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Democracy and Economic Development

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Abstract: With the goal of freeing the world from poverty, some Western authorities have consistently insisted on promoting democracy in totalitarian states in the past decades. Seeing that democratic political system are stably established more and more in many countries, an opportunity arises to determine the effects of democracy on economic development. Taking advantage of this fact, this paper attempts to explore whether or not democracy contributes largely to prosperity of a nation. The conclusion is that, whereas democracy acts as a catalyst that influences prosperity in many already well-to-do nations, democracy *per se* is not significantly beneficial to low initial income countries. Another interesting point found in this study is that the Western colonialism tends to be one of the most significant factors in explaining poor economic development in many regions of the world today.

Keywords: democracy, authoritarianism, economic growth, economic institutions, colonialism

JEL classification codes: O1 O43 O57

[1] I would like to thank my supervisor Dennis Mueller who gave me the possibility to complete this work.

1. Introduction and Literature Reviews

A form of market economy combined with a democratic political system has been adopted by most developed countries. It has been believed that this combination of economic and political systems is the perfect equation for the prosperity of nations. Therefore, with the objective of obtaining wealth coupled with the fact that some Western authorities have been consistently insisting on fostering democratic movements in totalitarian states, many countries changed their dictatorships into stable democracies beginning in the late 1980s. Here, democracy is called 'stable' in the sense that the democratic political system has been retained, without falling back to authoritarianism, since the emergence of democracy up to 2005 for at least ten years.

Regarding the issue of whether or not democracy indeed is superior to dictatorship in causing the prosperity of a nation, there are two main theories favored among scholars. The first argument is that democracy will bring prosperity and growth into a nation. In this respect, it is widely believed that in order to obtain economic prosperity from a market economy, private property is necessary. As a result, to effectively secure private domain, the government must act under the rule of law. As pointed out by McMillan (1994), when states can legally expropriate the land from the subjects, regardless of reasons, an insecure right over property discourages people from investing in such assets, which, in turn, undermines the prospect of growth in a nation. Moreover, Stiglitz (2002) argues that active participation of people in policy-making contributes to the sustainability of economic development in the long run. Hence, by referring to this argument, the phenomenon of waves of democratization will finally lead to the prosperity of nations.

A second theory contradicts that approach by arguing that authoritarian regimes have an advantage in that they do not largely depend on interest groups and thus can select policies without much pressure. Therefore, a country can benefit from its highly-controlled government and economic development can continue in line with the authoritarian regime. In fact, according to Barro (1996), there are advantages to dictatorships for the economic development of a nation. Specifically, because a dictator has ultimate control over the economic system within his nation, it is possible to control rent-seeking as well as other redistribution pressures. In other words, an

autocrat is capable of shutting down or ignoring redistributory demands of interest groups, which is not characteristic of a democracy.

Thus, not surprisingly, the empirical work on economic advancement as the result of democracy is still inconclusive. For example, the reviews of Przeworski and Limongi (1993)[2] and Barro (1996) assert that democracy has an economically small and statistically insignificant effect on economic growth. In line with this, by using graphical analysis showing different countries' shifts between authoritarianism and democracy and data about average gross domestic product per capita through time, Goldstone (2009) suggests that there is no direct correlation between democracy and economic development. According to Goldstone (2008)[3], "These graphs show some countries that move from authoritarian to democratic frequently, but have no real economic change," citing Peru and Chile as examples. "Another population consists of countries that have been stably democratic, that have just gotten richer." It can be inferred from Goldstone (2009) that whereas there is a group of countries that benefit from democracy, another group seems unlikely to obtain economic prosperity through democracy. However, Feng (2003) concludes that democracy significantly leads to economic growth. Likewise, Papaioannou and Siourounis (2008) report positive correlations between democracy and long-run growth.

Therefore, as democratic political systems are established in more and more countries, an opportunity arises to determine the effects of democracy on economic development. If there are positive advances toward prosperity in the future, one would be able to logically and convincingly argue that democracy does indeed spawn economic development. Additionally, this paper is also going to explore whether democracy is actually the determinant of the prosperity of those nations that comparatively started off with low initial income. The argument is that it is likely that democracy sustains the wealth of rich nations but whether or not the poor can eventually be as rich as their wealthy peers through democracy is still questionable.

In the next section, some descriptive data are presented. Then, the econometric specification of the model as well as the features of the data used in the regression analysis is discussed in section 3. In Section 4, the main empirical results examining

[2]According to Przeworski's literatures' review, although most likely every one agrees with that the protection of property rights could foster economic growth, there is a debate on whether democracies or dictatorships better secure citizens' property rights (Przeworski, 1993).
[3] http://thedartmouth.com/2008/11/18/news/goldstone/

the effect of democracy on growth for lower income countries are presented followed by the discussion in Section 5. Section 6 concludes.

2. General Overviews of Descriptive Data

Table 1 presents GDP per capita as of 1960, the year which we set here as a starting point, and GDP per capita as of 2004 of high income countries today that have always been highly democratic (Polity score always higher than 5) since 1960. In this study, real GDP per capita ($ in 2000 constant prices: Chain series) from Penn World PWT 6.2 is employed. Data are available till 2004. Countries are classified as high-income following the World Bank list of economies *(July 2008)*[4]. High income nations with no Polity score provided e.g. Barbados and Bahamas are excluded from the Table. Regarding the Polity score, it is one of the most widely-cited indicators of democracy used by scholars and policy analysts in comparative research. It measures levels of democracy on an ordinal scale ranging from +10 (strongly democratic) to -10 (strongly autocratic). The Polity score will be discussed more in the next section.

From Table 1, we can see that almost all of the high income economies, which have always been democratic states, are already at relatively high levels of income from 1960 onwards. Except for Japan, the GDP per capita of all these high income countries was higher than $5,000 in 1960. The average GDP per capita growth rate over the period of 1960-2004 of these countries is about 2.6 percent (see the last row of column 3). It is important to note that although the computed average growth rates of these countries are not particularly high, with the high initial income levels, even at this level of growth prosperity can be expected in the long run. In other words, despite unspectacular economic growth rates, they still show the kind of sustained economic growth that seems likely to carry them further to be relatively high income countries in the future.

[4] According to the World Bank (July 2008), economies are divided according to 2007 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, $935 or less; lower middle income, $936 - $3,705; upper middle income, $3,706 - $11,455; and high income, $11,456 or more.

Table 1: GDP per capita of high income economies as of 2004 which have been a sovereign country before 1960 and have always been democratic since 1960 onwards

	GDP in 1960	GDP in 2004	Average growth
Austria	8,444	28,158	2.80
Belgium	8,070	25,885	2.71
Denmark	11,438	28,447	2.12
Finland	7,785	24,608	2.71
France	8,531	26,168	2.60
Germany	9,424	25,606	2.32
Iceland	8,380	27,899	2.87
Ireland	5,294	28,957	3.98
Italy	7,167	23,175	2.73
Japan	4,509	24,661	4.01
Netherlands	10,462	26,479	2.15
Norway	9,473	34,759	3.01
Sweden	11,065	27,073	2.08
Switzerland	15,253	29,276	1.53
U.K.	10,323	26,762	2.21
Australia	10,815	27,994	2.20
New Zealand	12,063	22,792	1.50
Canada	10,576	28,398	2.30
U.S.A.	12,892	30,698	2.39
Israel	6,750	21,230	2.73
20 countries			2.55

Source: real GDP per capita ($ in 2000 constant prices: Chain series) provided by Penn World PWT 6.2. Note: average growth is author's own work using data from Penn World PWT 6.2.

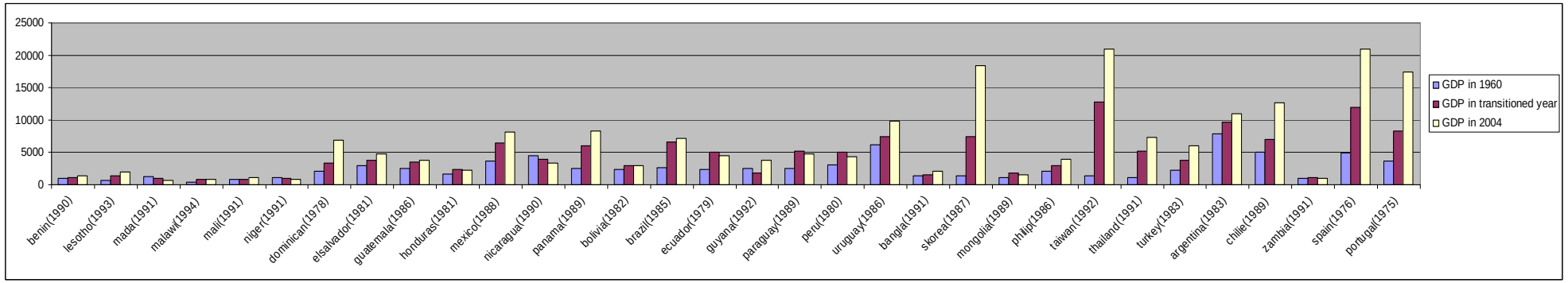
In contrast to developed nations, democracy does not seem to create a positive impact on the wealth of countries which have made transitions to democracy if they were relatively poor to begin with. Figure 1 shows GDP per capita of countries, which have made a transition from a dictatorship to stable democracy during 1960-1995. Because the purpose of this section is to compare countries' economic development during the stable democratic era with their previous authoritarian ones as well as to see whether or not the initial level of income is essential for a democratic political system to contribute to the sustainable economic growth in a nation, in addition to the income level as of 1960 or as of independence, the level of GDP per capita as of the latest transition year before a country became stably democratic are also reported (The data corresponding to Figure 1 can be found in Table 2). Descriptive data concerning average GDP per capita growth rates during the respective eras for each country are also given in Table 2.

At this point, two important remarks are worth making. First of all, note again that in this display democracy is called 'stable' in the sense that the democratic

political system has been retained since the latest emergence of democracy up to 2004 for at least ten years. Also, the Polity score averaged over the period from the transition year to 2005 is higher than 5. Here, we classify the transition year as the year where the Polity score jumped from a negative value to zero or positive ones. The numbers in parentheses represent the year of transition to democracy in each country. (Note that in this section, only countries with population over 500,000 are taken into account. Oil-rich nations are neglected in the sample.) Secondly, although there may be cases where authoritarian regimes had faced struggles and had been replaced by democratic ones before they eventually made the latest transition to stable democracy, such attempts to establish democracy were not successful. Their democratic political system had on and off reverted back to authoritarianism. For simplicity, therefore, this unsmoothed period is regarded as a general authoritarian one since democracy could not be firmly instituted during that time.

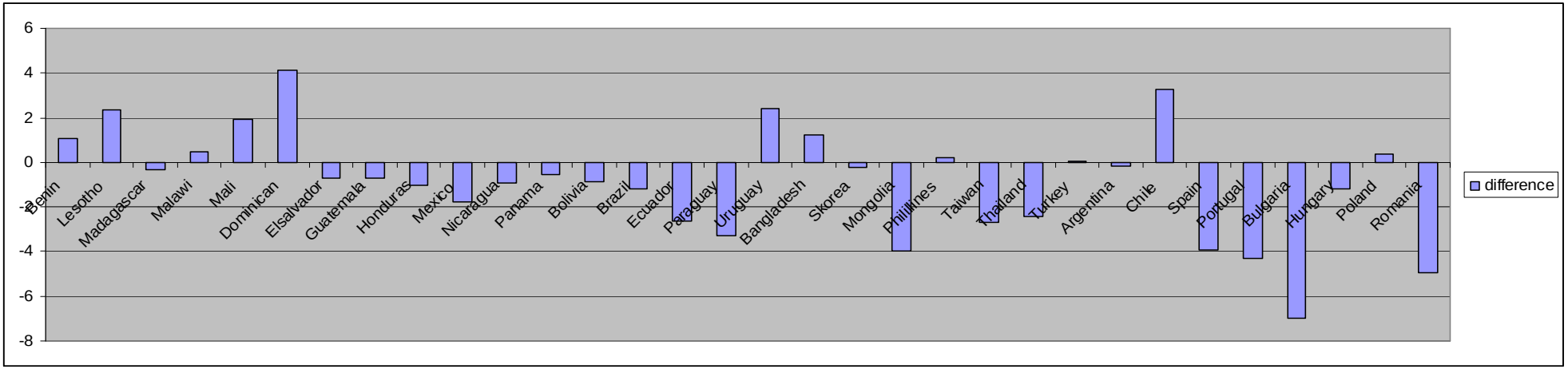
From Figure 1, we can see that only Taiwan, South Korea, Spain and Portugal have experienced a kind of sustainable economic growth since the establishment of democracy. In these countries, GDP per capita in 2004 is nearly double its level in the transition year (see clustered bar graphs of these countries representing GDP per capita as of the respective times in Figure 1 in parallel). Moreover, their average economic growth during the democratic period is higher than two percent which, similar to the countries in Table1, can already contribute to long-run prosperity given their relatively high level of GDP per capita as of the transition years (the average growth rate of South Korean, Taiwan, Spain and Portugal during the democratic period are 5.9, 4.4, 2.1 and 2.3 percent, respectively; see column 5 of Table 2).

Figure 1. GDP per capita as of 1960, as of the transitioned year, and as of 2004 of countries that have made a transition from dictatorship to stable democracy during 1960-1995.



Note: The year of transition is in parenthesis. The data corresponding to Figure 1 can be found in Table 2. Note that in this study democracy is called 'stable' in the sense that the democratic political system has been retained since the emergence of democracy up to 2005 for at least ten years.

Figure 2. The differences between average GDP per capita growth rates during the democratic period and during the authoritarian period (the first minus the second)



The data corresponding to Figure 2 can be found in the last column of Table 2.

Table 2. GDP per capita as of 1960, as of the transition year, and as of 2004 of countries that have made a transition from dictatorship to stable democracy during 1960-2005.

	GDP in 1960	GDP in transition year	GDP in 2004	Average growth during authoritarian era	Average growth during democracy	Difference (column5-column4)
Benin(1990)	956	1,086	1,345	0.58	1.66	1.09
Lesotho(1993)	680	1,362	2,008	2.75	5.10	2.35
Madagascar(1991)	1,268	937	751	-1.02	-1.34	-0.32
Malawi(1994)	459	819	803	1.45	1.91	0.47
Mali(1991)	797	873	1,183	0.50	2.42	1.92
Dominican(1978)	2,080	3,362	6,903	-0.34	3.77	4.11
El Salvador(1981)	2,991	3,770	4,751	3.39	2.69	-0.70
Guatemala(1986)	2,494	3,476	3,805	1.50	0.79	-0.71
Honduras(1981)	1,715	2,397	2,313	1.43	0.43	-1.01
Mexico(1988)	3,719	6,515	8,165	1.76	-0.02	-1.78
Nicaragua(1990)	4,428	3,908	3,417	2.21	1.31	-0.91
Panama(1989)	2,499	5,976	8,244	-0.25	-0.80	-0.55
Bolivia(1982)	2,431	2,896	3,006	3.20	2.32	-0.88
Brazil(1985)	2,644	6,531	7,204	1.18	-0.03	-1.21
Ecuador(1979)	2,396	5,025	4,515	3.60	0.97	-2.64
Paraguay(1989)	2,510	5,175	4,716	2.86	-0.41	-3.28
Uruguay(1986)	6,143	7,434	9,876	0.51	2.91	2.40
Bangladesh(1991)	1,449	1,606	2,154	1.22	2.47	1.24
South Korea(1987)	1,458	7,374	18,423	6.10	5.89	-0.21
Mongolia(1989)	1,156	1,768	1,597	2.99	-0.96	-3.95
Philip(1986)	2,039	3,016	3,939	1.46	1.68	0.22
Taiwan(1992)	1,444	1,2742	20,868	7.11	4.40	-2.71
Thailand(1991)	1,059	5,225	7,274	5.33	2.90	-2.43
Turkey(1983)	2,250	3,788	5,978	2.30	2.34	0.04
Argentina(1983)	7,838	9,732	10,939	0.98	0.82	-0.16
Chile(1989)	5,086	7,013	12,677	1.05	4.34	3.28
Spain(1976)	4,881	11,878	20,976	6.00	2.08	-3.92

Portugal(1975)	3,689	8,228	17,400	6.60	2.28	-4.32
Bulgaria (1990)	5,632	8,898	8,620	6.38	-0.60	-6.98
Hungary (1990)	5,721	10,304	13,638	3.18	1.98	-1.20
Poland (1990)	3,973	6,289	9,704	2.62	2.99	0.37
Romania (1990)	1,276	6,059	6,583	5.69	0.75	-4.94
				2.64	1.78	-0.86

Source: real GDP per capita ($ in 2000 constant prices: Chain series) from Penn World PWT 6.2.
Note: average growth is author's own work using data from Penn World PWT 6.2.

Nevertheless, whereas in these four countries there is a great deal of difference between GDP per capita as of its respective transition year represented by the dark purple bar and GDP per capita as of 2004 represented by the yellow one, this distinction does not seem to be obvious for other countries. The interesting point is that Taiwan, South Korea, Spain and Portugal made transitions to democracy when they were relatively rich (see clustered dark purple bar of these countries in comparison with others.). As a result, democratic rules have stimulated or at least sustained economic development in these countries ever since. On the other hand, democracy does not seem to support economic development in either poor African nations or middle-income countries. All African nations which have made transitions to democracy are still as poor as during their earlier periods. Whether or not the political system is democratic does not make any difference in terms of wealth in African nations. The economic development in the middle-income group, by the same token, has achieved only a modest improvement. Another important point is that while South Korea has achieved a remarkable economic success following the emergence of democracy, such a miracle is not apparent in other countries, whose GDP per capita fell in the same range as that of South Korea in their respective transition years. The examples of this are Mexico, Brazil, Panama, Uruguay and Argentina. Note that these countries as well as South Korea made the transition to democracy in the late 1980s (1986-1989). Hence, their age of democracy is pretty much the same.

Additionally, it is worth noting that Taiwan, South Korea, Spain and Portugal were relatively as poor as other countries examined in this study at the beginning (see clustered blue bar representing GDP per capita in 1960, the initial point). Unlike others, their economic advancement significantly improved during their respective authoritarian eras. The average GDP per capital growth rate of South Korea, Taiwan, Spain, and Portugal during the authoritarian periods are 6.1, 7.1, 6 and 6.6 percent, respectively (see Table 2). Because of the satisfactory economic development during the authoritarian eras, these countries had reached the levels of other developed countries before they changed their political system into democracies. Another important aspect is that the authoritarian regime in these countries was quite stable during their era e.g. no prior transition to democracy.

When we take a closer look at the figures representing average growth rate during the authoritarian period in comparison with the democratic one displayed in

Table 2, we can see that, economic development during the democratic period in generally not better than that of authoritarian one. Figure 2, which displays the figures in column 6 of Table 2, shows the difference between the average growth rates during the stable democratic period and during the previous authoritarian period (column 5 minus column 4). From the Figure, it can be seen, that positive changes in growth can only be found in few countries. The t-test below shows that the mean difference in growth rates between the two eras is negative and significant at the 5 percent level.

```
Paired t test
------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
    auth |      32        2.64      .39         2.21         1.84       3.43
    demo |      32        1.78      .32         1.78         1.14       2.42
---------+--------------------------------------------------------------------
    diff |      32         .85      .43         2.45         -.03       1.74
------------------------------------------------------------------------------
     mean(diff) = mean(auth - demo)                                t =   1.9697
 Ho: mean(diff) = 0                             degrees of freedom =       31

 Ha: mean(diff) < 0           Ha: mean(diff) != 0           Ha: mean(diff) > 0
 Pr(T < t) = 0.9711         Pr(|T| > |t|) = 0.0579          Pr(T > t) = 0.0289
```

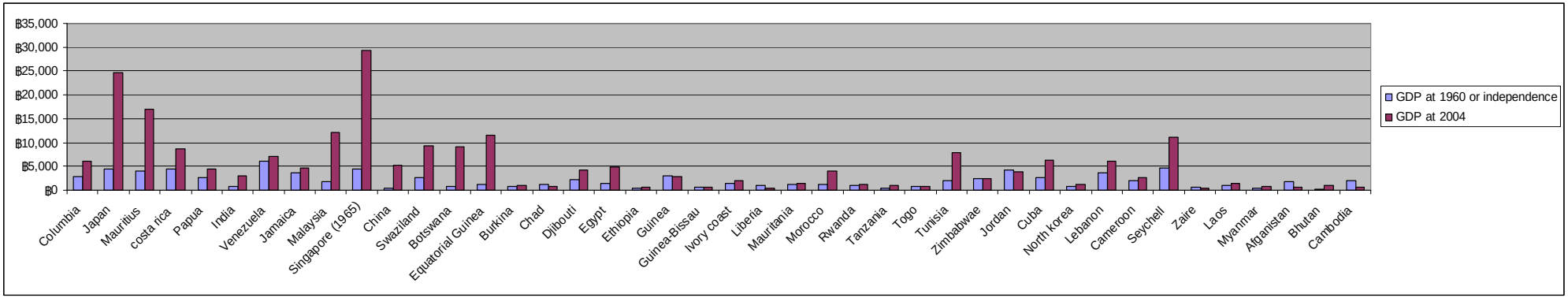
Furthermore, when considering only column 5 of Table 2, it can be seen that the only countries which experienced quite satisfactory economic development measured by average economic growth during the democratic era are Lesotho, South Korea, Taiwan and Chile. In these countries, the annual growth rate on average is 5.1, 5.3, 4.4 and 4.3 percent, respectively. However, in the case of Lesotho, despite its quite remarkable average economic growth during the democratic period, the GDP per capita as of 2004 only reached about $2,000 due to its low initial level of income. Now let's imagine that Lesotho can continue to grow at this rate uninterruptedly. The country's GDP per capita would arrive at $23,027 in the next fifty years. While this figure seems impressive, when taking a closer look at the high income countries of today, with the U.S.A. as the example, with a mean growth rate on 2.55, the U.S.A would achieve GDP per capita of approximately $108,117 in 2054. As a result, it seems to be unlikely for Lesotho, the best case of a low initial income country in terms of economic growth during the democratic era, to be as rich as the U.S.A in the foreseeable future. For Lesotho, in order to have the same level of GDP per capita as that of the U.S.A in fifty years, the country must grow at least 8.2 percent annually. Thus, whereas it is less likely for poorer countries to grow annually at more than 6 percent uninterruptedly, the already-rich nations are more likely to enjoy the long-run prosperity despite its low level of economic growth. Put differently, it is likely that

rich countries will never become poor but whether the poor can eventually be as rich as their wealthy peers through democracy is doubtful.

When we investigate the data in more depth, we can also see that, there are a number of countries adopting democracy since their first establishment despite low incomes, while still experiencing little economic development (e.g. India, Papua New Guinea). Figure 3 presents clustered bar graphs of GDP per capita as of 1960 and GDP per capita as of 2004 of always democratic as well as always authoritarian countries. Figure 4 displays the average GDP per capita growth rate of the corresponding countries during the 1960-2004 period. The corresponding data of both figures are given in Table 3. Here, countries are classified as always democratic if their Polity score is always higher than 5 and Przeworski's democracy index also coincides. According to Przeworski (2000), the regime is classified as authoritarianism if there is no election for the legislature or the chief executive contested by two or more parties. Overall, these two indexes agree. The only exception is Botswana where the Polity score is always very high, while Przeworski classifies this country as always authoritarian. Concerning Botswana, I agree with Przewoski that Botswana's ruling regime should be treated as authoritarian[5]. Note again that rich democracies of today that had in 1960 a GDP per capita higher than 5,000 as well as oil-rich countries are excluded from this presentation, due to the fact that we want to see the economic development patterns of democracies with low initial income. The data for always democratic as well as always authoritarian countries which gained independence in 1990s are reported separately in Table 4. In Figure 3 and 4, the first eight graphs show countries which are always democratic, including Columbia, Japan, Mauritius, Costa Rica, Papua guinea, India, Venezuela and Jamaica. The remaining, beginning with Malaysia and continuing until the end of the Figure, are countries classified as always authoritarian since 1960 or since independence. In Figure 4, the red graphs shows the average GDP per capita growth rates of countries classified as always democratic and the blue ones are the average GDP per capita growth rates of countries always adopting authoritarian rule.

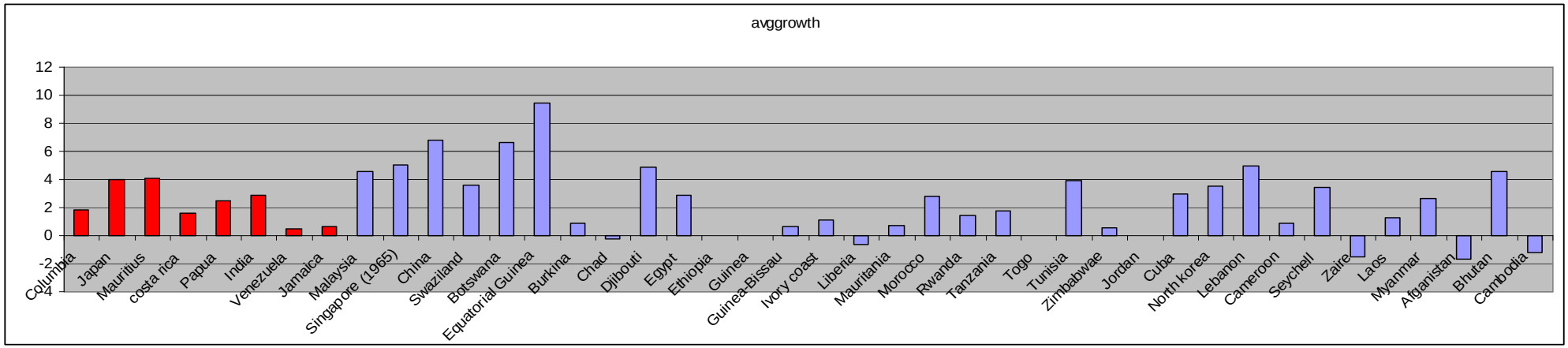
[5] Przeworski questioned that Botswana's government has ruled the country since independence. Although there are always elections with more than two parties competing, the elections in Botswana may be held because the ruling regime is certain about the election outcome and it is likely to be the case that the oppositions will never be allowed to assume office whenever they win. Because my study focuses mainly on the real political power of ruling regime, I agree with Przeworski on the point that Botswana should be classified as authoritarianism despite its showing competitiveness of elections.

Figure 3. GDP per capita as of 1960 (or the year of independence) and as of 2004 of always democratic and always authoritarian.



The data corresponding to Figure 3 can be found in Table 3. The first eight graphs (Columbia to Jamaica) show countries which are always democratic. The remaining, beginning with Malaysia until the end of the Figure, are countries with the authoritarian rule since 1960 or since independence.

Figure 4. The average GDP per capita growth rate over 1960-2004 period of always democratic and always authoritarian countries



Note: The red graphs show the average GDP per capita average growth rates of countries classified as always democratic and the blue ones are the average GDP per capita growth rates of countries always adopting authoritarian rule. The data corresponding to Figure 4 can be found in the last column of Table 3.

Table 3: GDP per capita as of 1960 (or the year of independence) and as of 2004 of always democratic and always authoritarian.

	GDP at 1960 or independence	GDP at 2004	Average GDP per capita growth rate
Columbia	2,818	6,094	1.83
Japan	4,509	24,661	4.01
Mauritius	4,098	16,953	4.09
Costa Rica	4,513	8,738	1.57
Papua	2,568	4,492	2.48
India	892	2,990	2.90
Venezuela	6,092	7,068	0.48
Jamaica	3,628	4,585	0.65
Malaysia	1,800	12,133	4.60
Singapore	4,527	29,404	5.02
China	448	5,332	6.81
Swaziland	2,616	9,210	3.63
Botswana	828	9,052	6.68
Equatorial Guinea	1,189	11,587	9.45
Burkina	768	1,073	0.86
Chad	1,141	883	-0.25
Djibouti	2,173	4,325	4.87
Egypt	1,468	4,759	2.85
Guinea	3,072	2,932	-0.02
Guinea-Bissau	663	583	0.61
Ivory coast	1,334	2,019	1.12
Liberia	1,062	342	-0.66
Mauritania	1,119	1,430	0.71
Morocco	1,298	4,061	2.82
Rwanda	1,059	1,302	1.42
Tanzania	453	912	1.74
Togo	833	744	0.01
Tunisia	2,103	7,922	3.88
Zimbabwe	2,342	2,439	0.54
Jordan	4,151	3,743	-0.01
Cuba	2,668	6,288	2.93
North Korea	714	1,228	3.48
Lebanon	3,588	6,085	4.99
Cameroon	1,947	2,618	0.92
Seychelles	4,601	11,128	3.46
Zaire	701	422	-1.53
Laos	1,005	1,412	1.27
Myanmar	453	876	2.62
Afghanistan	1,726	581	-1.68
Bhutan	233	934	4.55
Cambodia	1,947	580	-1.24

Source: real GDP per capita ($ in 2000 constant prices: Chain series) provided by Penn World PWT 6.2; average growth is author's own work using data from Penn World PWT 6.2.

Note: Always democratic are presented in purple. Always authoritarian countries with satisfactory economic development are shown in green. The remaining are always authoritarian countries with poor performance.

Table 4: GDP per capita as of the year of independence and as of 2004 of always democratic and always authoritarian countries which gained independence in 1990s

	GDP at 1990	GDP at 2004	GDP per capita average growth rate	Type of Regime
Slovak	7,469	11,328	3.25	Democracy
Estonia	9,810	13,779	1.71	Democracy
Ukraine	7,363	6,426	-0.87	Democracy
Latvia	6,905	10,806	4.61	Democracy
Lithuania	7,648	12,382	4.60	Democracy
Macedonia	5,328	5,252	-0.32	Democracy
Czech Republic	11,854	15,096	2.12	Democracy
Namibia	4,505	5,556	0.93	Democracy
Russia	10,954	11,789	-0.12	Democracy
Slovenia	13,787	20,659	2.31	Democracy
Eritrea	568	597	1.35	Authoritarianism
Tajikistan	2,415	1,942	-0.99	Authoritarianism
Turkmenistan	8,685	7,342	-0.94	Authoritarianism
Uzbekistan	4,075	3,916	-0.02	Authoritarianism
Azerbaijan	3,305	3,667	2.34	Authoritarianism
Kazakhstan	8,725	10,162	2.20	Authoritarianism
Kyrgyzstan	3,484	3,463	0.47	Authoritarianism

Source: real GDP per capita ($ in 2000 constant prices: Chain series) provided by Penn World PWT 6.2; average growth is author's own work using data from Penn World PWT 6.2.

From Figure 3 and 4, we can see that whereas democracy seems to support economic success in Japan and Mauritius, a democratic political system has fostered little economic development in other always democratic countries, despite some improvement. Regarding always authoritarian nations, beginning with Malaysia and continuing until the end of the table, although most of today's poor nations have an authoritarian regime as the political system, there exist some countries such as Malaysia, Swaziland, China, Botswana and Equatorial Guinea that have had a relative economic success along with their authoritarian regimes both in terms of differences between GDP per capita as of 2004 and 1960, as well as their average GDP per capita growth rates.

In conclusion, considering Table 1, Table 2 (Figure1 and Figure2) and Table 3 (Figure3), it would not be wrong to say that democracy encourages an already-rich nation to get richer but has not particularly helped the poorer countries to get out of the poverty trap. In other words, the countries which made a transition to democracy at lower levels of income tend not to benefit much from democracy in terms of prosperity. (Although it could be argued that consistently high income democracies also made a transition at lower levels of income, their incomes at the time of transition were comparatively higher than other countries. Moreover, one might argue that at their time of transitions to democracy, their GDP per capita was relatively equal to those of Latin-American countries and the stability of democracy helps reinforce economic development in these consistently high income democracies of today. However, I will argue in a subsequent part of the study that there is another significant predictor, colonialism, which thwarts Latin-American countries' economic development.) Moreover, despite some improvement in the case of middle income countries, they still failed to show the kind of sustained economic growth that seems likely to carry them to relatively high income levels in the foreseeable future.

Thus, whether or not countries will be prosperous does not appear to depend on democracy *per se*. It is likely that rich countries will never become poor but whether the poor can eventually be as rich as their wealthy peers through democracy is questionable. Furthermore, it seems more likely that the low income democratic African nations, at best, would follow the same path as their low-income democratic peers, such as India.

Given our discussion on these descriptive statistics, we turn to our econometric specification as well as the empirical evidence.

3. Model and Data

Model

The dependent variable is the growth rate of annual real per capita GDP ($ in 2000 constant prices: Chain series) provided by Penn World data PWT 6.2 in country *i* in year *t*. The main explanatory variable of interest is democracy.

To test the hypothesis, the following regression equation is used.

$$growth_{it} = b_{0t} + b_1 Demo_{i,t-T} + b_3 Z_{i,t-T} + u_{it}$$

where *i* is the country; *t* is the time period; T is a time lag, taken to be five years. The use of lagged variables mitigates the potential endogeneity problem to some extent. Z is a vector of variables, such as urbanization, economic institutions, etc. that we might expect to affect growth; and *u* is an error term. DEMO is the indicator for democracy - competitiveness of the political regime and liberal democracy, which are provided by Polity IV and Freedom House, respectively. In this respect, the definitions of democracy in the present study are rather narrow focusing on the competitiveness of the regime as well as the role of elections. More specifically, for the former as a measure of democracy the Polity index created by Gurr[6] and his associates is employed. As mentioned before, Polity score measures levels of democracy on an ordinal scale ranging from +10 (strongly democratic) to -10 (strongly autocratic). According to Polity IV's definition,

> Democracy is conceived as three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation.

To see if the findings remain robust and consistent irrespective of the specific measures of democracy which are employed for analysis, Freedom House (FH)'s

[6] http://www.systemicpeace.org/polity/polity4.htm

index of liberal democracy, which is also broadly used as a measure of democracy, is adopted. Here, the data of FH liberal democracy, which are taken from the Norris shared dataset (2009), are created by combining and standardizing Freedom House's political rights and civil liberties scales to 100 points. According to Freedom House' definition, by citing from what is quoted in Barro (1999, p. 4-6), "Political rights are rights to participate meaningfully in the political process. In a democracy this means the right of all adults to vote and compete for public office, and for elected representatives to have a decisive vote on public policies" (Gastil 1986-87, p. 7). Regarding civil liberties, "(they) are rights to free expression, to organize or demonstrate, as well as rights to a degree of autonomy such as is provided by freedom of religion, education, travel, and other personal rights" (Gastil 1986-87, p. 7).

The main explanatory variables are as follows.

1. Quality of economic institutions

   Regarding the relationship between economic institutions and prosperity, it is widely believed that the security of economic activity and property is the key to economic development. This belief receives considerable support from a vast literature. (For details, see literature reviews of Acemoglu et al (2005) and Weimer (1997)). Defined by Acemoglu et al (2005, p.11) "good economic institutions" are those that "provide security of property rights and relatively equal access to economic resources to a broad cross-section of society." Thus, as a measure for quality of economic institutions, the economic freedom index provided by the Fraser Institute since 1972 onwards is employed. According to the QOG Institution at University of Gothenburg,

   > The (economic freedom) index comprises 21 components designed to identify the consistency of institutional arrangements and policies with economic freedom in five major areas: size of government, legal structure and security of property rights, access to sound money, freedom to trade internationally, and regulation of credit, labor and business.

   In addition to the economic freedom index by the Fraser Institute, other measures, such as risk of expropriation and repudiation risk provided in International Country Risk Guide (ICRG) of the Political Risk Group (PRS),

which has been prevalently used as a measure of quality of economic institutions, will also be used.

2. Dummy variable for countries which had been colonized by other countries from other continents

   By following the definition of colonialism provided by the QOG Institute at University of Gothenburg, a country is coded 1 if it was colonized by "Western overseas" colonialism[7]. In this respect, I argue, countries which had been colonized by the USSR after the World War II are coded zero because it seems to be obvious that the USSR's colonization era represents mainly the political ideology, and did not have an opportunity to be resource takers. Moreover, Australia, New Zealand, Israel, the U.S.A. and Canada are coded zero as well as these countries are different from other colonized countries in that the people from colonizing countries also settled in these colonized countries and remain the majority of population. In addition, because countries in the same region are regarded as having relatively equal power as well as conflicts between neighboring states occur in general, countries which had been colonized by their neighbor are coded as zero. In other words, only countries which were mainly colonized for resource-taking purposes by the superpower countries in the respective time are coded 1. Note that only a country that has been colonized since 1700 is coded. In sum, the categories of colonizer consist of Dutch, Spanish, Italian, US, British, French, Portuguese, Belgian, British-French and Australian.

In addition to these main explanatory variables, I include as well the following control variables which are often used in standard growth model.

1. Urbanization

   On the topic of urbanization, we might think that close spatial proximity involves pecuniary externalities - reduces the costs of

[7] According to the QOG Institute at University of Gothenburg, "only Western colonizers (e.g. excluding Japanese colonialism), and only countries located in the non-Western hemisphere "overseas" (e.g. excluding Ireland & Malta), are coded 1."

intermediate and final goods trade. However, the empirical work on economic development as the result of urbanization is still inconclusive. For example, Gallup et al (1999) suggest that urbanization may cause economic growth, rather than just emerge as part of the growth process. However, recently there is also evidence suggesting that urbanization doesn't cause growth *per se*. Henderson (2003) finds no econometric evidence linking the extent of urbanization to either economic or productivity growth or levels.

2. Foreign Direct Investment

   Foreign direct investment is expected to boost economic growth in developing countries because technology transfers and endogenous spillovers accompany foreign investment. However, the sign of this is still unclear on empirical grounds. (For a survey of the literature, see Moran et al (2005).

3. Education

   As one indicator for human capital, education is often expected to boost economic development. Due to the fact that the dataset of average years of schooling in the population aged 25 and above provided by Barro and Lee (2001) has been prevalently used in comparative research, it is adopted as an indicator measuring levels of education in this study.

4. GDP per capita

   The well-known catch-up hypothesis that poor economies tend to grow faster per capita than rich ones and tend thereby to catch up to the rich ones is well-established in the literature. Thus, initial GDP per capita is also controlled for.

5. Investment

   Here, Gross capital formation (% of GDP) provided by The World Bank (WDI online database) is used as a measure for investment.

Table 5 presents the means, standard deviations, and numbers of observations for all variables. The variables and their sources are described in more detail in Table A1 of Appendix. The data includes all sovereign states from 1960 to 2004. The unit of observation is the average value of a given variable in the 5-year periods 1960–65, 1965–70, etc. As can readily be seen from Table 5, the number of observations

available differs across the variables leading to different sized samples for the models tested.

Table 5: Means and standard deviation of all variables

Variable	Obs	Mean	Std. Dev.
Growth	1207	1.71	4.06
Economic Freedom	678	5.78	1.25
Demo (polity)	1156	-0.32	7.39
Urban	1117	45.74	24.90
FDI	826	2.09	3.88
Education	862	4.64	2.91
Demo (Freedom House)	984	56.97	28.74
investment	1078	22.30	8.75
Risk of repudiation	360	6.16	2.20
Risk of expropriation	360	6.73	2.16
GDP per capita	1285	6585.49	7391.57

4. Regression Results

The basic regression results, when all countries are included are presented in columns (1) and (3) of Table 6. For the first two columns, as a measure of democracy the Polity score is employed, while the index of liberal democracy provided by Freedom House (FH) is used in the remaining.

In columns (1) and (3), economic freedom and democracy enter the model together with their interaction term. The correlation between democracy and growth is strongly positive in both columns. Regarding the variable economic freedom, columns (1) and (3) suggests that quality of economic institutions do matter for growth as expected. The interaction term has a significant negative sign which is reasonable. That is, the importance of economic freedom as a predictor decreases when a regime has a higher polity score. Also, the importance of polity score as a predictor decreases, when we have higher economic freedom. Thus, when a country has higher economic freedom or higher polity (FH) scores, it seems that there should be a minor effect of each on growth. Another main variable of interest, a dummy for colonization, is negatively correlated with the growth. Its significance does not disappear even when a dummy variable for being an African country is included in the model. Columns (2) and (4) show the regression outputs when all other variables are also being controlled.

All variables which are significant in the previous equation do not lose their significances. Concerning our control variables, only FDI, education and GDP per capita have the predicted significant effects on growth. That is education, as an indicator for human capital, has the positive impact on growth. The negative relation between the growth rate and level of per capita output confirms the catch-up hypothesis that poor economies tend to grow faster than rich ones.

By using different measures for the quality of economic institutions mentioned in the previous section, the regression results also give the same outcomes as in Table 6. These regression results can be found in Table 7. Proxied by risk of expropriation and repudiation risk, better quality of economic institutions leads to higher economic growth. However, the effect of initial GDP per capita is rather weak here despite it expected sign. This might be because the indicators proxying the effectiveness of the property right system only start from 1980s, which reduces the number of observations.

Table 6. OLS regression results including all countries

	Dependent variable: Growth			
	(1) Dem=Polity	(2) Dem=Polity	(3) Dem=FH	(4) Dem=FH
economic freedom (EF)	0.490***	0.546**	1.572***	1.163**
	(3.86)	(3.02)	(4.80)	(2.94)
polity	0.350***	0.256*		
	(3.70)	(2.33)		
EF*polity	-0.0618***	-0.0380*		
	(-3.88)	(-1.97)		
colony	-1.249***	-1.122*	-1.500***	-1.240**
	(-4.13)	(-2.48)	(-4.69)	(-3.00)
africandummy	-0.250	0.220	-0.0164	0.302
	(-0.66)	(0.60)	(-0.04)	(0.81)
education		0.224**		0.209**
		(2.64)		(2.60)
invest		0.0336		0.0312
		(1.66)		(1.56)
GDP per capita/1000		-0.119**		-0.128**
		(-2.85)		(-3.07)
FDI		0.108*		0.0999
		(2.01)		(1.85)
urban		-0.0158		-0.0132
		(-1.65)		(-1.47)
Dem (FH)			0.102***	0.0744*
			(3.89)	(2.45)
FH*EF			-0.0181***	-0.0107*
			(-4.19)	(-2.08)
N	635	453	619	469
R^2	0.108	0.154	0.117	0.154

Absolute t statistics calculated using robust standard errors are reported in parentheses.

The specifications include a constant but we do not report the estimates in the table.

All time-varying variables are lagged one period.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7. Panel regression using different indicators evaluating quality of economic institutions

	Dependent Variable: Growth			
	(1) Dem=Polity	(2) Dem=Polity	(3) Dem=FH	(4) Dem=FH
Dem (polity)	0.297*	0.298*		
	(2.40)	(2.47)		
Risk of expropriation	0.294*		0.809*	
	(2.08)		(2.36)	
Expro*polity	-0.0439*			
	(-2.33)			
colony	-1.282	-1.323	-1.392	-1.321
	(-1.68)	(-1.80)	(-1.87)	(-1.81)
africandummy	-0.736	-0.576	-0.660	-0.531
	(-1.34)	(-1.02)	(-1.20)	(-0.94)
edu	0.219	0.219	0.200	0.197
	(1.90)	(1.92)	(1.79)	(1.78)
urban	-0.0153	-0.0144	-0.0124	-0.0105
	(-1.31)	(-1.22)	(-1.07)	(-0.92)
investment	0.00517	-0.00143	0.00121	-0.000634
	(0.14)	(-0.04)	(0.03)	(-0.02)
GDP per capita/1000	-0.0683	-0.0781	-0.0702	-0.0883
	(-1.00)	(-1.09)	(-0.95)	(-1.15)
FDI	0.231**	0.237**	0.244**	0.249**
	(2.75)	(2.83)	(2.99)	(3.05)
repudiation		0.372*		0.805*
		(2.45)		(2.31)
Repudiation*polity		-0.0478*		
		(-2.35)		
Dem (FH)			0.0694*	0.0587
			(2.06)	(1.93)
Expro*FH			-0.00983	
			(-1.93)	
Repu*FH				-0.00873
				(-1.75)
N	236	236	241	241
R^2	0.178	0.180	0.171	0.169

Absolute t statistics calculated using robust standard errors are reported in parentheses.
The specifications include a constant but we do not report the estimates in the table.
All time-varying variables are lagged one period.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Note that higher values of measure of quality of institution, namely risk of expropriation and repudiation risk indicate "better" ratings, i.e. less risk.

Although we can see in Table 6 that democracy as a political system appears to be a significant determinant of economic growth, the picture looks much different when considering only data from lower income groups as shown in Table 8. Here, low income group comprises all countries which are not classified by the World Bank (July 2008) as high income countries[8]. The result suggests that whereas quality of economic institutions, e.g. a well-functioned property rights system, is a significant determinant of economic growth in lower income nations, democracy seems to have no significant effect on growth at the 5 percent level in this sample[9]. Again, a dummy for colonization is negatively related to economic growth in this group of countries. In this dataset, however, urbanization and education appear to be the only significant control variables. Unlike in Table 6 where all countries are included, initial GDP per capita does not play the significant role in explaining economic growth in poorer income nations.

[8] According to the World Bank, economies are divided according to 2007 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, $935 or less; lower middle income, $936 - $3,705; upper middle income, $3,706 - $11,455; and high income, $11,456 or more.

[9] However, it is significant at the 10 percent level.

Table 8. OLS regression results excluding high-income countries classified by the World Bank (July 2008)

	Dependent Variable: Growth			
	(1) Dem=Polity	(2) Dem=Polity	(3) Dem=FH	(4) Dem=FH
Economicfreedom (EF)	0.763***	0.452*	1.351**	0.934
	(4.54)	(2.17)	(2.73)	(1.65)
Dem (polity)	0.215	0.267		
	(1.57)	(1.66)		
EF*polity	-0.0366	-0.0357		
	(-1.45)	(-1.17)		
colony	-2.098***	-0.961	-2.373***	-1.018
	(-4.38)	(-1.57)	(-4.86)	(-1.67)
africandummy	-0.134	0.394	0.183	0.450
	(-0.37)	(1.09)	(0.52)	(1.21)
education		0.218*		0.218*
		(2.05)		(2.04)
urban		-0.0276*		-0.0276*
		(-2.41)		(-2.41)
invest		0.0441		0.0375
		(1.47)		(1.28)
GDP per capita/1000		-0.0576		-0.0745
		(-0.63)		(-0.83)
fdi		0.0228		0.0116
		(0.23)		(0.12)
Dem (FH)			0.0703	0.0704
			(1.65)	(1.47)
FH*EF			-0.0109	-0.00840
			(-1.43)	(-0.98)
N	421	293	401	293
R^2	0.129	0.152	0.142	0.153

Absolute t statistics calculated using robust standard errors are reported in parentheses.

The specifications include a constant but we do not report the estimates in the table.

All time-varying variables are lagged one period.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Another interesting point found from this analysis is that colonization is a significant determinant of initial income. In the regression below, GDP per capita as of 1960 of all sovereign countries is regressed on the colonized dummy. Its coefficient is negative and significant. Thus, colonization causes differences in the GDP per capita of countries, and is also a significant impediment to economic growth. It seems that countries which colonized others continue to do well while the colonized nations seemingly cannot get out from the trap of poverty

```
Linear regression                               Number of obs =     105
                                                F(  1,   103) =   33.66
                                                Prob > F      =  0.0000
                                                R-squared     =  0.2803
                                                Root MSE      =  2998.5

------------------------------------------------------------------------------
             |               Robust
1960gdp per capita  |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Colony |      -3735    644        -5.80   0.000       -5012    -2458
       _cons |       6080    605        10.06   0.000        4881     7279
------------------------------------------------------------------------------
```

5. Discussion

. The study suggests that the real goal for development should not merely be one of promoting democracy, as democracy does not necessarily lead to the prosperity of nations, particularly, when countries comparatively started off poor. Here we might ask how elections could lead to prosperity when the people in general do not have the capacity to judge the policies offered by politicians. Citing from Mueller's literature reviews (2003, p 2),

> (John Stuart) Mill feared that the participation of the uneducated and poor would worsen the *quality* of the inputs into the political process and thereby the quality of the policies coming out of it. Moreover, to achieve high levels of growth governments must adopt intelligent economic policies, or at least refrain from foolish ones. Thus, if high participation by low income and uneducated classes leads to poor

> government policies of one sort or another, misguided economic policies causing slow growth are likely to be among them.

Besides, it is important to note that each country has its own specific political, economic, cultural and historical environment that does not allow one to apply the positive consequences of democracy evenly. Without sufficient understanding among populations about the ways democracy actually functions, for example, elections alone can prove to be harmful to a nation. That is because democratic elections can be used as the way to legitimize the authoritarian power of democratically-elected politicians. While authoritarian ruling regimes have always been criticized in the international sphere, democratically-elected authoritarian rulers have fewer constraints to face. And this is particularly true when these poor nations' democratically-elected authoritarian rulers have good ties with powerful authorities, policy makers and politicians of some Western superpower countries.

To see why democracy might not foster economic development of poor nations, we must consider the political background of these countries. In general, whereas in developed nations there are usually well established institutions governing democracy, in poorer nations these institutions are relatively new and very vulnerable to political interference. Additionally, because people generally do not actively participate in politics, rulers have fewer constraints to confront and can implement whatever policy is beneficial to them. It can be said that democratic elections have been used by politicians as an innovative means to gain legitimacy of the well-known authoritarian regime. According to the characteristics of how the democracy functions in less developed nations, it can be implied that democratic elections are necessary but not sufficient for generating the effective democracy. The majority of support from elections has subsequently been used to legitimate the absolute political control of those wealthy in government. This, in turn, firmly maintains their superiority in economic terms. Consequently, democracy does not prove to be beneficial to these nations in the long run.

The conclusion is that a consolidated democracy supporting economic growth is unlikely to emerge in countries where incomes are low. When a country is poor, people and thus political parties tend to have no political ideology. People tend to be myopic when they are very poor. They can easily be entertained by any fiscal or monetary expansionary macroeconomic policy of governments. Neither the long run consequences of implementing policies nor the failures of other countries from such

policies have received enough attention. Moreover, the authoritarian characteristics of the incumbent leader, the rampant corruption of governments and other political issues are ignored as long as those in office can provide them some visible benefits. As a result, whereas in developed nations democratic political regimes have fortified prosperity, in low income nations, democratic elections have largely been exploited so as to strengthen the economic and political power of those well off. Therefore, the democracy in such countries does not support long-term growth of nations.

Next, as can be seen from the empirical analysis, because colonization could leave a tremendously negative impact on colonized countries long afterward, the impact of democracy on economic development of poorer nations tends to be worsen when the idea of exporting democracy of developed nations are attached to the thoughts of taking natural resources of resource-rich poor countries. That is to say that by only overthrowing the authoritarian regime with newly democratic rulers who have good ties with some of the democracy-exporting countries might not prove beneficial or, in fact, could be disastrous for these democracy-imported countries. In the case of Iraq, which is an extreme case, although it is still too early to say what the relationship between democracy and prosperity in this country will be, it is unclear who actually benefited from replacing the authoritarian regime with a new democracy in this country. As a matter of fact, democracy is made of political institutions that need to be developed over time. Overnight destruction of the old with replacement of the new would never improve anything because people are still same, their thoughts are still the same; nothing is new there except the new face of ruler and the new name of the regime.

In addition, since this study repeatedly shows that colonialism, which represented the need to seek out resources in these colonized lands, is a major effect on the deprivation of prosperity in today's world. Thus, if the goal of all major policy makers is to reduce poverty and make this world a better place to live for everyone, not only for specific countries, the foreign policies with the underlying resource-seeking intentions must be abandoned or should be criticized harshly by all economists whose aim is to seek 'A World Free of Poverty'. Any policies attached to any form of this intention will never free this world from poverty. It will, on the contrary, only dampen the future of this world as the Western superpowers had done and the effects still remain in significantly obstructing the economic development of the contemporary world. Thus, as each country has its own specific political,

economic, cultural and historical environment that does not allow one to apply the positive consequences of democracy evenly, policy makers should be more cautious on their democracy-promoting advice to the poorer world.

6. Conclusion

First of all, this study shows that countries that were comparatively poorer than others in the respective times, which cannot achieve prosperity or at least the well-established foundation leading to growth during an authoritarian era, tend to be worse off. The best regime for poor countries in getting out from poverty is when the country has a benevolent and patriotic authoritarian ruler as a leader. It would not be correct to only assume that all rulers are self-interested. If it is so, some authoritarian nations such as Singapore, Malaysia, Swaziland and so on, would not have achieved remarkable results concerning economic development, as well as South Korea, Spain, Portugal and Taiwan would not be highly developed during an authoritarian era either. However, although good rulers exist, this world is still overwhelmed with mainly self-interested persons. Thus, when an evil dictator rules the country, the country can be heading to severe destruction, which may take a lifetime to recover from afterwards.

In summary, the authoritarian political system can go for the extreme case of either positive or negative. Democracy for the very poor seems to never be the best solution. Nevertheless, democracies have never caused severe damage to countries as much as authoritarian regimes have. As Sen put it in *Democracy as Freedom*, "No famine has ever taken place in the history of the world in a functioning democracy," Thus, the solution of democracy in terms of prosperity for the contemporary less well-off nations seems to be in the middle between the worst authoritarianism and the best authoritarian rulers. That is, in the case of poor nations, authoritarian regime can produce either the best or the worst result. Democracy is something between these two.

Note that this analysis does not attempt to say that a democratic political system is not the factor boosting economic growth in a nation. Rather, this study suggests that the key goal for economic development, particularly for those poorer nations, should not be one of promoting democracy only. The important task should be to work on developing favorable conditions leading to economic development, i.e.,

efficient property rights system, which, in turn, would spawn economic success. As a result, higher development would autonomously activate the peoples' demands for a democratic political system. When a democratic political system is finally established, subsequently, such democracy-ready conditions will spawn economic growth in a country further as well as reinforce the solidity of a democratic regime. That is to say that, in addition to people's analytical abilities for the possible consequences of policies offered by politicians, the sufficient knowledge of people on how a democracy really functions indeed act as a catalyst for economic development itself. Moreover, it is also the people who are the main actor in maintaining their democratic political regime. Thus, when the time is ripe coupled with the fact that the people are ready for it, a democratic political system would foster prosperity in these nations, as it does for most of the developed countries nowadays.

Appendix

Table A1. Variables and sources

Variable name	Variable source	Variable description
Growth	Penn World Table PWT 6.2	Growth rate of Real GDP per capita (at 2000 constant prices: Chain series)
Urbanization	HNPStats of The World Bank	Urban population (% of total)
Risk of Expropriation	International Country Risk Guide (ICRG)	Risk of expropriation is scales ranging from 0-10, with higher values indicating "better" ratings, i.e. less risk. This variables evaluates the risk "outright confiscation and forced nationalization" of property.
Risk of Repudiation	International Country Risk Guide (ICRG)	Repudiation of contracts is scales ranging from 0-10, with higher values indicating "better" ratings, i.e. less risk. "This indicator addresses the possibility that foreign businesses, contractors, and consultants face the risk of a modification in a contract taking the form of a repudiation, postponement, or scaling down" due to "an income drop, budget cutbacks, indigenization pressure, a change in government, or a change in government economic and social priorities."
Economic Freedom	Fraser Institute	The index comprises 21 components designed to identify the consistency of institutional arrangements and policies with economic freedom in five major areas: size of government, legal structure and security of property rights, access to sound money, freedom to trade internationally, and regulation of credit, labor and business
FDI	FDI stat by UNCTAD	Foreign direct investment as percentage of GDP
Dem (Polity)	Polity IV project http://www.systemicpeace.org/polity/polity4.htm	The operational indicator of democracy is derived from coding of the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive. The value +10 indicates strongly democratic and value -10 indicates strongly autocratic political regime
Dem (FH)	Pippa Norris; Democracy Timeseries Data Release 3.0, January 2009	The Freedom House annual political rights and civil liberty scales are combined and standardized to 100 points
Colony	The QOG Institute, University of Gothenburg	According to the QOG, "only Western colonizers (e.g. excluding Japanese colonialism), and only countries located in the non-Western hemisphere "overseas" (e.g. excluding Ireland & Malta), have been coded. Each country that has been colonized since 1700 is coded. In cases of several colonial powers, the last one is counted, if it lasted for 10 years or longer." The categories of colonizer are the following: Dutch, Spanish, Italian, US, British, French, Portuguese, Belgian, British-French and Australian.
Education	Barro and Lee (2001)	Average years of schooling in the population aged 25 and above (1960-2000)

Investment	WDI online databases, The World Bank statistics	Gross capital formation (% of GDP)
GDP per capita	Penn World Table 6.2	Real GDP per capita (2000 as base year) Missing values are filled in by using data provided by Gledisch (Data is taken from The QOG Institute, University of Gothenburg)

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