

**Democratic Quality and Human
Development in Latin America: 1972-2001**
David Altman y Rossana Castiglioni

DOCUMENTOS DE TRABAJO ICSO
NUMERO 2 / AÑO 1 / AGOSTO 2005



facultad de ciencias
sociales e historia



Democratic Quality and Human Development in Latin America: 1972-2001

David Altman

Instituto de Ciencia Política
Pontificia Universidad Católica de Chile

Email: daltman@uc.cl

Tel: (+56-2) 354-7819

Fax: (+56-2) 354-7813

y

Rossana Castiglioni

Instituto de Investigación en Ciencias Sociales, ICSO
Universidad Diego Portales

Email: rossana.castiglioni@udp.cl

Tel: (+56-2) 676-8149

Fax : (+56-2) 676-8153

Sobre los autores:

David Altman (Ph.D. Universidad de Notre Dame) es Profesor Auxiliar del Instituto de Ciencia Política de la Universidad Católica de Chile, Editor de Revista de Ciencia Política, Vicepresidente de la Asociación Chilena de Ciencia Política y miembro del Grupo de Estudio de Ciencias Jurídicas y Políticas del Fondo Nacional de Desarrollo Científico y Tecnológico de Chile (FONDECYT). Su trabajo ha sido publicado en *Electoral Studies*, *Party Politics*, *Democratization*, *The Journal of Legislative Studies*, *Nordic Journal of Latin American and Caribbean Studies*, *International Review of Public Administration* y *PS-Political Science and Politics*, entre otros.

Rossana Castiglioni es Doctora en Ciencia Política de la Universidad de Notre Dame (EE.UU), becaria de FONDECYT y académica del Instituto de Investigación en Ciencias Sociales (ICSO) de la Universidad Diego Portales. Ha publicado artículos en *Electoral Studies*, *Latin American Politics and Society*, *Instituciones y Desarrollo*, y otras revistas especializadas. Su libro *The Politics of Social Policy Change in Chile and Uruguay: Retrenchment versus Maintenance, 1973-1998* (Nueva York & Londres, Routledge) fue publicado este año.

Abstract

This paper analyzes the connection between democracy and human development. In so doing, it examines two main questions: 1. Are democracies better than non-democracies in achieving human development? 2. Among democracies, is there a direct relationship between the actualization of civil and political rights and human development? In answering these questions, we offer a cross-national study of 18 Latin American countries from 1972 to 2001. We use Least Squares Dummy Variables (or fixed effect models) for analyzing our cross-country pooled time series data. The evidence suggests not only that democracies are better than non-democracies in fostering human development (controlling for wealth), but also that different degrees of democracy have a significant impact on human development in terms of infant mortality, illiteracy, and life expectancy.

Key words: Latin America, Quality of Democracy, Human Development, Infant Mortality, Life Expectancy, Illiteracy.

This research was founded by the FONDECYT's Projects #1040920 and #3040012.

I. Introduction

The interest in the study of human development has gained salience in the past ten or fifteen years. Part of this interest has been motivated by the realization that economic growth has not always translated into better living conditions for the citizens of developing countries. This is particularly true for Latin America in the 1990s, a region that has been plagued by what Korzeniewicz and Smith (2000) call the “empty-box syndrome.” In other words, “from a comparative perspective, economic growth in the region has not been accompanied by significant or lasting reductions in poverty and inequality” (Korzeniewicz and Smith 2000: 8).

The publication of the first Human Development Report in 1990, by the United Nations Development Programme (UNDP), gave notoriety to such concerns. In fact, these reports have fueled a growing debate around how to conceptualize and measure human development (for an extensive analysis of the conceptualization of HD see Alkire 2002). In contrast to other broader conceptualizations, in this paper we use a narrow definition of human development.¹ Following Sen, we define human development as “the process of expanding education, health care, and other conditions of human life” (Sen 1999: 41).

There are several reasons why the consideration and the promotion of human development are crucial for developing countries. Several scholars recognize that social policy² has a positive impact on domestic levels of consumption, productivity, economic growth, social cohesion, and political stability (Korzeniewicz and Smith 2000: 22; Mkandawire 2001: 12-14; Pastor and Wise 1999: 43; Rapley 1996:97). Sen’s brilliant review of the critical significance of human development is worth quoting:

What does human development do? The creation of social opportunities makes a direct contribution to the expansion of human capabilities and the quality of life. ... Expansion of health care, education, social security, etc. contribute directly to the quality of life and its flourishing. There is every evidence that even with relatively low income, a country that guarantees health care and education to all can actually achieve remarkable results in terms of the length and quality of life of the entire population ... The rewards of human development go ... well beyond the direct enhancement of quality of life, and include also its impact of people’s productive abilities and thus on economic growth on a widely shared basis. Literacy and numeracy help the participation of the masses in the process of economic expansion. ... Furthermore, there is considerable evidence that improved health care as well as nutrition also make the workforce more productive and better remunerated....[Thus,] the benefits of human development are manifest (Sen 1999: 144-145).

As a result, given its crucial importance, it is critical to examine the variables that have a positive impact on human development. This paper assesses the impact of democracy and democratic quality on human development. A democracy, or, following Dahl (1971), a polyarchy, is a political regime in which leaders are elected through free and fair elections and where most of the adult population has the right to vote and to run for public office.³ Democratic quality, in turn, is “the extent to which any given polyarchy actualizes its potential as a political regime” (Altman and Pérez-Liñán 2002: 86).⁴ In analyzing the impact of democracy and democratic quality on human development, this paper seeks to answer two main questions:

1. Are democracies better than non-democracies in achieving human development?
2. Among the regimes that we may label democratic or polyarchic, are those in which civil and political rights are actualized to their fullest potential better at addressing human development than those where reasonable levels of civil and political rights exist but are not fully actualized?

In answering these questions, we offer a cross-national study of 18 Latin American countries, from 1972 to 2001. We use Least Squares Dummy Variables (or fixed effect models) for analyzing our cross-country pooled time series data. Our database is composed of 540 observations. The evidence suggest not only that democracies are better than non-democracies in fostering human development (controlling for wealth), but also that different degrees of democracy have a significant impact on human development in terms of infant mortality, illiteracy, and life expectancy.

This paper is organized as follows: section two examines the connection between democracy and human development, section three offers the hypotheses and methods utilized in assessing their connection, the fourth section analyzes the main findings of this research, and the last section summarizes the main argument of this paper.

II. Democracy and Human Development

During the second half of the twentieth century, one of the most prolific discussions in political science was, and still is, the study of the relationship between economic development and democracy. Although many scholars such as Mills, Marx, and de Tocqueville studied this relationship, it was not until the late 1950's -with Lerner (1958) and Lipset (1959)- that this focus of attention reached its momentum. It was at this time when Lipset wrote “the more well-to-do a country in economic terms, the greater the chances to sustain a democratic government,” a

sentence that made history and that O'Donnell (1979), twenty years later, called the “optimist equation.” The “optimist equation” was based on the belief that economic development, the increase in communications, and better levels of education, tend to produce moderate tendencies in society; and consequently, more moderate lower and upper classes and a larger middle class. This context tends to produce a better ground to maintain democracy.

Rueschemeyer, Stephens and Stephens (1992) point out that from Lipset on, we can trace two main lines of research on the relationship between economic development and democracy. Both lines not only differ in the methods they use, but also in the conclusions they arrive to. On the one hand, are those who use quantitative cross-national analysis—see, for example, Cutright (1963), Huntington (1968), Bollen (1979), Bollen and Jackman (1985; 1995), Muller (1988; 1989; 1995), Przeworski *et al* (2000). On the other hand, some scholars turn to comparative historical studies—such as Bendix (1964), Moore (1966), Skocpol (1979), O'Donnell (1979) and other dependency theorists. In general, while those who study from a quantitative cross-national perspective tend to agree with Lipset's optimist equation, those who advance qualitative research claim that the relationship between modernization and democracy is much more complex.

Finally, other scholars are careful to judge this relationship (Doorenspleet 2000). Among this group, perhaps the most well known is Nobel Prize, Amartya Sen who affirms that “the directional linkage seems to depend on many other circumstances, and while some statistical investigations note a weakly negative relation, others find a strongly positive one. If all the comparative studies are viewed together, the hypothesis that there is no clear relation between economic growth and democracy in either direction remains extremely plausible” (Sen 1999: 7).

In a very similar vein, the debates about the connection between democracy and human development arrived at contrasting, and sometimes contradictory, conclusions. In reviewing this literature, Zweifel and Navia (2000) argue some scholars claim that democracies are better at addressing the needs of their citizens because they are more accountable to their populations than dictatorships. Conversely, others remark that the “unintended consequences of a premature democracy slow development and that the decisive and pervasive state intervention required for development is unduly fettered by democracy” (Zweifel and Navia 2000: 101). Still others have challenged the idea that there is a (positive or negative) relationship between democracy and human development (Zweifel and Navia 2000: 100-101).

Among those who claim that democracy has a positive impact on human development, research has often focused on assessing the impact of democracy in a single policy area, such

as infant mortality or food security (see for example Dreze and Sen 1989; Jenkins and Scanlan 2001; McGuire 2002; Zweifel and Navia 2000) or in the cross-national examination of the impact of democracy on the physical quality of living in developing nations (London and Williams 1990; Moon 1991; Wickrama and Muldorf 1996). Additionally, in the literature on social policy development in advanced industrial nations, scholars from the power resources perspective have claimed that democratic politics allow workers and diverse interest groups to shape and to push for redistributive social policy. This occurs because in democratic politics, “the principal power resources are the right to vote and the right to organize for collective action” (Korpi 1989: 312). Thus, in this view political and civil rights are essential for social policy development.

Perhaps the most seminal contribution to our knowledge of the connection among civil, political and, social rights was elaborated by T.H. Marshall. In his study of citizenship in Western European countries, Marshall argued that the expansion of civil rights first and then political rights, facilitated the ensuing extension of social rights. The formative period of civil rights was the 18th century and they included individual freedoms such as speech, thought and faith, property rights and the right to justice. Political rights, in turn, expanded in the 19th century and included the right to participate in the exercise of political power, by running and voting for office. Finally, social rights developed in the 20th century and included “a modicum of economic welfare and security, to the right to share to the full in the social heritage and to live the life of a civilized being according to the standards prevailing in the society” (Marshall 1992: 8).

The crucial aspect of Marshall’s contribution (at least for the purposes of this paper) is that civil and political rights are considered critical for the extension of social rights, as they allow those actors who favor redistributive social policy, to organize and to push for new or better benefits. As he remarks,

civil rights became, for the workers, an instrument for rising their social and economic status, that is to say for establishing the claim that they, as citizens, were entitled to certain social rights. But the normal method of establishing social rights is by the exercise of political power, for social rights imply an absolute right to a certain standard of civilization which is conditional only on the discharge of the general duties of citizenship (Marshall 1992: 26).

This is not to say, however, that social rights, and the concomitant promotion of human development, are introduced solely after a reasonable expansion of civil and political rights has occurred. In fact, for a variety of reasons, there are several examples of the introduction of social rights by authoritarian governments. In Europe, for instance, Germany’s Chancellor Bismarck, extended social rights to avoid granting political rights as well as to consolidate

divisions among wage-earners and to instill loyalty to the state authority (Esping-Anderson 1990: 24; Rimlinger 1971: 112). In the same vein, some of the authoritarian governments of the East Asian “dragons” introduced minimum social rights to boost productivity and economic growth as well as to gain political legitimization (Holliday 2000: 708; Moon and Yang 2002: 151). And in Latin America, several countries followed a “populist pattern” though which some rather limited social rights were granted, before political and civil rights were acquired (O'Donnell 2001: 603).

As a result, one can hardly claim that the civil and political rights associated with democracy are a *precondition* for the development of social rights. Yet, civil and, particularly, political rights offer citizens the opportunity to organize, mobilize, and push for better living conditions. As O'Donnell has emphasized, political rights can be “used as a space of freedom from which to conquer other rights. ... This possibility, which originates in the availability of political rights, is denied by all kinds of authoritarian rule. ... It is a possibility uniquely offered by democracy, through the political rights it enacts, to those who suffer truncated social and civil rights” (Moon and Yang 2002: 605).

By the same token, Przeworski *et al* (2000) show that dictatorships restrict the opportunities for citizen's dissent and have a negative impact on some critical social variables, such as life expectancy and infant mortality. They emphasize that

although democracies are far from perfect, lives under dictatorship are grim and short. Dictatorships are regimes in which political rulers accede to power and maintain themselves in power by force. They use force to prevent people from expressing their opposition and to repress workers. Because they rule by force, they are highly vulnerable to any visible sign of dissent. ... Thus, whereas scarcity makes lives destitute, regimes do make some difference, not only for political liberty but also for material well-being (Przeworski *et al* 2000).

In this regard, the process of democratization in Latin America, which brought with it the opening of civil and political liberties significantly curtailed under bureaucratic authoritarian regimes, may have had a positive impact on human development.

Thus, in the following section we intend to examine whether Latin American democracies fared better than authoritarian regimes in the expansion of education, health care, and other conditions of human life (i.e. human development). We also plan to assess if those democracies that have been able to actualize to a fuller extent their civil and political rights have been more successful in expanding human development than those democracies with more limited civil and political rights.

III. Variables and Hypotheses

This research seeks to examine whether democracies fare better than authoritarian regimes in the expansion of human development. It also assesses whether different “degrees” of democracy have an impact on human development. In order to analyze these two issues, we dealt with a database built upon eighteen Latin American countries since 1972. The countries included in this analysis are the following: Argentina, Bolivia, Brazil, Chile, Costa Rica, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. This database is composed by 540 observations and we count on time series as our main statistical tool. We use Least Squares Dummy Variables (or fixed effect models) for analyzing our cross-country pooled time series data.

Our dependent variable, Human Development, is comprised by a rather a fuzzy set of policies that is hard to capture with a single unidimensional variable. Although the expansion of social opportunities calls for the incorporation of a variety of variables, for most Latin American countries it is extremely difficult to find historical series to exhaustively cover all relevant policy areas. Due to the poor quality and scarce amount of data available for Latin American countries we decided to include those indicators for which it was possible to count on reliable and extensive information. Therefore, we opted to rely on three basic indicators for three key policy areas: education, health, and hunger.

We rely on three different databases from the World Bank, the Pan-American Health Organization, and the Centro Latinoamericano de Demografía.⁵ The chosen indicators are *adult illiteracy* (as percentage of people 15 and older), *life expectancy* (in years), and *infant mortality* rate (per 10,000 births) as a hunger proxy.⁶ Given the presence of missing data in the country series, interpolations were done in order to fill the gaps between two non-continuous years. For instance: if life expectancy in any given country was 65.8 for year 1980 and 66 for year 1982, we assumed that life expectancy for year 1981 was 65.9. If the gaps were larger than one year we left them as missing values.

Given that we utilize three different indicators (*illiteracy*, *infant mortality*, and *life expectancy*) to capture our dependent variable human development and that we want to study the impact of regime type and democratic quality on human development, we have six models to check. In the following paragraphs we describe the main hypotheses guiding our research as well as the indicators used to measure each independent variable.

Our first hypothesis is that *democratic regimes are better than non-democratic regimes in achieving human development*. The logic behind this hypothesis is that democracies allow their citizens to freely organize, mobilize, and press the government for new or better social benefits. Under democracies, citizens are more likely to denounce and punish their governments for their shortcomings and the government's continuation depends on electoral politics. As a result, democratic governments are more accountable than non-democracies and politicians have more incentives to address the needs of the population. Having operationalized human development, we need to define the "regime" component of this hypothesis.

Although there are several measurements of regimes (see Munck and Verkuilen 2002), it is clear that the operationalization of this concept is not straightforward. Perhaps this is simply because democracy is "probably the most complex concept in political science. It has not been and may never be measured in all its many-faceted, multidimensional glory" (Coppedge 2002: 35). While several measures of regimes are currently used by political scientists, most of them are highly correlated (Ward 2002).⁷ We opted to use the widely known *polity* variable of Polity IV (Marshall and Jaggers 2001) because it offers the widest variation in its measurement level.⁸ The *polity* variable oscillates from -10 (high autocracy) to 10 (high democracy).

Of course one may suspect that the richer a country is, the higher its chances to become democratic (Marshall and Jaggers 2001) and the better equipped democracy is to address its citizens' needs. As Przeworski *et al* (2000) have argued "what matters for individual well-being is the growth of each person's income and consumption, rather than the development of the aggregate economy" (p. 216). Additionally, most students of advanced industrial democracies agree with Wilensky that "economic level [measured as GNP per capita] is the root cause of welfare development" (Wilensky 1975: 47). Scholars who analyze developing countries, however, often recognize that economic growth is a necessary but not sufficient condition to promote human development and to reduce poverty and inequality (Karl 2000: 154; Korzeniewicz and Smith 2000: 17; Mkandawire 2001: 4; Zweifel and Navia 2000: 99). Therefore, we decided to examine the relationship between democracy and human development controlling for income level. In other words, *human development is consistently higher in democracies than in other types of regime, controlling for income level*. In testing this hypothesis we include two variables of control: GDP per capita (current international Dollars) and variation in GDP per capita income (i.e., the rate of economic growth). These data were obtained from the World Development Indicators database for 1972-2001 (2001).⁹

The second hypothesis addresses the relationship between democratic quality and human development. *Among democratic regimes, those that actualize civil and political rights to a fuller extent, are better in addressing human development.* As Mainwaring (1999) has remarked, some Latin American countries still have “restricted democracies.” A restricted democracy “has a civilian government elected under reasonably fair conditions, but it also has significant restrictions on participation, competition, or the observance of civil liberties, or it has ... policy arenas that should be, but are not, under the control of the elected government” (Mainwaring 1999: 102). The existence of these restrictions harms accountability and hinders the ability of citizens to challenge governmental policies.

Our third hypothesis is related with citizens’ electoral participation. *The more citizens’ participate, the more the expansion of human development.* Although most scholars would agree that voter turnout should not be part of a definition of democracy, many others have argued that turnout is an important dimension of the *quality* of democratic life. The quality of the democracy is related to electoral participation in several ways. First, participation may be considered a value in itself, as it has been emphasized by “participationists” (Pateman 1970). Second, even “an elitist” vision (v.g., schumpeterian) of democracy would consider high electoral participation as a factor that improves the democratic life. Finally, high levels of participation may prompt accountability as they involve more voters using their resources for political control (Texeira 1987). In other words, “greater participation – whether it is voluntary or encouraged by compulsory vote – makes democratic governments responsive to a larger share of the population” (Altman and Pérez-Liñán 2002: 88).

Since all democracies are organized on the base of regular elections as the procedure for the selection of government, the possibility of voting in national elections constitutes the common denominator that characterizes all polyarchies (Altman and Pérez-Liñán 1999). Therefore we adopt the levels of electoral participation as the standard measurement for actual political participation. Although it is undeniable that participation could adopt many other forms, these become more meaningful when citizens are able to directly affect the formation of government and the exercise of power. Because low turnout in Latin America is typically related to low levels of voter registration this study measures turnout as the number of voters over the voting-age population (VAT). Data comes from López Pintor and Gratschew (2002).

IV. Statistical Analysis

This section has two main objectives. On the one hand, we intend to examine whether in general terms democracies fare better than authoritarian regimes in the expansion of human development in terms of illiteracy, life expectancy, and infant mortality. On the other hand, we assess whether different “degrees” of democracy and electoral turnout have an impact on human development. A first look at the database tells us that Latin America still is an extremely diverse region in terms of the indicators we are dealing with (see Table 1 for a basic summary of the variables involved in the study).

<Table 1 about here>

Before turning to the analysis, we should be aware that there are a series of intrinsic problems using cross-country pooled time series data. Among them, autocorrelation and heteroscedasticity are the most important. Heteroscedasticity means that “some units are inherently more variable than others at all times. Such differential variability is usually of modest concern in unpooled data because it affects only a single case at a time. In pooled data it is likely to affect whole sets (e.g. all years for one region) and have considerably greater potential for mischief” (Stimson 1985: 919). Moreover, “since it is unlikely that units are statistically unrelated over time, BTSCS observations, like their continuous dependent variable TSCS cousins, are likely to be temporally dependent. *It is well known that violations of the assumption of independent observations can result in overly optimistic inferences (underestimates of variability leading to inflated t-values)*” (Beck, Katz, and Tucker 1998: 1261, italics are ours). To correct for these errors we estimated fixed effect models (also known as Least Squares Dummy Variables) with STATA’s *xtreg fe i()* command.

Table 2 reports the regression estimates for all the models under consideration. We introduce the command *c(ar1)* to correct for autocorrelation. Each model regresses *polity*, GDP per capita, GDP per capita growth, and one dummy variable per country—being Uruguay the reference group—on infant mortality, illiteracy, and life expectancy respectively. Overall, the models are very robust and there are no major surprises besides the opposite signs of one of the independent variables hypothesized to be relevant to explain change in each of the dependent variables (GDP per capita growth). Although *turnout* and *polity* are theoretically independent, they are related in empirical terms and therefore, we dropped *turnout* from these regressions because of its high correlation with the variable *polity* (.781 significant at the .01 level, 2-tailed). *Polity* and GDP per capita came up systematically statistically significant and with the expected signs.

<Table 2 about here>

The evidence suggest that the more democratic a regime is, the more it fosters the life expectancy of its inhabitants and the more it reduces illiteracy and infant mortality rates. Thus, it suggests that democracies are better than non-democratic regimes in addressing human development. As regard for the dummy variables, most of them in the three models came up significantly. Therefore, controlling for levels of democracy, GDP per capita, and GDP per capita growth, there is a variation that we did not explain simply with the independent variables other than the dummies. Accounting for each dummy would require an analysis that its outside the scope of this paper, but in any case, we have accounted for each country in statistical terms. Once we control for levels of democracy, GDP per capita, and GDP per capita growth, the former countries have the same level at the dependent variable than Uruguay, which is the reference point.

In the Figures 1 and 2 we represent the predicted value of infant mortality, and life expectancy as the variable polity changes. We have included the country lines based on the different coefficients given by the dummy variables for the two countries whose dummies were at the extremes in relation with Uruguay. In order to correctly interpret the lines, we should bare in mind that if a country line is below or above the reference group (Uruguay) it does *not* mean that this country has a higher or lower level of infant mortality, illiteracy, or life expectancy than Uruguay. These lines simply represent the hypothetical level of any given country in terms of the dependent variable if this country had the same level of democracy and GDP per capita and GDP growth than Uruguay.

<Figure 1 about here>

<Figure 2 about here>

Democratic Subset

Given that the variable *polity* does not establish a clear cutting point between democracies and non-democracies, we suspect that the previous relationships might be given by a contrast of two major groups (democratic vs. non-democratic) rather than by differences of degrees among them. As we stated before, the second question of this research inquires whether those democracies in which civil and political rights are actualized to their fullest potential fare better at addressing human development than those where reasonable levels of

civil and political rights exist but are not fully actualized. In other words, we are also interested in studying whether within the realm of democracies, those that we might consider of better quality advance human development more than those of lower quality. Therefore, we proceed to study the subset of democracies in our database leaving aside those that are not democracies.

Of course, given the lack of a precise cutting point between democratic and non-democratic regimes in the Polity IV database we were forced to establish one. We are aware that “instruments designed to grade regimes in a wide range between full authoritarianism and full democracy might lack sensitivity to discriminate within the pool of polyarchies clustered at one extreme of the range” (Altman and Pérez-Liñán 2002: 86). Since we still lack measures to deal solely with the democratic subset of regimes for the countries during the period under consideration, we decided to establish a criterion for accounting for democracies only. In consequence, we divided the variable *polity*, which is a 21 point scale, into three sections: a group of clear authoritarian regimes (from -10 to -5), a group of mixed regimes (from -4 to 4), and finally a group of democracies (from 5 to 10). By way of a series of boxplots we can grasp the nature of the relationship between regime type and the dependent variables under consideration (see Figures 2 to 4). Each box shows the median, quartiles, and extreme values within a category of regime. The most interesting aspect of these figures is the poor performance of the hybrid regimes in terms of illiteracy, life expectancy, and infant mortality.

<Figure 3 about here>

<Figure 4 about here>

<Figure 5 about here>

Once the subset of democratic regimes was selected we tested whether different degrees of democracy have an impact on human development (measured the same way than in the previous section of the statistical analysis). One of the problems with this exercise is that the number of observations is significantly reduced, albeit it remains large enough for statistical inferences. Table 3 reports the regression estimates for all the models under consideration. Each model regresses *polity*, GDP per capita, GDP per capita growth, turnout, and a dummy per country (Uruguay being the reference group) on infant mortality, illiteracy, and life expectancy for democracies alone. The previous problem of the high correlation between *polity* and turnout is drastically reduced. With this subset of regimes, the Pearson correlation between turnout and *polity* is .216 significant at the .01 level, 2-tailed, n=272.

Overall, the new models perform even better (see Table 3) than the previous in terms of r-squares. For the dependent variables *infant mortality* and *illiteracy* the independent variable GDP per capita growth came not statistically significant from zero and turnout was not statistically significant in any of the models. GDP per capita growth came up significant and with the expected sign only when regressed against life expectancy. Regime level was not significant in the illiteracy model. Let us address each model by itself.

<Table 3 about here>

In the Model 1 on *Infant mortality*: While two of the independent variables, polity and GDP per capita, came up highly significant and with the expected signs, the other two, GDP per capita growth and turnout were not. Running the same model with the STATA options *c(ar1)* and *hetonly* but without the dummies for countries, the R2 is equal to .8085. The difference in R2s with and without dummies is 0.12. This difference, which is small in relative terms, is the value added in including the dummies. As regard to the model on *illiteracy*, one of the most interesting aspects is that the variable polity was not statistically discernible from zero. The economic variables of control, in a consistent way across models, came up significant, but with opposed signs. All dummies are statistically significant, therefore controlling for the independent variables, other than the dummies, we could infer that each country is significantly different than the reference group. These systematic differences between each country dummy and the reference group explains the significant difference in R2s running the model with and without dummies. The difference between these two models is about 22% and without the dummies the R2 decreases to 0.72. Finally, for the *life expectancy* model, the difference between running the model with or without dummies is almost nil (only 0.05).

In Figures 6 and 7 we again represent the predicted value of infant mortality and life expectancy, as the variable polity changes. The difference is that this time we just consider the democratic subset of countries. We have included the country lines based on the different coefficients given by the dummy variables for the two countries whose dummies were at the extremes in relation with Uruguay.

<Figure 6 about here>

Again, if a country line is below or above the reference group (Uruguay) it does *not* mean that this country has a higher or lower level of the dependent variable. For example in Figure 6, if Bolivia had had the same level of democracy and GDP per capita than Uruguay, it would have

an infant mortality rate of 85/10,000 at a polity level of 5 but this value would drop to 74/10,000 at the maximum value of polity. The same reasoning would apply for the predicted value of life expectancy, see Figure 7 below.

<Figure 7 about here>

V. Conclusions

The evidence suggests, as previously hypothesized, not only that democracies are better than non-democracies in fostering human development controlling for wealth (GDP per capita), but also that differences in the degree of democracy have a significant impact on human development in terms of infant mortality, illiteracy, and life expectancy. In other words, the more democratic a regime is along the continuum full authoritarianism to full democracy, the better it will perform in terms of human development. As a result, this research shows that there is a direct, positive relationship between democratic quality and human development.

Our findings for Latin America are consistent with the conclusions of previous cross-national research on developing countries about the connection between regime type and human development. Under democratic regimes, individuals tend to live longer and better lives than under non-democratic regimes. But in contrast to other studies, this research also shows that democratic quality makes a difference in terms of human development. Those democracies that actualize civil and political rights to their fullest potential, have better chances of expanding human development than “restricted democracies.”

Besides telling us something we democrats, want to believe, this finding is relevant in terms of policymaking and not trivial at all. It does make a difference to have a democratic regime, but more important, it does make a big difference to have a “good” democratic regime. Nowadays, most Latin American countries have reached the minimum electoral and procedural requirements for being considered democracies. Many of these countries, however, still fall far away from a democracy of high quality. As a result, the elimination of the significant restrictions on participation, competition, and civil liberties mentioned by Mainwaring (1999) seems crucial for the promotion of human development.

Other findings of this research are surprising. First, among democratic regimes, GDP per capita growth does not have a significant impact on human development. This finding seems to provide further evidence that earlier “trickle down,” growth first approaches to human development that suggested that economic growth would nearly automatically bring with it well-being were misleading and insufficient. Second, voter turnout does not seem to affect human

development. This finding is more difficult to interpret. Perhaps, as students of welfare development in advanced industrial democracies have suggested, we need to turn our attention to additional variables related to some key power resources, such as the ability of different social groups to organize for collective action. As a result, future research should examine other factors such as the strength of right and left wing parties, the degree to which labor is capable of building cross-class political coalitions, and the strength and organizational capacities of trade unions and interest groups (Esping Andersen and van Kersbergen 1992: 191; Esping Andersen 1990: 30; Huber *et al* 1993: 718; Korpi 1989: 323).

Table 1: Summary Indicators

Variables		Obs.	Mean	Standard Deviation	Minimum Value	Maximum Value
Independent Variables	Polity	491	2.85	6.53	-9	10
	GDP Per Capita	483	4095.17	2252.94	884	12600
	GDP Per Capita Growth	537	.97	4.52	-29	20
	Turnout	531	.45	.32	0	.961
Dependent Variable	Infant Mortality	355	46.47	26.52	10.1	151
	Life Expectancy	308	66.22	5.77	46.7	77.5
	Illiteracy	522	18.85	12.06	2.3	53.2

Table 2: Latin America 1972-1999. Panel Corrected Standard Error: Coefficients and Standard Errors

	Infant Mortality		Illiteracy		Life Expectancy	
N	305		436		265	
R ²	0.906 [.798 without dm]		0.938 [.724 without dm]		0.996 [.989 without dm]	
Rho	0.910		0.908		0.920	
Polity	-.506*** (.138)		-.059*** (0.014)		.083*** (0.025)	
GDP P/C	-.004*** (.000)		-.001*** (0.000)		.0010*** (0.000)	
GDP P/C Growth	.117* (.050)		.026*** (0.008)		-.028** (0.011)	
Argentina	12.757*** (2.116)		3.961*** (8.886)		3.562*** (0.383)	
Bolivia	51.400*** (7.717)		17.221*** (2.304)		-11.965*** (1.619)	
Brazil	28.634*** (3.240)		16.573*** (1.131)		-6.680*** (0.535)	
Costa Rica	-4.238 (3.347)		2.876*** (0.565)		2.405*** (0.639)	
Chile	-6.332* (3.128)		1.912*** (0.527)		1.307 (0.678)	
Colombia	3.021 (2.571)		7.835*** (0.996)		-3.242*** (0.736)	
Ecuador	18.914** (7.271)		23.603*** (1.599)		-5.386** (1.712)	
El Salvador	16.180** (5.575)		7.089*** (1.467)		-3.350*** (1.016)	
Guatemala	27.655*** (4.905)		34.403*** (1.747)		-8.224*** (1.144)	
Honduras	16.921** (5.663)		26.911*** (1.772)		-5.430*** (1.353)	
Mexico	13.944*** (1.581)		10.479*** (1.010)		-2.411*** (0.683)	
Nicaragua	20.579*** (6.137)		31.057*** (1.361)		-5.649*** (1.599)	
Panama	-9.069*** (1.635)		6.520*** (1.077)		1.915** (0.653)	
Paraguay	-1.676 (2.386)		4.490*** (1.094)		-1.161** (0.445)	
Peru	27.346*** (6.505)		11.663*** (1.569)		-6.036*** (1.434)	
Dominican Rep.	22.833*** (4.369)		15.657*** (1.392)		-4.569*** (0.850)	
Venezuela	1.377 (2.269)		8.505*** (1.234)		-1.229 (0.711)	
Constant	55.295*** (2.885)		11.248*** (.980)		65.584*** (8.742)	

***p<.001, **p<.01, *p<.05

Table 3: Prais-Winsten Regression, Heteroskedastic Panels Corrected Standard Errors: Coefficients and Standard Errors

	Infant Mortality		Illiteracy		Life Expectancy	
N	199		276		164	
R ²	.926 [.808 dm]	without	.942 [.720 dm]	without	.997 [.992 dm]	without
Rho	.849		.873		.739	
Polity IV	-2.261**	(0.832)	-.081	(0.089)	.365**	(0.164)
GDP Per Capita	-.004***	(0.000)	-.0009***	(0.000)	.001***	(0.000)
GDP Per Capita Growth	.054	(0.059)	.020*	(0.009)	-.003	(0.016)
Turnout	-2.459	(2.245)	-.362	(0.272)	-.276	(0.828)
Argentina	8.917**	(3.184)	2.473**	(0.897)	-3.198***	(0.766)
Bolivia	40.402***	(5.758)	14.478***	(1.791)	-8.773***	(1.019)
Brazil	18.383***	(3.067)	14.394***	(0.840)	-5.175***	(0.556)
Costa Rica	-7.102*	(3.060)	2.273***	(0.680)	3.575***	(0.556)
Chile	-12.296***	(3.371)	1.785*	(0.782)	2.151**	(0.682)
Colombia	-2.553	(2.869)	7.383***	(0.859)	-1.602*	(0.725)
Ecuador	1.024	(4.499)	19.994***	(1.223)	-1.663	(1.091)
El Salvador	8.930	(4.681)	6.243***	(1.125)	-1.115	(0.725)
Guatemala	3.810	(3.346)	27.005***	(1.377)	-4.269***	(0.745)
Honduras	2.745	(5.145)	23.758***	(1.451)	-1.562	(0.986)
Mexico	5.582	(3.343)	6.911***	(0.630)	-.215	(0.744)
Nicaragua	-3.597	(3.855)	27.840***	(0.953)	.402	(0.919)
Panama	-8.700***	(2.240)	4.515***	(0.608)	3.204***	(0.531)
Paraguay	-12.497***	(3.734)	2.257**	(0.811)	.257	(0.817)
Peru	27.492***	(6.043)	10.807***	(1.344)	-4.518***	(0.968)
Dominican Rep.	14.673***	(4.525)	15.036***	(1.009)	-2.286**	(0.819)
Venezuela	-2.677	(2.627)	8.009***	(1.091)	.230	(0.556)
Constant	74.471***	(8.541)	11.054***	(1.151)	61.160***	(1.777)

***p<.001, **p<.01, *p<.05

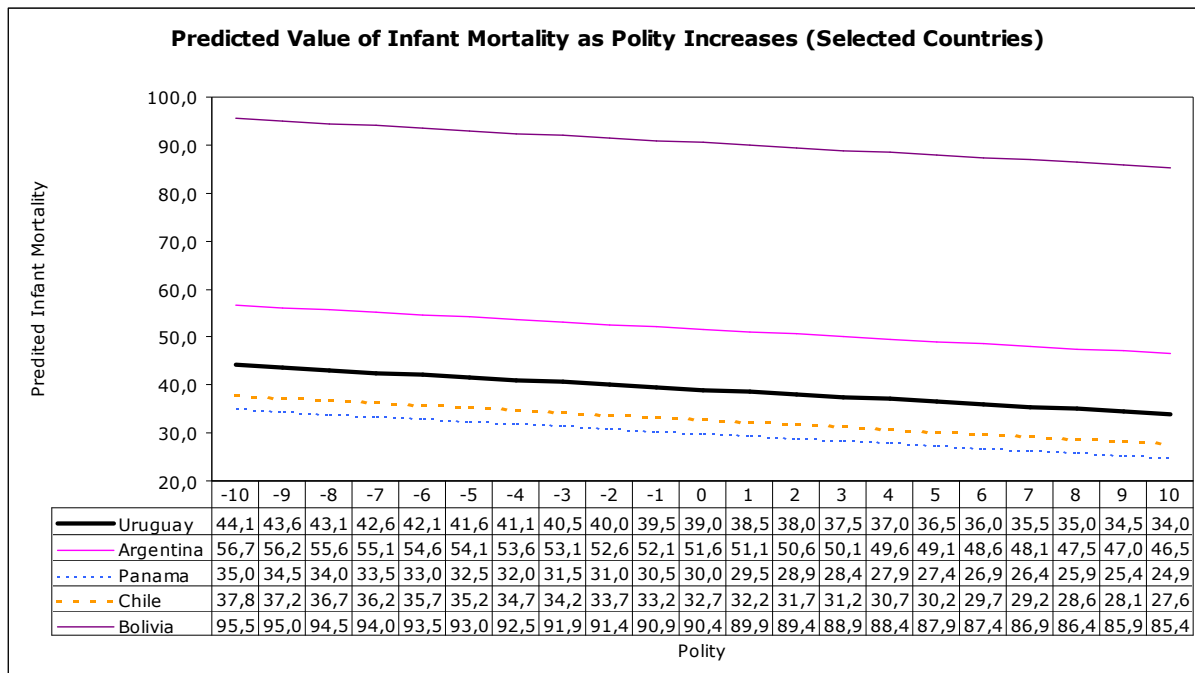


Figure 1: Predicted Value of Infant Mortality as Polity Increases (Selected Countries)

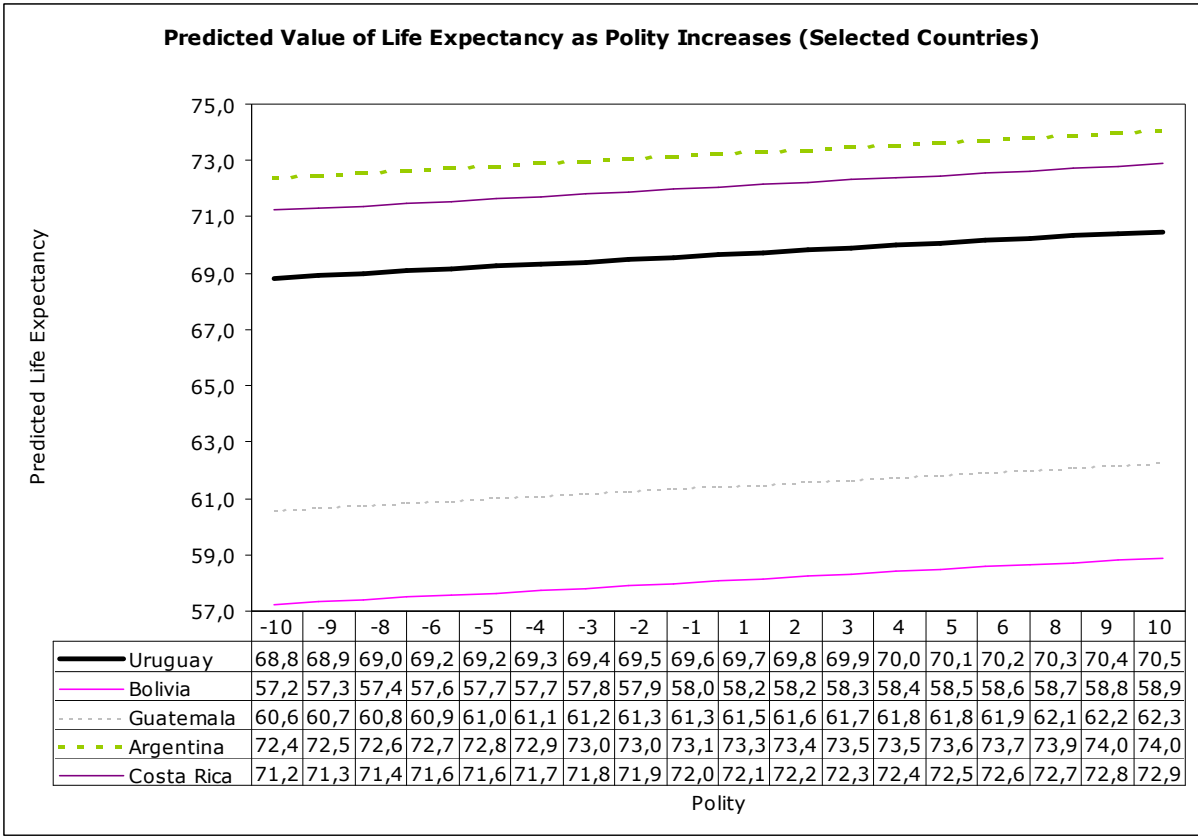


Figure 2: Predicted Value of Life Expectancy as Polity Increases (Selected Countries)

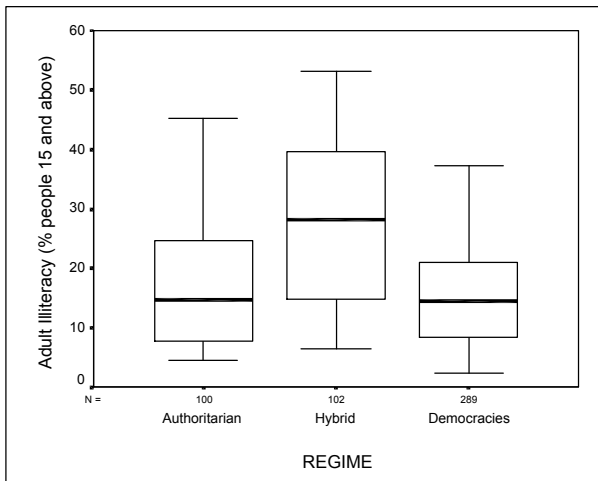


Figure 3: Adult Illiteracy by Type of Regime

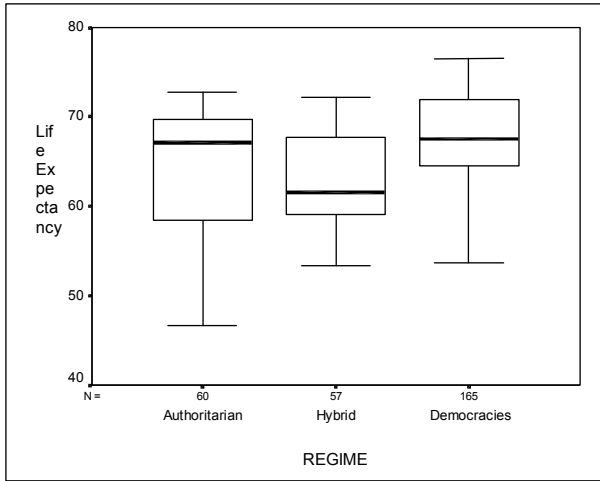


Figure 4: Life Expectancy by Type of Regime

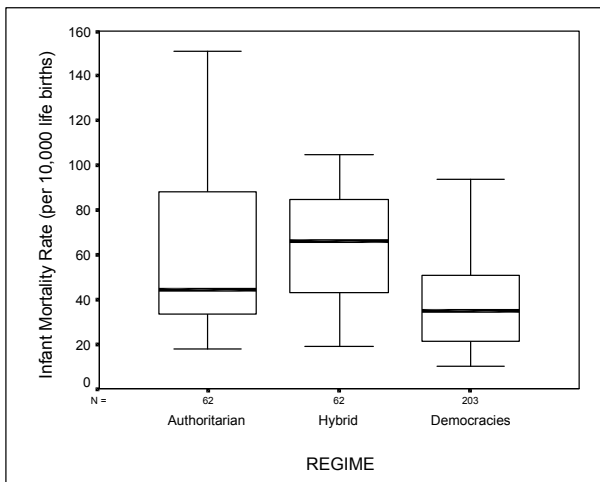


Figure 5: Infant Mortality by Type of Regime

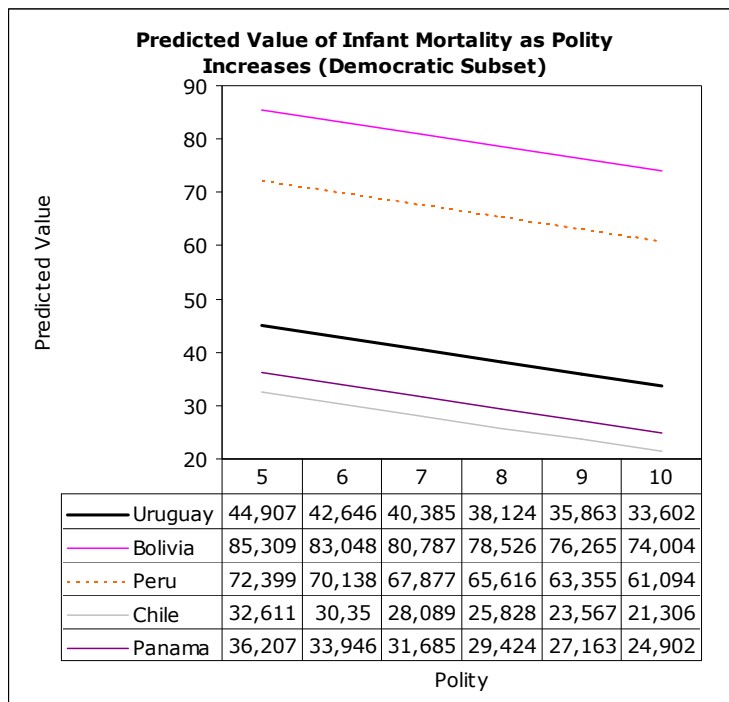


Figure 6: Predicted Value of Infant Mortality as Polity Increases

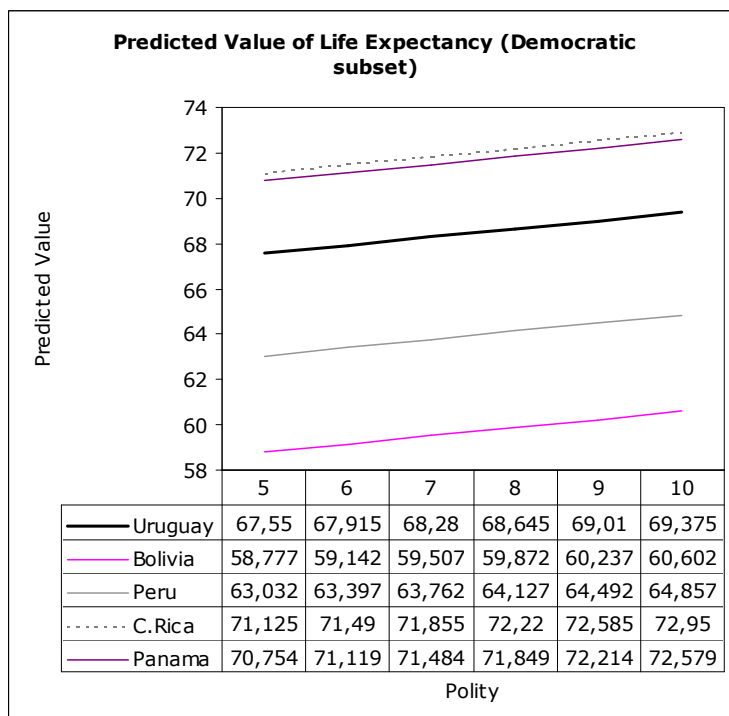


Figure 7: Predicted Value of Life Expectancy (Democratic Subset)

REFERENCES

- Alkire, Sabina. 2002. "Dimensions of Human Development." *World Development* 30 (2): 181-205.
- Altman, David and Aníbal Pérez-Liñán. 1999. "Más Allá de la Poliarquía: Midiendo la Calidad de las Democracias." *Revista Uruguaya de Ciencia Política* 11 83-105.
- Altman, David and Aníbal Pérez-Liñán. 2002. "Assessing the Quality of Democracy: Freedom, Competitiveness, and Participation in 18 Latin American Countries." *Democratization* 9 (2): 85-100.
- Beck, Nathaniel, Jonathan Katz, and Richard Tucker. 1998. "Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable." *American Journal of Political Science* 42 (4): 1260-1288.
- Bendix, Reinhard. 1964. *Nation Building and Citizenship*. New York: John Wiley & Sons Inc.
- Bollen, Kenneth A. 1979. "Political Democracy and the Timing of Development." *American Sociological Review* 44 (4): 572-587.
- Bollen, Kenneth A. and Robert W. Jackman. 1985. "Political Democracy and the Size Distribution of Income." *American Sociological Review* 50 (4): 438-457.
- Bollen, Kenneth A. and Robert W. Jackman. 1995. "Income Inequality and Democratization Revisited: Comment on Muller." *American Sociological Review* 60 (6): 983-989.
- Coppedge, Michael. 2002. "Democracy and Dimensions: Comments on Munck and Verkuilen." *Comparative Political Studies* 35 (1): 35-39.
- Cutright, Phillip. 1963. "National Political Development: Measurement and Analysis." *American Sociological Review* 28 (2): 253-264.
- Dahl, Robert. 1971. *Polyarchy: Participation and Opposition*. New Haven: Yale University Press.
- Diamond, Larry. 1996. *Is the Third Wave of Democratization Over?* Stanford: Hoover Institution.
- Diamond, Larry. 1999. *Developing Democracy: Toward Consolidation*. Baltimore: The Johns Hopkins University Press.
- Doorenspleet, Renske. 2000. "Development and Democracy: Power and Problems of Empirical Research." Presented at the *ECPR Joint Sessions*, April 14-19, Copenhagen.

- Dreze, Jean and Amartya Sen. 1989. *Hunger and Public Action*. New York: Oxford University Press.
- Esping-Andersen, Gøsta. 1990. *The Three Worlds of Welfare Capitalism*. New Jersey: Princeton University Press.
- Esping Andersen, Gøsta and Kees van Kersbergen. 1992. "Contemporary Research on Social Democracy." *Annual Review of Sociology* 18 187-208.
- Freedom House, FH. 2002. "Freedom in the World Country Ratings: 1972-73 to 2001-2002." Retrieved from <http://freedomhouse.org/research/freeworld/FHSCORES.xls>.
- Frey, Bruno S. and Alois Stutzer. 2000. "Happiness Prospers in Democracy." *Journal of Happiness Studies* 1 (1): 79-102.
- Graham, Carol and Stefano Pettinato. 2001. "Happiness, Market, and Democracy: Latin America in Comparative Perspective." *Journal of Happiness Studies* 2 (3): 237-268.
- Holliday, Ian. 2000. "Productivist Welfare Capitalism: Social Policy in East Asia." *Political Studies* 48 (4): 706-723.
- Huntington, Samuel. 1968. *Political Order in Changing Societies*. New Haven: Yale University Press.
- Jenkins, J. Craig and Stephen J. Scanlan. 2001. "Food Security in Less Developed Countries, 1970 to 1990." *American Sociological Review* 66 (5): 718-744.
- Karl, Terry Lynn. 2000. "Economic Inequality and Democratic Instability." *Journal of Democracy* 11 (1): 149-156.
- Korpi, Walter. 1989. "Power, Politics, and State Autonomy in the Development of Social Citizenship: Social Rights during Sickness in Eighteen OECD Countries since 1930." *American Sociological Review* 54 (3): 309-328.
- Korzeniewicz, Roberto Patricio and William C. Smith. 2000. "Poverty, Inequality, and Growth in Latin America." *Latin American Research Review* 35 (3): 7-54.
- Lerner, Daniel. 1958. *The Passing of Traditional Society*. New York: Free Press.
- Lipset, Seymour Martin. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review* 53 (1): 69-105.
- London, Bruce and Kirk Williams. 1990. "National Politics, International Dependency, and Basic Needs Provision: A Cross-National Analysis." *Social Forces* 69 (2): 565-584.

- López Pintor, Rafael and Maria Gratschew. 2002. *Voter Turnout from 1945: A Global Report*. Stockholm: IDEA: Institute for Democracy and Electoral Assistance.
- Mainwaring, Scott. 1999. "The Surprising Resilience of Elected Governments." *Journal of Democracy* 10 (3): 101-114.
- Mainwaring, Scott, Daniel Brinks, and Aníbal Pérez-Liñán. 2001. "Classifying Political Regimes in Latin America 1945-1999." *Studies in Comparative International Development* 36 (1): 37-65.
- Marshall, Monty G. and Keith Jagers. 2001. "Polity IV project: Political Regime Characteristics and Transitions, 1800-1999." Retrieved from: <http://www.bsos.umd.edu/cidcm/polity/>.
- Marshall, T. H. 1992. "Citizenship and Social Class." In *Citizenship and Social Class*, edited by T. H. Marshall and T. Bottomore. London: Pluto Press, Pp. 3-51.
- McGuire, James W. 2002. "Democracy, Social Provisioning, and Under-5 Mortality: A Cross-National Analysis." Presented at the *Annual Meeting of the American Political Science Association*, August 29 - September 1, Boston, MA.
- Mkandawire, Thandika. 2001. "Social Policy in a Development Context." *Programme Paper Number 7* Geneva (UNRISD).
- Moon, Bruce. 1991. *The Political Economy of Basic Human Needs*. Ithaca and London: Cornell University Press.
- Moon, Chung-in and Jae-jin Yang. 2002. "Globalization, Social Inequality and Democratic Governance in South Korea." In *Democratic Governance and Social Inequality*, edited by A. Brown. Boulder and London: Lynne Rienner Publishers, Pp. 131-162.
- Moore, Barrington Jr. 1966. *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Boston: Beacon Press.
- Muller, Edward N. 1988. "Democracy, Economic Development, and Income Inequality." *American Sociological Review* 53 (2): 50-68.
- Muller, Edward N. 1989. "Democracy and Inequality: Reply to Weede." *American Sociological Review* 54 (5): 868-871.
- Muller, Edward N. 1995. "Economic Determinants of Democracy." *American Sociological Review* 60 (6): 966-982.

- Munck, Gerardo and Jay Verkuilen. 2002. "Conceptualizing and Measuring Democracy: Evaluating Alternative Indices." *Comparative Political Studies* 35 (1): 5-34.
- O'Donnell, Guillermo. 1979. *Modernization and Bureaucratic-Authoritarianism*. Berkeley: Institute of International Studies.
- O'Donnell, Guillermo. 2001. "Reflections on Contemporary South American Democracies." *Journal of Latin American Studies* 33 (3): 599-609.
- Pastor, Manuel and Carol Wise. 1999. "The Politics of Second-Generation Reform." *Journal of Democracy* 10 (3): 34-48.
- Pateman, Carole. 1970. *Participation and Democratic Theory*. Cambridge: Cambridge University Press.
- Przeworski, Adam, Michael E. Alvarez, José 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 and Fernando Limongi. 1997. "Modernization: Theories and Facts." *World Politics* 49 (2): 155-183.
- Radcliff, Benjamin. 2001. "Politics, Markets, and Life Satisfaction: The Political Economy of Human Happiness." *American Political Science Review* 95 (4): 939-952.
- Rapley, John. 1996. *Understanding Development: Theory and Practice in the Third World*. Boulder: Lynne Rienner Publishers.
- Rimlinger, Gaston. 1971. *Welfare Policy and Industrialization in Europe, America, and Russia*. New York: John Wiley & Sons.
- Rueschemeyer, Dietrich, Evelyne Huber Stephens, and John Stephens. 1992. *Capitalist Development and Democracy*. Chicago: University of Chicago Press.
- Sen, Amartya. 1999. *Development as Freedom*. New York: Anchor Books.
- Skocpol, Theda. 1979. *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. Cambridge: Cambridge University Press.
- Stimson, James. 1985. "Regression in Space and Time: A Statistical Essay." *American Journal of Political Science* 29 (4): 914-947.
- Teixeira, Ruy. 1987. *Why Americans don't Vote: Turnout Decline in the United States, 1960-1984*. New York: Greenwood Press.

- U.N.D.P. 1990. *Human Development Report*. New York and Oxford: Oxford University Press.
- U.N.D.P. 2001. *Human Development Report 2001: Making New Technologies Work for Human Development*. New York and Oxford: Oxford University Press.
- Ward, Michael D. 2002. "Green Binders in Cyberspace: A Modest Proposal." *Comparative Political Studies* 35 (1): 46-51.
- Wickrama, K. and Charles Muldorf. 1996. "Political Democracy, Economic Development, Disarticulation, and Social Well-Being in Developing Countries." *The Sociological Quarterly* 37 (3): 375-390.
- Wilensky, Harold. 1975. *The Welfare State and Equality: Structural and Ideological Roots of Public Expenditures*. Berkeley: University of California Press.
- Zweifel, Thomas and Patricio Navia. 2000. "Democracy, Dictatorship, and Infant Mortality." *Journal of Democracy* 11 (2): 99-114.

¹ For instance, Alkire defines human development as "human flourishing in its fullest sense" (2002). For UNDP, in turn, human development is the process of enlarging people's choices, by expanding human capabilities and functionings (2001).

² Following Mkandawire we define social policy as "collective interventions directly affecting transformation in social welfare, social institutions, and social relations" (2001). Social policies are crucial as they constitute a tool for institutionalizing the expansion of human development.

³ A polyarchy has two dimensions: contestation and participation. Dahl argues that contestation has five components or institutional requirements: (1) elected officials, (2) free and fair elections, (3) freedom of expression, (4) associational autonomy, and (5) the existence of alternative sources of information. He defines participation in terms of (1) suffrage and (2) widespread eligibility to run for public office.

⁴ Those who are concerned with the quality of democracy have been studying the phenomenon through three main avenues. Some scholars compare countries from an institutional point of view, i.e. how democracy performs in terms of turnout, competition, nomination of judges, and the like. Others have citizens as the main unit of analysis and examine their entitlements to certain civil, political, and economic rights. Finally, other scholars compare subjective well-being across nations (see: Frey & Stutzer 2000, Graham & Pettinato 2001, Radcliff 2001).

⁵ <http://www.paho.org/Project.asp?SEL=HD&LNG=ENG&CD=COREH>,
<http://www.worldbank.org/data/wdi2002>;

<http://www.eclac.cl/celade/proyecciones/intentoBD-2002.htm>

⁶ As Zweifel and Navia claim, "infant mortality rate is the indicator of chronic hunger most commonly used by policy makers and international organizations" (2000: 99).

⁷ There are three databases on measuring democracy with a fairly long series for the countries we are interested in. These are Freedom House (2002), Marshall and Jaggers (2001), and Mainwaring *et al.* (2001). Ward (2002) is correct when claiming that these measures of democracies are highly correlated. For our universe of analysis the Pearson correlation between Freedom House and Mainwaring *et al.* is -.816, Freedom House and Polity IV .841, and Mainwaring *et al.* and Polity IV -.907; all significant at the 0.01 level (2-tailed).

⁸ This variable is computed by subtracting AUTOC from DEMOC. DEMOC, Range = 0-10 (0 = low; 10 = high) Democracy Score: general openness of political institutions. The 11-point Democracy scale is constructed additively. AUTOC Range = 0-10 (0 = low; 10 = high) Autocracy Score: general closeness of political institutions. The 11-point Autocracy scale is constructed additively. <http://www.cidcm.umd.edu/inscr/polity/index.htm>. We treated all "transition" values (-88, -66) in the Polity index as missing values.

Ideally we would check for the impact of political rights and civil liberties on our dependent variables. Even assuming that Freedom House's political rights and civil liberties scores are theoretically related with Marshall's categories (Marshall, 1992), a dubious assumption, it is impossible to check for this relationship given the extremely high correlation between both indicators (.772 significant at the .01 level, 2-tailed).

⁹ <http://www.worldbank.org/data/wdi2002>