levels of democracy, HDI and GDP per capita. Another interesting finding here is also that, in the 2005-2010 period, when controlling for democratic and regional effects, the level of inequality is found to be *positively* related to the levels of human and economic development. This suggests that more *unequal* countries have relatively higher levels of HDI and GDP per capita, at least over the years 2005-2010. As before,

many of the regional dummy variables are also statistically significant, suggesting higher development levels in Europe, North America and Oceania, and lower development levels in Sub-Saharan Africa, even after the other independent variables are controlled for. Finally, the adjusted R-squared values of these panel regressions also suggest that democracy and inequality explain slightly more of the variation in levels of human development than in levels of economic development.

Finally, the pooled panel regression results with HDI growth and economic growth as the dependent variable, respectively, are shown in Table 9 below.

TABLE 9: HDI growth and GDP growth panel regression results

Dependent variable:	HDI growth		GDP per capita growth	
	2005-2010	1980-2010	2005-2010	1980-2010
Democracy	0.030* (0.018)	0.074*** (0.028)	-0.485*** (0.104)	0.280*** (0.094)
Inequality	-0.011*** (0.003)	0.004 (0.005)	0.019 (0.021)	0.009 (0.016)
Democratisation (lagged)	0.004* (0.002)	0.001 (0.005)	0.009 (0.015)	-0.034** (0.016)
HDI (initial)	-2.808*** (0.262)	-3.187*** (0.315)		
(Log) GDP per capita (initial)			-0.205 (0.180)	0.012 (0.160)
Sub-Saharan Africa	-0.113 (0.091)	-0.350*** (0.115)	-1.165** (0.495)	-0.297 (0.382)
Middle East and North Africa	-0.192 (0.127)	0.381** (0.153)	-1.310* (0.777)	1.240** (0.532)
Asia and the Pacific	0.015 (0.093)	0.270** (0.119)	0.828 (0.564)	2.215*** (0.414)
Europe, North America and Oceania	-0.127 (0.099)	0.337** (0.133)	0.319 (0.586)	-0.053 (0.479)
Constant	2.985*** (0.217)	2.160*** (0.306)	6.347*** (1.641)	-0.420 (1.496)
Adjusted R-squared	0.320	0.212	0.052	0.112
Prob. (F-statistic)	0.000	0.000	0.000	0.000
Periods included	6	7	6	7
Cross-sections included	143	87	143	87
Total panel observations	858	609	858	609

Note: Pooled panel least squares method (White heteroskedasticity-consistent standard errors and covariance). Standard errors in parenthesis, * significant at 10%, ** significant at 5%, *** significant at 1%. Latin America and the Caribbean omitted category for regional dummy variables. *Source:* Author's calculation, based on data from UNDP (2011), Freedom House (2012b) and World Bank (2012).

As seen in Table 9, the general cross-sectional results for the effects of democracy on changes in development also seem to be confirmed by these panel regression results. First of all, the initial level of human development is found to be the most significant determinant of HDI growth, where a higher level of initial HDI implies lower HDI growth rates. Second, the level of democracy and previous democratisation are found to be positively related to changes in human development, although the latter is only marginally significant over the shorter 2005-2010 period. Over the years 2005-2010, inequality is also found to be a negative and statistically significant determinant of HDI growth rates, suggesting that countries with a more equal income distribution grow faster in terms of human development. The coefficients on inequality and lagged democratisation, however, are not statistically significant over the full 1980-2010 period.

With respect to economic growth, democratisation tend to be followed by lower GDP per capita growth rates over the full sample period of 1980-2010, while not being statistically significant in the years 2005-2010. The time-dependence of the effects of democracy on economic growth is further supported by the finding that more democratic countries experienced *higher* growth rates over the full 1980-2010 period, but *lower* growth rates during the shorter period of 2005-2010. The adjusted R-squared values of these regressions indicate that less of the variance in development changes is explained by these panel models than by the pure cross-sectional models. Still, these results expand those found by Tsai (2006), as not only *levels* but also *changes* in development are found to be significantly affected by democracy. Moreover, these panel models also explain more of the variation in HDI growth rates than in GDP per capita growth rates. Finally, it should also be noted that the significance of some of the regional dummy variables suggests that there may be other region-specific variables, such as institutions and culture (Knack 2003), which further affect the process of development.

5 Conclusion

This study has analysed the effects of political democracy and democratisation on countries' *levels* of development as well as *changes* in development. More specifically, the effects on *human* and *economic* development have been analysed and compared in a number of cross-sectional and pooled panel multiple regression models. The time period analysed in this study covers all the years for which the HDI has been reported, that is, 1980-2010. Moreover, regressions were performed for both shorter time periods and for the full period covered. In the largest sample, the regressions include data from 146 different countries from all around the world. The empirical results of this study generally confirm the hypothesis that democracy and democratisation are more important for human development than for economic development.

The results for the regressions using *levels* of human and economic development, respectively, as the dependent variable are found to be relatively similar. In both cases, more democratic countries are found to have *higher* development levels, while positive democratisation changes are found to be associated with *lower* levels of development, both in terms of HDI and GDP per capita. One possible reason for this finding, however, is that less developed countries (in terms of HDI, GDP per capita and democracy levels) have the potential to democratise much more than already developed and relatively democratic countries.

Yet, when development is measured as a *process* the regression results were found to differ quite substantially between HDI growth and GDP per capita growth rates. When statistically significant, both the levels of democracy and previous changes in democracy were found to be positive determinants of HDI growth rates. As such, both more democratic and democratising countries were found to have relatively higher rates of human development. The results for economic growth rates, on the other hand, were somewhat more ambiguous, but in most cases indicated that democracy and democratisation tend to affect growth in GDP per capita negatively.

Thus, a main finding of this paper is that political democracy and democratisation *increase* the rate of human development, while it may still *decrease* the rate of economic growth. Applied to Sen's (1999) theory of development as freedom, these results confirm the hypothesis that human development and human freedom are both compatible and positively interrelated (UNDP 1990). Moreover, these results also confirm the hypothesis that democracy and democratisation are more important for human development than for economic growth (Diamond 1992; Welzel and Inglehart 2005). While income inequality was often found to be non-significant in the regressions, some results also support the hypothesis that HDI growth rates are higher in more equal

societies. As such, equality-enhancing income and wealth distribution policies seem to be one way to promote human development. Some suggestive support for a convergence effect in human development, but not in economic development, was also found. To conclude, the policy implications of this study are that democratisation and democracy promotion are important as long as human and socioeconomic development, rather than economic growth, is what we are stringing for. Moreover, the criticism of the HDI as being a redundant indicator of development (McGillivray 1991), is not well-founded as long as development is considered a *process* rather than a *level* of well-being.

Finally, these results also suggest for a number of areas in which more research will be needed. First of all, the finding that the effects of democracy on development (particularly economic) differed between different time periods gives some support to the idea that this relationship may be history and time-dependent (Elgström 2002; Gerring *et al.* 2012). This possibility could be further analysed with data covering a longer period of time. Second, the significance of some of the regional dummy variables also suggests that this relationship could vary across space. As such, future studies could also include more regional-specific variables, such as cultural and institutional indicators (Knack 2003), to further analyse this impact on country-level differences in development. Moreover, while this study has found support for a linear relationship between democracy and development, there is also the possibility of a nonlinear relationship, which could be further analysed (Barro 1996). Finally, this study has only analysed the effects *of* democracy *on* human development. As stated in the beginning of this paper, the reverse causality of human development affecting democratisation is also possible. Since previous research on democracy and economic development has found support for both directions of causality (Barro 1996; 1999), the possibility of an interrelated relationship between democracy and human development also seems likely. More research, including case studies and qualitative methodologies, would be one way to further investigate this issue of causation.

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Appendix

TABLE 10: Countries included in the regressions

SUB-SAHARAN AFRICA			
	Not Free	Partly Free	Free
High HDI			
Medium HDI	Republic of the Congo, Gabon, Swaziland		Botswana, Cape Verde, Ghana, Namibia, Seychelles, South Africa
Low HDI	Angola, Cameroon, Chad, Democratic Republic of the Congo, Cote d'Ivoire, Guinea, Rwanda	Burkina Faso, Central African Republic, The Gambia, Guinea- Bissau, Kenya, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Niger, Nigeria, Sierra Leone, Tanzania, Togo, Uganda, Zambia	Benin, Lesotho, Sao Tome and Principe, Senegal
MIDDLE EAST AND NORTH AFRICA			
	Not Free	Partly Free	Free
High HDI	Qatar		
Medium HDI	Algeria, Egypt, Iraq, Syria, Tunisia	Jordan, Morocco	
Low HDI	Djibouti, Sudan, Yemen		
ASIA AND THE PACIFIC			
	Not Free	Partly Free	Free
High HDI		Singapore	Japan, South Korea
Medium HDI	Cambodia, China, Iran, Laos, Vietnam	Bhutan, Fiji, Malaysia, Maldives, Philippines, Sri Lanka, Thailand	India, Indonesia, Federated States of Micronesia, Mongolia
Low HDI	Afghanistan	Bangladesh, Nepal, Pakistan, Papua New Guinea, Timor-Leste	

EUROPE, NORTH AMERICA AND OCEANIA			
	Not Free	Partly Free	Free
High HDI			Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States
Medium HDI	Belarus, Kazakhstan, Russia, Tajikistan, Turkmenistan, Uzbekistan	Armenia, Bosnia and Herzegovina, Georgia, Kyrgyzstan, Moldova	Albania, Bulgaria, Croatia, Latvia, Macedonia, Portugal, Romania, Turkey, Ukraine
Low HDI			
LATIN AMERICA AND THE CARIBBEAN			
	Not Free	Partly Free	Free
Low HDI			
Medium HDI		Colombia, Guatemala, Honduras, Nicaragua, Venezuela	Argentina, Belize, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guyana, Jamaica, Mexico, Panama, Paraguay, Peru, Saint Lucia, Suriname, Trinidad and Tobago, Uruguay
Low HDI		Haiti	

Note: Based on country-level average data for 2005-2010. Countries with an inverted political rights and civil liberties average between 1.0 and 2.9 are classified as “Not Free”, between 3.0 and 4.9 as “Partly Free”, and between 5.0 and 7.0 as “Free” (Freedom House 2012b). HDI values between 0.000 and 0.499 are classified as “Low Human Development”, between 0.500 and 0.799 as “Medium Human Development”, and between 0.800 and 1.000 as “High Human Development”. For each regression, only countries with available data for all the variables are included.