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Jac, Heckelman

Wake Forest University

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The Connection between Democratic Freedoms and Growth in Transition Economies*

Jac C. Heckelman
Wake Forest University
110 Carswell Hall
Winston-Salem, NC 27109
heckeljc@wfu.edu

Abstract. The Freedom House democracy index is often used in regression analysis to estimate the relationship between democratic freedoms and growth. The index is comprised of two broad categories for political rights and civil liberties. However, the relationship between the underlying types of rights and liberties to growth remains unknown. A newer alternative democracy index developed by Freedom House specifically for the transition nations is compared to the original democracy index. The two are highly correlated but the latter entails a greater breakdown across six democracy areas including civil society, judicial framework, media independence, corruption, electoral process, and governance. Except for corruption, each is found to be individually significant in separate growth regressions, but when all are included simultaneously, only greater freedoms in civil society and electoral process are significantly correlated with higher growth, while greater freedom in judicial framework is significantly correlated with lower growth. The remaining areas are not statistically significant.

1. Introduction

According to a recent survey of academics, both economists and political scientists "overwhelmingly agree" with the proposition that political rights and civil liberties promote growth (Whaples and Heckelman 2005). Political rights and civil liberties are often used interchangeably with the broader concept of democracy (e.g. de Haan and Siermann 1995). The benefits of democracy in promoting economic growth and development have both theoretical and empirical support in the literature, although it is not universal.

Wittman (1995) champions the idea that democracy is most efficient for an economy. In Wittman's view, competition in political markets would minimize the social costs from rent-seeking. In addition, a more open political process makes the government more beholden to voter interests, which would include economic prosperity.[1] Authoritarian governments, insulated from citizen pressure, can maximize their own wealth at the greater expense of their citizenry. Economic and political instability associated with changing governments by coup rather than regularly scheduled elections is also expected to hamper growth opportunities (Alesina and Perotti 1994; Rodrik 1999).

In contrast, Bhagwati (1966) long ago argued a trade-off existed between economic development and democratic institutions. More recently, however, he has rejected that claim, now arguing that democracy is more conducive to growth opportunities compared to autocracies, but on its own is unlikely to foster growth unless also accompanied by open markets and sufficient competition (Bhagwati 2002). The case against democracy promoting growth entails the notion that authoritarian governments can more easily resist special interests to implement needed market reforms. In contrast to Wittman's position, Barro (1991) believes that open democracy can result in greater opportunities for rent-seeking and inefficient redistribution. Furthermore, the same electoral pressures which keep democratic governments in-line can actually skew their incentives by forcing them to appease the short-sided interests of the voters.

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[1] A wealth of studies has shown vote shares and government popularity are partially dependent on economic growth. See Mueller (2003, chapter 19) for a recent survey of the literature.

Roland (2002) believes this to be especially problematic for democracy in the transition nations where fundamental economic alterations could temporarily lead to recession during the adjustment period. Voters might not support reform candidates or quickly look to reverse economic policy at the first sign of distress.

Empirical studies utilizing large cross-national samples have generally found democracy to be positively associated with growth (Feng 1995; Goldsmith 1995; Rodrik 1999; Scully 2001) although some report no significant relationship (Helliwell 1994; Knack and Keefer 1995) and Barro (1996) discovers a weakly negative overall association between democracy and growth. Stroup and Heckelman (2001) find the significance of democracy depends on econometric specification and regional sample. Using extreme bound analysis, de Haan and Siermann (1995) conclude the relationship between democracy and growth is not robust. The empirical record thus appears somewhat mixed. Still, as mentioned at the outset, the academy overall tends to maintain belief in the ability of civil liberties and political rights to promote growth.

A common proxy measure for democracy, used in the studies listed above as well as many others, is based on the Freedom House indexes for political rights and civil liberties. Freedom House defines the overall level of democracy as the simple average of these two indexes. Consistent with the Freedom House approach, researchers often quantify democracy as the sum or unweighted average of the Freedom House ratings for a nation's relative level of political rights and civil liberties. Examples include Knack and Keefer (1995), Rodrik (1999) and Fidrmuc (2003) among many others.

Using the combined index to measure democracy treats political rights and civil liberties as equal contributors to democracy, and therefore in regression analysis as equal contributors to growth or whatever other macro variable is of interest being used as the dependent variable. Such an approach may not always be appropriate. When the individual indexes for political rights and civil liberties are isolated in separate regressions, Feng (1995) found each to be statistically significant for explaining variation in growth as did Bahmani-Oskooee and Goswami (2006) for determining black market premiums, but in

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both cases the estimated marginal impacts from these two alternative measures of democratic freedoms differ substantially. Weller and Singleton (2004) show that, in separate regressions, civil liberties are significantly related to financial stability whereas political rights are not. Isham et al. (1997) find a similar result for the returns to government projects. Furthermore, when both are included individually in the same regression, Isham et al. (1997) also find that civil liberties have an independently significant impact while political rights do not.

Still other studies have proxied for the level of democracy in a nation by including only the index of political rights (Barro 1991, Goldsmith 1995, Stroup and Heckelman 2001) or civil liberties (Kormendi and Meguire 1985, Spindler 1991, Li et al. 1998) but ignoring altogether the other index.

The potential for such disparate effects from civil liberties and political rights suggest care must be utilized in assessing the impact of democratic freedoms. Civil liberties and political rights can have differentiated effects on growth or other variables of interest because they work through different channels. Civil liberties relate to freedom of expression and organization, including workers' rights. While on the one hand civil liberties would allow workers to be more influential and productive, they also make it easier for growth-retarding unions and other special interest groups to form, possibly leading to an Olsonian sclerotic effect (Olson 1982). Political rights, in turn, refer to the way in which political decision-making occurs. More political rights imply competition which allows for better monitoring, and grants citizens the avenue for punishing elites for poor economic conditions. Such institutions would force those in power to focus their attention on improving economic outcomes. However, decentralization and increased checks and balances may also make it more difficult for those in power to implement important economic reforms when needed.

According to de Haan and Siermann (1995) the civil liberties index can be characterized as capturing rights of the individuals whereas the political rights index measures the degree of control individuals have over those who govern them. A different interpretation is put forth by Aron (2000) who classifies the civil liberties index under the rubric of social capital, and the political rights index as a

proxy for institutional quality. Under either taxonomy, there is no reason to presume there should be equal marginal impacts on development between civil liberties and political rights.

By similar reasoning, it might also be true that the various types of civil liberties or political rights which Freedom House surveys to construct the indexes may not all be of equal importance. Although Freedom House describes the components which comprise these indexes (discussed briefly below and in Appendix I), the individual component scores are not publicly released, preventing the ability to perform empirical tests to separate out their effects.

For the case of transition nations, however, Freedom House has also created a secondary democracy index, which began in 1997. This new democracy index is based on the average of six different ratings covering civil society, judicial framework, media independence, electoral process, governance, and corruption (added later), whose individual scores are published for each nation. As explained below, the first three of these categories reflect civil liberties and the rest political rights, and are closely related to many of Freedom House's original democracy index components. Each of these democratic freedom categories are again comprised of a series of underlying components (described in Appendix II). Although the underlying component scores for each of the six separate ratings are not published, the additional number of separate ratings made available for the transition nations can allow for greater precision in determining which types of democratic freedoms are most influential.

Because growth is the most commonly utilized economic indicator, growth regressions are used to illustrate the point. As explained below, the new index categories are consistently rated over the period 2000-2004. As a point of comparison to the available sample for the new index categories reflecting the transition nations, it is found that the traditional democracy index is statistically significant in explaining recent growth from 2000-2004, as are both the civil liberties and political rights indexes in separate regressions. However, the civil liberties index shows a stronger marginal impact, and also remains statistically significant when tested jointly with political rights, whereas the political rights index does not. The initial conclusion is that on average civil liberties are more important for growth than political rights.

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The new democracy index for these transition nations is highly correlated with the original democracy index. Not surprisingly, then, it too is found to be statistically significant in a growth regression. The benefit of the new index is the detailed breakdown of separate scores across six areas. Each of the distinct areas of the new index is individually significant in separate growth regressions, except for the corruption index. Furthermore, when the other areas are controlled in the same regression, only civil society and electoral process remains significant with the same sign, whereas judicial framework is significant but of opposite sign, indicating more freedoms in terms of the judiciary reduces growth when the other types of democratic freedoms are controlled. Media independence falls just a little short of obtaining 10% level of significance in the same regression. Neither corruption nor governance is either individually or even jointly significant. Thus, freedom in civil society and electoral process appears to be the democratic freedoms most robustly correlated with growth for the transition nations. Because electoral process represents a type of political right rather than civil liberty, this result somewhat discounts the stronger connection of civil liberties to growth found when using the aggregated civil liberties and political rights indexes.

2. Freedom House measures of democracy

2.1 The original democracy index

Some of the most popular proxies for democracy are those developed by Freedom House. Freedom House rates each nation on a scale of 1 (most freedom) to 7 (least freedom) for their perceived degree of civil liberties and political rights where lower values represent more freedom. The rankings for civil liberties are based on points awarded on a range from 0 to 4 for each of 15 questions covering four basic areas of Freedom of Expression and Belief, Associational and Organizational Rights, Rule of Law, and Personal Autonomy and Individual Rights. The rankings for political rights are based on the same scale of 0 to 4 points for 10 questions related to three areas of Electoral Process, Political Pluralism and Participation, and Functioning of Government. Further details on the exact questions related to each of these areas are

presented in Appendix I.

The total for the raw points assigned separately to the civil liberties and political rights categories are then each converted by Freedom House to the published 1 to 7 integer scale. Each integer on the new scale represents its quantile range of raw points for either civil liberties or political rights. This serves to standardize the scores in order to account for the differing number of questions and consequently differing number of total raw points possible between civil liberties and political rights. The average of the scaled value for political rights and civil liberties represents the nation's "liberal democracy" score. Nations receiving a democracy score in the top third (1.0 - 2.5) are considered "Free", those in the middle third (3.0 - 5.0) are classified as "Partly Free", and those in bottom third (5.5 - 7.0) are designated as "Not Free". Only the converted scale values for civil liberties and political rights, and the corresponding democracy average, are published by Freedom House, not the actual number of total raw points or breakdown within each category.

By defining democracy as the average of the civil liberties and political rights rankings, Freedom House is implicitly assigning equal value to the importance of civil liberties and political rights in determining the presence of democratic freedoms. Whether this is true for the impact of democracy on growth (or any other measure) is still an open empirical question. Utilizing the combined index in growth regressions can result in biased estimates if civil liberties and political rights have differential marginal impacts. Policy makers could also then be led astray by treating all democratic freedoms as equal in the pursuit of growth.

It is often noted the Freedom House ratings for civil liberties and political rights are highly correlated, from which several researchers have justified using the two measures interchangeably. On the other hand, this high degree of correlation prevents a true test of Kormendi and Meguire's (1985) position that civil liberties in particular, rather than democratic freedoms in general, are important for development, if only one of the two measures is utilized. Significance of the civil liberties index may be merely reflecting the importance of political rights rather than an independent effect from civil liberties per se.

However, it is shown below that even with the high degree of correlation the marginal impacts are significantly different from each other, and importantly, the positive impact found for civil liberties remains robust to the presence of political rights, but not vice versa.

2.2 The new democracy index for transition nations

Beginning in 1997, Freedom House introduced a new index of democracy specifically for the nations transitioning away from Communist rule under the reign of the former Soviet empire. For these 27 nations, Freedom House published index scores on five categories: civil society; judicial framework; media independence; electoral process; and governance. An index for corruption was added starting with the 2001 edition (to cover the degree of governmental corruption in 2000), and in 2005 the governance measure was replaced by separate measures for national democratic governance and local democratic governance.

The first three categories correspond to some of the components comprising the civil liberties index and the others correspond to some of the components comprising the political rights index.[2] The underlying components comprising each of the new categories are described in detail by Freedom House (see Appendix II), but separate ratings for each of these components are not published. Still, using the new categories can give some additional insights into which particular types of civil liberties or political rights are most important for growth. Each of the different types of democratic freedoms included in the separate categories have been promoted by various scholars as important determinants for supporting economic reform, increasing government accountability, and reducing harmful rent-seeking. Examples include Ratliff (1999) for civil society, Feld and Voight (2003) for judicial framework, Coyne and Leeson (2004) for media independence, Mauro (1995) for corruption, Henisz (2000) for electoral process, and

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[2] It is important to keep in mind, however, that several other components of the original civil liberties and political rights indexes are not captured by the new categories. Refer back to Appendix I for the detailed listing of civil liberties and political rights surveyed by Freedom House.

Bird et al. (1995) for governance. Still, the various components of democratic freedoms are related to growth through different channels. For example, corruption and judicial framework directly affect business transactions and the potential for investment, whereas media independence and electoral process work more indirectly as potential oversight mechanisms. As such, their effects on growth and development can vary.

As with the distinction between the general civil liberties and political rights indexes, the generally high degree of correlation among these category scores makes it difficult to test individual theories regarding the effect of distinctive characteristics of democratic freedoms. For example, various proxies for civil society have often used as an independent variable to explain growth, but if civil society is highly correlated with other measures of democratic freedoms then it is unclear if significance of those proxies is capturing an independent effect from civil society or merely proxying for one of the other types of democratic freedoms.

Furthermore, greater freedom in certain areas can potentially harm growth. As one example, there is currently a debate as to whether corruption "sands" or "greases" the wheels of development. For the developed nations, corruption is generally viewed as harmful, but corruption can also be beneficial within the developing nations to circumvent inefficient policies and bureaucratic red tape (Svensson 2005). As another example, Landes and Posner (1975) argue that an independent judiciary makes the legislature more credible, which while having positive attributes, also encourages wasteful rent-seeking expenditures to influence legislative policy, especially in the direction of inefficient redistribution and monopoly creation and protection. Thus, certain democratic freedoms can retard, rather than enhance, economic growth. Using a singular index which combines all the attributes would be incapable of separating out these differing effects.

The new democracy categories created by Freedom House are based on the same 1 to 7 scale as the original index, except that quarter point ranges are used rather than strict integer values. The average value of the category scores then represents an alternative democracy score for each nation. Freedom

House also adopts an alternative classification scheme for the new democracy index which is more narrowly defined than for the original index. Specifically, utilizing the new category areas, nations whose democracy score is less than 3.0 are classified as a "Consolidated Democracy"; 3.0 - 3.9 is "Semi-consolidated Democracy"; 4.0 - 4.9 is "Transitional Government or Hybrid Regime"; 5.0 - 5.9 is "Semi-consolidated Authoritarian Regime"; and greater than 6.0 is "Consolidated Authoritarian Regime".

2.3 Descriptive comparisons

Table 1 lists the rating values for each democracy index and their associated categories, averaged over the period 2000-2004 which covers the interval in which the corruption category and single governance category were both included in the new democracy index.[3] The two democracy indexes yield similar conclusions overall regarding the degree of democratic freedoms allotted in each nation. All the "consolidated democracies" or "semi-consolidated democracies" are "free", the "transitional government or hybrid regime" nations are "partly free" and the "semi-consolidated authoritarian regimes" and "consolidated authoritarian regimes" are "not free". As shown in Figure 1, a plurality, but not majority, of the transition nations are considered "free", with "consolidated democracies" representing the single most common type of government structure. There are an equal number of "free" and "partly free" nations.

[Table 1 about here]

The ratings between civil liberties and political rights are fairly similar for each nation, with only Bulgaria and Moldova having more than a 1 unit differential. However, important differences do appear. Seven nations maintained the best rating for political rights in each year and Uzbekistan had the worst

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[3] Turkmenistan is not included in the sample because of missing GDP data needed for the growth regressions. Yugoslavia is rated by Freedom House until 2002, after which separate ratings are assigned to Montenegro and Kosova.

possible rating for political rights in every year. These extremes were not found for any nations on the civil liberties scale. Although there is almost an even split between nations having better scores in political rights (14) versus civil liberties (11), and the political rights ratings average among these nations is just slightly better, the variation among political rights is much higher.

The overall degree of democratic freedoms among these transition nations appears better under the original democracy index compared to the new democracy index. Each of the three "semi-consolidated democracies", along with Moldova, has a more than one unit differential between the two democracy scores. Only Tajikistan and Uzbekistan, two of the three worst performing nations under the original democracy index, fared better (not as bad) under the newer democracy classification scheme. Every category in the new democracy index had a worse rating on average relative to either the civil liberties or political rights average, except that civil society on average was rated just slightly better than the average of all civil liberties. Nations performed worst on average by far in terms of corruption, which also has the least variation in the ratings among all the democracy categories. Corruption would thus appear to be a prime target for potential democratic reform. Whether reform in this area would be expected to improve economic growth will be tested below.

The more detailed breakdown across six categories in the new democracy index allows for greater precision compared to the more aggregated two categories of civil liberties and political rights upon which the original democracy index is constructed. Although there are multiple ties in the rankings under the scores assigned based on the original democracy index, there are no ties using the new democracy index. The relative rankings of each nation are not perfectly consistent, but the overall correlation of country rank is .97. Only four nations (Bulgaria, Croatia, Moldova, Romania) showed more than a one unit differential across the two democracy index averages.

[Table 2 about here]

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Correlations among the various democracy freedom ratings are presented in Table 2. The original and new democracy indexes are correlated at a robust .97. The original democracy index is correlated at better than .99 with each of its two equally weighted categories of civil liberties and political rights. These categories are correlated with each other at .97, and only minimally lower with the new democracy index at about .96. Among the categories in the new index, corruption is correlated the lowest with the others, ranging from .85 with civil society to .92 with governance. Judicial framework and media independence are correlated the highest at .98. Not all the categories which represent various types of civil liberties are correlated higher with other civil liberties than with categories within political rights. For example, governance is correlated more strongly with media independence than corruption. Judicial framework is actually more highly correlated with the original political rights index than with the original civil liberties index, and among the political rights categories only electoral process is more highly correlated with the original political rights index than with the original civil liberties index. This reinforces the importance of not only analyzing the effect of civil liberties and political rights separately, but also separately analyzing the effect of each of the newer categories representing civil liberties and political rights. The aggregated democracy indexes may conflate different impacts, and so too the civil liberties and political rights indexes used to construct the original democracy index may still suffer from this problem.

3. Empirical evaluation of the impact of democratic freedoms on growth in the transition nations

In this section, regression analysis is utilized to determine the marginal impact of democracy and its various components on growth, when controlling for other relevant factors. In particular, a series of OLS regressions on the 25 country observations take the form

$$GROWTH_i = \alpha + \beta INC_i + \gamma INV_i + \lambda CIS_i + \delta DEM_i + e_i$$

where for each for country *i:*

$\quad GROWTH_i$ = the rate of economic growth;

$\quad INC_i$ = initial income;

INV_i = investment;

CIS_i = a dummy variable for the nations which comprise the Commonwealth of Independent States;

DEM_i = one (or alternatively a vector) of the various democracy freedom indicators.

GROWTH is measured here as the average annual per capita GDP growth from 2000-2004 to match the data availability of each of the new democracy categories. Five year growth periods for the transition nations were also utilized by Fidrmuc (2003) in a series of "moving-window" regressions beginning in 1990-1994 and culminating in 1996-2000.

Initial income is measured by log of per capita GDP in 2000. Conditional convergence would be supported by a statistically significant negative coefficient.[4] Investment is represented by the gross capital formation to GDP ratio averaged over the 2000-2004 period. Past studies have typically found a positive and statistically significant coefficient for investment, and investment is the only variable to pass Levine and Renelt's (1992) robustness tests.[5] The CIS dummy is included to represent the degree of integration and economic cooperation among these former Soviet Republics.[6] The economic variables are taken from the on-line World Development Indicators database available through World Bank. The various democracy measures, representing the average values from 2000-2004, are based on the values presented in Table 1. Recall that the Freedom House indexes are scaled from 1 to 7, with 1

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[4] Since only Eastern European nations which had been part of the Soviet empire are included in the sample, this might better represent "club convergence". On the other hand, Friedman (1993) has rejected the notion that the correlation between initial income and growth in cross-country regressions can properly identify the process of convergence. The validity of this claim is beyond the scope of the paper. It is merely mentioned here that a growing number of scholars appear to support Friedman's position even while many studies continue to test for convergence in this manner.

[5] As Levine and Renelt, and others, have also argued, investment may be endogenous to growth. Dropping investment from the specification does not alter any of the presented results with one exception explained below.

[6] A dummy for EU membership was also considered but never found to be statistically significant. Furthermore, the eight transition nations which were members during this period did not join the EU until the end of the sample period in 2004.

representing the most freedom and 7 the least. This sometimes leads to confusion in interpreting coefficients since a positive coefficient would imply more freedom is correlated with *lower* growth. To avoid this problem in the empirical estimation, each index is inverted and then normalized to a standard 0-1 scale, where higher values represent greater freedom rather than greater repression.

The only difference across the regressions pertains to the treatment of DEM_i. As detailed below, in one regression DEM_i represents the original Freedom House aggregated democracy index. In another regression, DEM_i represents only the civil liberties index. In yet another regression, DEM_i represents a vector of the civil liberties and political rights indexes, each entered separately. In the latter case, δ becomes a vector of coefficients to be estimated. Similar interpretations hold when using the alternative democracy index, or its separate component indexes.

3.1 Growth regressions using the original democracy index measures

The first column in Table 3 presents estimates using the original democracy index which is the average of the values assigned to the civil liberties and political rights indexes. Each of the control variables has the expected sign, showing support for conditional convergence, the importance of investment, and that significant growth differences remain for the Commonwealth of Independent States compared to the longer independent former Soviet bloc nations. More important for the purposes of this study is that the democracy index is positive and significant implying that controlling for the other variables, transition nations which grant more democratic freedoms have higher growth rates.[7] The next two columns replace the average level of democracy with the individual index values for civil liberties and political rights in alternate regressions. Both measures of democratic freedoms also generate positive and significant coefficients, as might be expected from the high degree of correlation reported in Table 2, and the signs

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[7] These results were robust to the inclusion in various combinations of: size of the government sector, inflation, and openness to trade as proxied by the sum of exports and imports as a percentage of GDP. Missing data for some categories reduced the sample size. Given the small sample size to start, the rest of the regressions were limited to the inclusion of only the base control variables.

and significance levels of the other variables are unaffected. At first, this might suggest civil liberties and political rights are interchangeable in terms of their relevance for growth. However, the magnitude of the civil liberties index coefficient is much larger (by 50%) than for the political rights index coefficient and a Wald test confirms the difference is statistically significant. Furthermore, in the final column both indexes are included at the same time and here only the civil liberties index remains significant. This implies that significance of the political rights index when used in isolation is merely picking up the effects of civil liberties and has no independent impact on its own. The finding regarding the importance of civil liberties over political rights in the promotion of economic growth corroborates the arguments of Kormendi and Meguire (1985).

[Table 3 about here]

3.2 Growth regressions using the new democracy index measures

Table 4 presents regression estimates using the same specification but replacing the original democracy index with the new democracy index. Again, all the control variables retain their expected coefficient signs and level of significance, and the new democracy index also generates a positive and statistically significant coefficient, with a magnitude similar to the original democracy index. This lends further credence to the connection between the two democracy indexes and therefore that the breakdown of the new democracy index into its separate areas would yield similar findings if rating for the separate areas of the original democracy index were available.

[Table 4 about here]

The next six columns replace the democracy index with each of the individual democracy area ratings, one at a time. Each type of democratic freedom also generates a positive and significant

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coefficient, except for corruption which has no effect. The regression equation using freedom from corruption as the sole measure of democratic freedom explains the least amount of variation in growth. It is also the only case for which inclusion of a single variable proxy for democratic freedom does not result in each of the control variables achieving significance. This may point to a connection between corruption and investment, and also inclusion in the CIS. Nations with above average freedom from corruption have somewhat higher investment ratios than those below the mean (25.2 versus 22.3). In addition, the 11 CIS members included in this sample (recall Turkmenistan was not included due to lack of GDP data; see note 3) tend to suffer much worse from corruption compared to the other transition economies (the re-scaled freedom from corruption average is .17 for CIS members versus .53 for non-members). The lack of significance for the corruption variable is consistent with several empirical studies.[8] That each of the other democracy categories is statistically significant suggests caution must be used in interpreting their independent importance to growth when none of the other categories are controlled.

The next two columns group the democracy freedoms by whether they can be classified as civil liberties or political rights in the original democracy index. Including the first three listed democratic freedoms in the same regression generates a positive and significant coefficient for only one type of civil liberty—namely civil society. Controlling for civil society and media independence, judicial framework now has a negative and significant coefficient, and with a magnitude roughly equal to civil society which suggests identical improvements in the freedom for civil society and judicial framework would simply offset each other and leave growth unaffected. However, although the average effect of a change in judicial freedom is approximately equal in magnitude to an identical change in civil society, the standard error on the former effect is two and half times as large as for the latter implying less precision in its estimated marginal impact. Media independence appears to have no independent effect of its own when controlling for these other types of civil liberties. This result does not support Coyne and Leeson's (2004)

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[8] In his survey article, Svensson (2005) concludes that "to the extent we can measure corruption in a cross-country setting, it does not affect growth" (p.39).

emphasis on media independence for development. Still, an equal improvement in all three civil liberties would yield a small net positive impact on growth which an F-test supports as statistically significant at the 10% level.

Individually, the reversal of sign for judicial independence, and loss of significance for media independence, found when controlling for civil society, suggests the impact of the first two democracy components were most likely capturing the importance of civil society when used in isolation in the third and fourth columns of the table. As noted earlier, judicial independence can be either beneficial or harmful to growth. On the plus side, it may help protect the legal environment in which nongovernmental organizations operate and allow for the formation and development of free trade unions. Landes and Posner (1975), however, stress the possible harmful aspects of judicial independence, such as the potential for increased rent-seeking of the legislature. Likewise, the protection of human rights and equality before the law may be desirable from a normative perspective but at the same time be less conducive to economic growth. The positive coefficient on judicial framework when used by itself suggests that on net, judicial independence does benefit growth. However, the growth-enhancing aspects appear to manifest primarily through promotion of civil society, as when holding the degree of civil society constant, greater freedom in the judicial framework then deters, rather than fosters, growth.

Among the political rights components, only electoral process maintains a positive and significant coefficient. Governance changes sign and loses significance. The negative coefficient on corruption, however, is now statistically significant, indicating that corruption is beneficial to growth. This seemingly perverse result might find support from recent work by Heckelman and Powell (2007), who show corruption can be beneficial in the absence of other good economic institutions, as proxied by the Economic Freedom Index (EFI). They found that low scores on the EFI correspond to a positive relationship between corruption and growth, but the benefits of corruption diminish as economic freedom improves. Many of the transition nations are not included in the EFI for the 2000-2004 period, but in 2005 the average EFI rank for the transition nations was 62 out of 141 nations covered, and this still did

not include Belarus, Tajikstan, or Uzbekistan which likely would have lowered the average rank even further. However, as will be shown in the next regression, the significant impact of corruption is not robust when controlling for the various civil liberties. These results for the pre-eminence of the importance of electoral process among the political rights categories support Henisz's (2000) focus on checks and balances, competitive elections, and the number of party veto players as important contributors to growth.

The final column in Table 4 includes all the democracy areas individually in the same regression. The results are similar to the previous two columns where the civil liberties and political rights were kept separate, except that the corruption variable switches signs and loses its marginal significance. The effect of media independence is enhanced but remains statistically insignificant, falling just short of the 10% level. This is the only regression in which inclusion of investment makes a difference. If investment were dropped out of concerns for potential endogeneity then media independence would be significant at the 5% level without affecting interpreted significance of any of the other variables. This suggests one avenue for media independence to improve growth is through an increase in investment, but that it has less of a direct effect on growth.[9] With investment included, only three democracy areas are independently significant, although the sum of all the democracy coefficients is still positive. Thus even though the magnitude of judicial framework is greater than that of civil society and electoral process combined, equal improvement in every area of democracy simultaneously would still increase growth on average overall. Taken together, however, the effect of democracy in the first column is revealed to differ depending on which democracy area is improved. Reforms in civil society and electoral process appear to have the most consistent connection to improving growth overall. That electoral process is classified as a type of political rights rather than civil liberties in the original democracy index stands somewhat in contrast to

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[9] Coyne and Leeson (2004) provide evidence on the connection between media and development through a series of analytical narratives covering Poland, Hungary, Ukraine, and Bulgaria, but do not conduct regression analysis. They stress the importance of open borders to foreign investment and media.

the findings in Table 3 which suggested that civil liberties were on average more important to economic growth than are political rights. The weak effects from corruption and governance may have watered down the marginal impact of the political rights index sufficiently enough to mask the importance of electoral process for economic development. Only when the democracy index is separated into its separate areas of political rights does the importance of electoral process shine through.

4. Alternative methods to weight democracy categories

In creating its various democracy indexes, Freedom House uses the average value of the ratings assigned to each of the included categories. This methodology weights every category equally in determining a nation's relative level of democratic freedoms. If some categories are more important for growth than others, as suggested by the previous regressions, the democracy index will not properly reflect the differences.

Alternatively, Heckelman and Stroup (2000) advocate an hedonic approach, where the weights are determined by each category's relationship to some other variable of interest. In particular, they use the t-statistics from a growth regression, which incorporates both the estimated marginal impact of each respective category, and its error distribution. In this way, greater weights are placed on those categories which have a higher level of statistical significance. To apply this method, the hedonic weights for the civil liberties index and political rights index are taken from the final column in Table 3, and the hedonic weights for each of the six index categories in the new democracy index are taken from the last column in Table 4.

It is important to note that weights on individual categories can be either positive or negative. Therefore a new aggregated democracy index based on these methods would no longer strictly represent a hierarchy of democratic *freedom*. For any category receiving a negative weight, a nation's aggregated

democracy index will fall when it has more freedom in that category.[10] Higher values of the aggregated index would therefore represent nations which have more freedoms specifically in those categories which were found to enhance growth and less freedoms in those categories which were found to hinder growth. Thus, the hedonic index could be interpreted as a relative ranking of democratic institutional quality, where quality is defined as the tendency to promote growth, rather than freedom per se.[11,12]

[Table 5 about here]

The calculated values and relative rank for each nation's democracy index are presented in Table 5, based on either the simple average or the hedonic growth t-statistics. The hedonic method puts more weight on the civil liberties index score, but also penalizes nations (to a lesser extent) for greater political rights scores because the political rights index was found to be inversely correlated to growth when controlling for civil liberties. The top rated nation under the hedonic index is Romania, which is only rated tenth in terms of average level of democratic freedoms. Still, the overall correlation (presented in Table 6) between the hedonic index and a simple averaging is 0.82.

Greater differences are apparent using the new democracy categories, because there are more of

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[10] This applies to the transformed scores in which higher values represent more freedom. The reverse would hold true using the published index values given by Freedom House. A negative weight assigned to a higher category score which would represent *less* freedom would generate a lower aggregate democracy score leading to the false interpretation of *more* freedom. The index transformation made here to 0-1, so that higher values more intuitively represent more freedom, do not affect the hedonic weights, except to always reverse the sign of each category weight.

[11] Using this nomenclature should make clear that hedonic weights can be derived from other quantifiable goals using alternative regressions with different dependent variables, such as environmental quality, life expectancy, education rates, the United Nations Human Development Index, etc. The weights and subsequent rankings could differ substantially.

[12] Caudill et al. (2000) claim that differentiated category scores are best aggregated into a single index by the method of principal components. This procedure can also result in negative weights. However, unlike the hedonic index, no natural interpretation of the values of an index created from principal components can be ascertained (see Greene, 1997, p. 273 for additional details). Despite this problem, the method of principal components remains a popular aggregation method.

them and they are not quite as highly correlated with each other. The greater number of categories results in more precision (no ties) for the new democracy index rankings compared to the original democracy index, without much other difference in the overall relative rankings. The hedonic method puts the largest single weight on judicial framework (31%), but penalizes nations for granting more freedom in this category because the weight is negative. On the other hand, freedom from corruption receives a negligible weight (3%) in the construction of the hedonic democracy index. Less freedom in judicial framework and governance but more freedom in every other category will generate higher hedonic democracy scores. Greater freedom in electoral process is worth, for example, six times a similar level of freedom from corruption.

For example, Poland, Slovenia and Estonia are the two highest rated nations in terms of the average level of democratic freedom, but rank only 4th, 6th, and 11th respectively under the hedonic index. In other words, other combinations of democratic freedoms granted in these nations might be expected to result in higher economic growth while still obtaining the same average level of democracy overall. In particular, trading further improvements in civil society with an equal reduction in freedom for any other area, or less freedom in judicial framework coupled with an equal increase in freedom for any other area (as well as various other combinations) could improve growth prospects while maintaining the same average degree of democracy overall. Likewise, the autocratic governments could still remain as repressive on average while at the same time improving their expected growth by following a similar prescription. A noteworthy example is Uzbekistan, ranked lowest under the hedonic method and next to last by the simple average of its democratic freedoms. This nation is not only severely repressing its citizenry but keeping them poor as well in the process. Romania, on the other hand, has the second highest ranked hedonic index value despite ranking close to the median in terms of its average level of freedoms.

[Table 6 about here]

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The correlations presented in Table 6 of the national relative ranking under the various democracy scores summarize these relationships. Both of the weighting schemes are highly correlated for the original democracy index relying on just the two index values for civil liberties and political rights. The average value of the six new democracy categories is also highly correlated with both of the rankings for the original democracy categories. The hedonic method for the new democracy categories is also highly correlated (but not quite as high) with these other rankings. In fact, the ranking of the average of the original democracy categories is more highly correlated with the hedonic ranking of the new democracy categories than with the hedonic rank based on the original democracy categories.

5. Conclusion

The wealthiest nations tend to be considered liberal democracies rather than autocratic in nature. As such, democracy is often considered to be an important institutional ingredient for growth and several empirical studies have found a strong connection to exist. What is less clear, however, is which dimensions of democratic freedoms are most important.

Standard growth regressions covering a sample of 25 transition nations of the former Soviet empire are employed to investigate this question. While the Freedom House democracy index is found to be statistically significant, the civil liberties component of this index is more robustly related to growth than the political rights component.

A more detailed breakdown of democratic freedoms is available from an alternative democracy index developed uniquely for the transition economies. Here it is found that among six different areas of democratic freedoms covering civil society, judicial framework, media independence, corruption, electoral process, and governance, only freedoms in civil society and electoral process are robustly correlated with growth. One explanation is that the civil liberties of judicial framework and media independence enhance growth only indirectly through the promotion of civil society, and have no other

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direct positive influence on growth. Similarly, stability and transparency of governance is related to competition in electoral process and it is only the latter which truly affects economic growth. Thus, although democratic reform in general may be desirable from a normative perspective, from a positive policy perspective reforms in civil society and the electoral process in particular might be expected to have the greatest impact on economic development.

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Figure 1 Histogram of new democracy index classifications
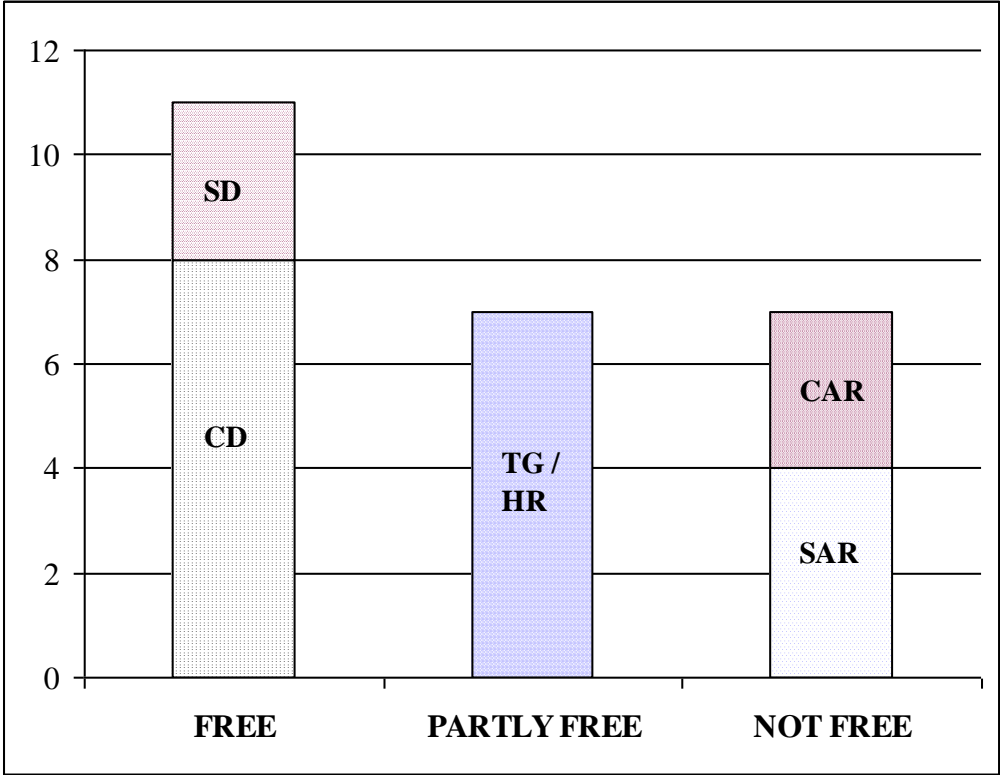
Notes. CD=Consolidated Democracy; SD=Semi-consolidated Democracy; TG/HR=Transitional Government or Hybrid Regime; SAR=Semi-consolidated Authoritarian Regime; CAR=Consolidated Authoritarian Regime

Table 1 Democracy ratings, averaged for 2000-2004

	civil liberties	political rights	original democracy index	classification	civil society	judicial framework	media independence	corruption	electoral process	governance	new democracy index	classification
Albania	3.60	3.20	3.40	PF	3.65	4.40	4.00	5.25	3.80	4.25	4.23	TG/HR
Armenia	4.00	4.20	4.10	PF	3.50	5.05	5.05	5.75	5.60	4.63	4.93	TG/HR
Azerbaijan	5.00	6.00	5.50	NF	4.50	5.40	5.70	6.25	5.90	5.94	5.61	SAR
Belarus	6.00	6.20	6.10	NF	6.55	6.75	6.75	5.55	6.80	6.44	6.47	CAR
Bosnia	3.80	4.40	4.10	PF	4.05	4.90	4.25	5.10	3.90	5.44	4.61	TG/HR
Bulgaria	2.40	1.20	1.80	F	3.15	3.40	3.40	4.35	1.90	3.63	3.30	SD
Croatia	2.20	2.00	2.10	F	2.90	4.15	3.65	4.65	3.20	3.63	3.70	SD
Czech	1.80	1.00	1.40	F	1.55	2.50	2.20	3.60	1.95	2.19	2.33	CD
Estonia	1.80	1.00	1.40	F	2.05	1.75	1.65	2.55	1.65	2.25	1.98	CD
Georgia	4.00	3.80	3.90	PF	3.80	4.45	3.90	5.65	4.95	5.25	4.67	TG/HR
Hungary	1.80	1.00	1.40	F	1.25	1.85	2.30	2.85	1.25	2.75	2.04	CD
Kazakhstan	5.00	6.00	5.50	NF	5.40	6.10	6.25	6.35	6.40	5.81	6.05	CAR
Kyrgyzstan	5.00	6.00	5.50	NF	4.50	5.40	5.70	6.00	5.90	5.69	5.53	SAR
Latvia	2.00	1.00	1.50	F	1.95	2.00	1.65	3.55	1.75	2.25	2.19	CD
Lithuania	2.00	1.20	1.60	F	1.55	1.80	1.75	3.65	1.75	2.50	2.17	CD
Macedonia	3.20	3.40	3.30	PF	3.60	4.25	4.00	5.20	3.65	4.13	4.14	TG/HR
Moldova	4.00	2.60	3.30	PF	3.90	4.35	4.70	6.20	3.70	5.00	4.64	TG/HR
Poland	1.80	1.00	1.40	F	1.25	1.60	1.60	2.50	1.45	1.94	1.72	CD
Romania	2.00	2.20	2.10	F	2.70	4.20	3.70	4.50	2.85	3.75	3.62	SD
Russia	5.00	5.20	5.10	NF	4.30	4.75	5.60	5.90	5.00	5.13	5.11	SAR
Slovakia	1.80	1.00	1.40	F	1.55	2.05	2.10	3.30	1.65	2.38	2.17	CD
Slovenia	1.40	1.00	1.20	F	1.60	1.65	1.70	2.00	1.60	2.25	1.80	CD
Tajikistan	5.40	6.00	5.70	NF	4.95	5.75	5.75	6.10	5.50	5.94	5.66	SAR
Ukraine	3.80	4.00	3.90	PF	3.55	4.55	5.30	5.85	4.05	5.00	4.72	TG/HR
Uzbekistan	6.00	7.00	6.50	NF	6.55	6.45	6.75	6.00	6.75	6.13	6.44	CAR
Average	3.39	3.26	3.33		3.37	3.98	3.98	4.75	3.72	4.17	3.99	
Std. Dev.	1.51	2.11	1.79		1.55	1.64	1.74	1.37	1.88	1.50	1.57	

Notes. Classification scheme abbreviations:
original democracy index: F=Free; PF=Partly Free; NF=Not Free
new democracy index: CD=Consolidated Democracy; SD=Semi-consolidated Democracy; TG/HR=Transitional Government or Hybrid Regime; SAR=Semi-consolidated Authoritarian Regime; CAR=Consolidated Authoritarian Regime

Table 2 Correlations of democracy and separate index ratings

	original democracy index	civil liberties	political rights	new democracy index	civil society	judicial framework	media independence	corruption	electoral process	governance
original democracy index	1.000									
civil liberties	0.990	1.000								
political rights	0.995	0.971	1.000							
new democracy index	0.969	0.965	0.961	1.000						
civil society	0.950	0.955	0.935	0.968	1.000					
judicial framework	0.939	0.927	0.936	0.989	0.959	1.000				
media independence	0.958	0.952	0.950	0.987	0.951	0.975	1.000			
corruption	0.871	0.878	0.856	0.937	0.851	0.917	0.917	1.000		
electoral process	0.975	0.961	0.972	0.975	0.940	0.956	0.954	0.884	1.000	
governance	0.957	0.954	0.948	0.983	0.948	0.966	0.964	0.924	0.944	1.000

Table 3 Growth regressions using original democracy index based on civil liberties and political rights

| | democracy categories | | | |
	averaged	individual	individual	joint
constant	-7.36**	-8.53**	-6.36**	-9.70**
	(-2.75)	(-3.31)	(-2.30)	(-3.74)
log initial	-0.94**	-0.64**	-1.16**	-0.13
GDP per cap	(-3.14)	(-2.14)	(-3.75)	(-0.29)
investment	0.22**	0.20**	0.23**	0.16*
	(2.40)	(2.34)	(2.38)	(1.81)
CIS dummy	5.96**	6.61**	5.40**	7.25**
	(5.55)	(6.21)	(5.02)	(6.57)
democracy	7.79**			
	(5.02)			
civil liberties		9.68**		19.89**
		(5.67)		(2.97)
political rights			6.32**	-7.62
			(4.50)	(-1.58)
Adjusted R-square	0.77	0.80	0.74	0.81

Notes.
Heteroskedasticity-corrected t-statistics in parentheses.
**significant at 5%
*significant at 10%

Table 4 Growth regressions using new democracy index based on civil society, judicial framework, media independence corruption, electoral process, and governance

				democracy	categories					
	averaged	individual	individual	individual	individual	individual	individual	civil liberties	political rights	joint
constant	-5.67 (-1.53)	-5.86** (-2.13)	-4.08 (-1.12)	-4.23 (-1.07)	2.42 (0.53)	-6.71** (-2.20)	-5.25 (-1.21)	-2.84 (-1.30)	-1.50 (-0.49)	-4.62 (-1.51)
log initial GDP per cap	-1.64** (-4.28)	-1.55** (-5.01)	-1.79** (-4.20)	-1.61** (-3.93)	-1.34** (-2.97)	-1.32** (-4.11)	-1.76** (-4.02)	-0.46 (-1.29)	-0.84* (-1.90)	0.62 (1.03)
investment	0.27** (2.17)	0.25** (2.50)	0.27** (2.06)	0.24* (1.85)	0.17 (1.15)	0.28** (2.26)	0.26** (1.98)	0.09 (1.19)	0.22** (2.38)	0.07 (0.95)
CIS dummy	4.13** (3.18)	3.84** (4.79)	2.89** (2.81)	4.03** (2.47)	0.34 (0.18)	4.63** (4.50)	3.84** (2.47)	4.14** (2.29)	1.76 (1.43)	8.08** (2.96)
democracy	6.57** (3.63)									
civil society		6.36** (4.38)						18.79** (6.96)		12.08** (2.11)
judicial framework			4.87** (2.21)					-19.13** (-2.74)		-30.06** (-3.29)
media independence				5.35* (1.96)				3.68 (0.54)		16.03 (1.72)
corruption					-1.67 (-0.42)				-7.87* (-1.74)	1.65 (0.34)
electoral process						6.38** (3.98)			9.91** (2.91)	12.11** (2.01)
governance							6.57* (1.94)		-3.06 (-0.40)	-8.05 (-1.03)
Adjusted R-square	0.61	0.73	0.57	0.56	0.48	0.70	0.55	0.87	0.80	0.89

Notes. Heteroskedasticity-corrected t-statistics in parentheses.
**significant at 5%
*significant at 10%

Table 5 Democracy scores under alternative weighting methods

weighting method	original democracy categories				new democracy categories			
	average	rank	hedonic	rank	average	rank	hedonic	rank
Slovenia	0.967	(1)	1.192	(2)	0.867	(2)	1.762	(6)
Czech	0.933	(2)	0.994	(4)	0.778	(8)	1.883	(3)
Estonia	0.933	(2)	0.994	(4)	0.836	(3)	1.625	(11)
Hungary	0.933	(2)	0.994	(4)	0.826	(4)	1.977	(1)
Poland	0.933	(2)	0.994	(4)	0.880	(1)	1.854	(4)
Slovakia	0.933	(2)	0.994	(4)	0.805	(6)	1.815	(5)
Latvia	0.917	(7)	0.895	(12)	0.801	(7)	1.707	(8)
Lithuania	0.900	(8)	0.948	(9)	0.806	(5)	1.746	(7)
Bulgaria	0.867	(9)	0.750	(14)	0.616	(9)	1.691	(9)
Croatia	0.817	(10)	1.059	(3)	0.551	(11)	1.666	(10)
Romania	0.817	(10)	1.211	(1)	0.564	(10)	1.897	(2)
Macedonia	0.617	(12)	0.933	(10)	0.477	(12)	1.278	(14)
Moldova	0.617	(12)	0.326	(24)	0.393	(15)	1.104	(15)
Albania	0.600	(14)	0.682	(19)	0.463	(13)	1.312	(13)
Georgia	0.517	(15)	0.642	(20)	0.389	(16)	1.079	(16)
Ukraine	0.517	(15)	0.794	(13)	0.381	(17)	1.067	(17)
Armenia	0.483	(17)	0.748	(15)	0.345	(18)	0.853	(18)
Bosnia	0.483	(17)	0.899	(11)	0.399	(14)	1.552	(12)
Russia	0.317	(19)	0.516	(22)	0.315	(19)	0.528	(22)
Azerbaijan	0.250	(20)	0.727	(16)	0.231	(21)	0.603	(20)
Kazakhstan	0.250	(20)	0.727	(16)	0.158	(23)	0.318	(23)
Kyrgyzstan	0.250	(20)	0.727	(16)	0.245	(20)	0.574	(21)
Tajikistan	0.217	(23)	0.529	(21)	0.223	(22)	0.765	(19)
Belarus	0.150	(24)	0.284	(25)	0.088	(25)	0.145	(24)
Uzbekistan	0.083	(25)	0.495	(23)	0.094	(24)	-0.081	(25)

Table 6 Correlation matrix of democracy rankings

	weighting method for original categories		weighting method for new categories	
	average	Hedonic	average	Hedonic
original				
average	1.000			
Hedonic	0.820	1.000		
new				
average	0.965	0.815	1.000	
Hedonic	0.910	0.840	0.914	1.000

Appendix I: Description of Civil Liberties and Political Rights in original democracy index

Civil Liberties

1. Freedom of Expression and Belief
       1. Are there free and independent media and other forms of cultural expression?
       2. Are religious institutions and communities free to practice heir faith and express themselves in public and private?
       3. Is there academic freedom and is the educational system free of extensive political indoctrination?
       4. Is there open and free private discussion?

2. Associational and Organizational Rights
       1. Is there freedom of assembly, demonstration, and open public discussion?
       2. Is there freedom for nongovernmental organizations?
       3. Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining? Are there free professional and other private organizations?

3. Rule of Law
       1. Is there an independent judiciary?
       2. Does the rule of law prevail in civil and criminal matters? Are police under direct civilian control?
       3. Is there protection from political terror, unjustified imprisonment, exile, or torture, whether by groups that support or oppose the system? Is there freedom from war and insurgencies?
       4. Do laws, policies, and practices guarantee qual treatment of various segments of the population?

4. Personal Autonomy and Individual Rights
       1. Does the state control travel or choice of residence, employment, or institution of higher education?
       2. Do citizens have the right to own property and establish private businesses? Is private business activity unduly influenced by government officials, the security forces, political parties/organization, or organized crime?
       3. Are there personal social freedoms, including gender equality, choice of marriage partners, and size of family?
       4. Is there equality of opportunity and the absence of economic exploitation?

Political Rights

1. Electoral Process
       1. Is the head of government of other chief national authority elected through free and fair elections?
       2. Are the national legislative representatives elected through free and fair elections?
       3. Are the electoral laws and framework fair?

2. Political Pluralism
       1. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system open to the rise and fall of these competing parties or groupings?
       2. Is there a significant opposition vote and a realistic possibility for the opposition to increase its support or gain power through elections?
       3. Are the people's political choices free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies, or any other powerful group?

4. Do cultural, ethnic, religious, or other minor groups have full political rights and electoral opportunities?

3. Functioning of Government
     1. Do the freely elected head of government and national legislative representatives determine the policies of the government?
     2. Is the government free from pervasive corruption?
     3. Is the government accountable to the edentate between elections, and odes it operate with openness and transparency?

Appendix II: Description of areas in new democracy index for transition countries

1. Civil Society
Assesses the growth of nongovernmental organizations, their organizational capacity and financial sustainability, and the legal and political environment in which they function; the development of free trade unions; and interest group participation in the policy process.

2. Judicial Framework and Independence
Highlights constitutional reform, human rights protections, criminal code reform, judicial independence, the status of ethnic minority rights, guarantees of equality before the law, treatment of suspects and prisoners, and compliance with judicial decisions.

3. Media Independence
Addresses the current state of press freedom, including libel laws, harassment of journalists, editorial independence, the emergence of a financially viable private press, and Internet access for private citizens.

4. Corruption
Looks at public perceptions of corruption, the business interests of top policy makers, laws on financial disclosure and conflict of interest, and the efficacy of anticorruption initiatives.

5. Electoral Process
Examines national executive and legislative elections, electoral processes, the development of multiparty systems, and popular participation in the political process.

6. Governance
Considers the stability of the governmental system; the authority of legislative bodies; decentralization of power; the responsibilities, election, and management of local governmental bodies; and legislative and executive transparency.