

Miljenko Antić\*

UDK 330.55:32  
JEL Classification E10, O11  
Prethodno priopćenje

## **DEMOCRACY VERSUS DICTATORSHIP: THE INFLUENCE OF POLITICAL REGIME ON GDP PER CAPITA GROWTH**

*This article investigates the influence that a regime type has on GDP per capita growth. Statistical investigation showed that, during the 1820-1950 period, democracies were much more successful than dictatorships in promoting economic growth. However, during the last fifty years, dictatorships achieved results that were equivalent to democracies in the promotion of GDP per capita growth.*

*Keywords: Political regime, democracy, dictatorship, GDP per capita growth.*

### **Introduction**

According to Dani Rodrik (quoted in Przeworski et al., 2000, 322), there are very few questions in social sciences more fundamental than the relationship between political regimes and economic prosperity. However, previous investigations did not provide an answer to the question of the relationship between regimes and development. To illustrate, Przeworski and Limongi (1993) found that eight out of twenty-one of the most important empirical investigations concluded that democracy produced faster development; eight investigations argued that dicta-

---

\* M. Antić, dr. sc., predavač na Građevinskom fakultetu Sveučilišta u Zagrebu. Članak primljen u uredništvo: 19. 5. 2004.

\*\* Acknowledgement: Research for this article was supported in part by Central European University (CEU) Special and Extension Programs. The opinions expressed herein are the author's own and do not necessarily express the views of CEU.

torship produced faster development and five investigations concluded that there was no difference (Przeworski and Limongi 1993, 60, 66). Therefore, they claim that, “the impact of political regimes on growth is wide open for reflection and research (*italics - MA*).” In addition, investigations during the last ten years also produced contradictory results.

Hence, the main purpose of this article is to investigate the developmental success of the two types of political regimes – democracy and dictatorship - during the 1820-1999 period. Furthermore, linear regressions investigate whether political regime has statistically significant influence on GDP per capita growth. The main finding of the article is that democracies were more successful than dictatorships in promoting GDP per capita growth during the last 180 years. However, during the last 50 years, dictatorships achieved results that were equivalent to democracies in the promotion of GDP per capita growth.

### **Literature review**

The relationship between regimes and development has been investigated in two ways – on the basis of theoretical arguments and on the basis of empirical data. This literature review presents first the theoretical arguments and then provides a critical examination of the empirical investigations.

### ***Theoretical arguments***

There are two different answers to the question which regime - democracy or dictatorship - enables faster development.<sup>1</sup> One group of authors (Galenson 1959, Schweinitz 1959, Huntington 1968, Rao 1984-5) argue that dictatorships are more effective than democracies in mobilizing resources for investment. An additional argument in favor of a dictatorship is the ability of a dictatorship to force firms to invest and export, refusing particularistic pressures for unproductive uses of resources (Haggard 1990). Furthermore, dictatorships may promote stability. Hewlett (1980) argues that repression, imposed by a military regime, prevented social unrest in Brazil in the 1960s and stabilized the economy. For Huntington, democratic political systems can be effective in developed countries. In contrast, a democracy frequently produces anarchy in developing countries. Briefly, authors

---

<sup>1</sup> Analysis in this section is based on Przeworski and Limongi 1997a.

who argue that dictatorship fosters development claim that dictatorship provides more stability and mobilizes more resources.

Another group of authors argues that democracies are more successful than dictatorship. According to Sen (2000), universal suffrage and division of power neither produce political instability nor hinder economic growth. Economic and political freedoms strengthen one another and economic freedoms foster economic growth. According to Olson (2000), dictatorships may produce economic miracles for a short period of time but only democracies produce long lasting economic success. He also argues that the main advantage of democracy is better protection of property rights. These rights stimulate economic activities because people know that they will enjoy the rewards of their work. In contrast, dictatorships produce much more uncertainty because they are prone to success crises.

According to North (1990), only democracy can force a government to act in the interest of the general population. The lack of democratic control enables dictators to steal resources instead of using them for economic development. In contrast, democracy enables the replacement of politicians that use resources inefficiently or only for the well being of the ruling elite. In other words, democracy imposes accountability on governments. Finally, Goodell (1985) argues that only democracies may produce predictable “rules of the game,” and this predictability fosters investment. Briefly, authors who think that democracies produce faster economic growth claim that democracies allocate economic resources better than dictatorships. Furthermore, democracies protect property rights, which reduces uncertainty and encourages investment.

### *Empirical Studies*

In the literature, it is possible to find approximately fifty articles that compare GDP per capita growth in democracies and dictatorships. Roughly half of them argue that democracies were more successful and half of them argue that dictatorships were more successful. It would be out of the scope of this article to present all of the works. Therefore, an appendix of the article presents the most important articles and books about this topic. Here, a critical summary of the articles is presented.

The empirical studies about the influence of political regime on economic growth have one common characteristic – they neither prove that democracies enable faster economic development nor that dictatorships have better results. As Sirowy and Inkeles (1990, 137) pointed out:

Overall, these studies present a very mixed and confusing picture with regard to the effect of democracy on economic growth. The inconclusive results presented by these studies are further compounded by the fact that these studies are quite heterogeneous with respect to characteristics of measurement, coverage research design, and method of analysis.

Fortunately, there is a book that sheds a lot of light on the investigation of the influence of regime type on economic development. The book *Democracy and Development* (2000) by Przeworski, Alvarez, Cheibub and Limongi contributes more to the investigation of a regime's effectiveness than any other previous investigation in this field. First, the book covers the longest period of time (1951-90) and the largest number of countries (141). Therefore, this is the most comprehensive investigation in the field. Inclusion of all the possible cases excludes the possibility of bias. Second, the book presents clear definitions of terms. Even though the authors' definition of democracy is a new one, it follows Schumpeter's (1947, 269) definition of democracy<sup>2</sup> and, therefore, enables a comparison with other works in the field. The usage of two classical terms – democracy and dictatorship – contributes to the clarity of the work. Furthermore, in contrast to other subjective classifications (Gastil's, Bollen's, Adelman and Moriss'), Przeworski et al use an objective criterion for classification – alternation in power as a result of elections.<sup>3</sup> In the book *Democracy and Development*, Przeworski et al present many discoveries about the relationship between regime type and development. The most important finding is that, during the 1951-90 period, dictatorships had higher annual rates of growth of GDP (4.42 percent) than democracies (3.95 percent). However, an average annual growth of GDP per capita was higher in democracies (2.46 percent) than in dictatorships (2.00 percent) (pp. 216). In addition, people live longer in democracies. "Men live 66.2 years under democracy and 50.8 under dictatorship, and women 71.5 years under democracy and 54.2 under dictatorship" (pp. 228). On the basis of comprehensive investigation of the successes of democracies and dictatorships, Przeworski et al (2000, 12) conclude the following: "Whenever regimes do make a difference, lives under dictatorships are miserable. The Churchillian view may be not enough, but it is accurate. Democracies are far from perfect but they are better than all the alternatives." However, this article challenges some of Przeworski et al. findings.

## **Definitions of key terms and the investigation plan**

### *Definitions of democracy and dictatorship*

Since the main purpose of the article is to compare the results of democracies and dictatorships, this section provides first a short explanation of the origin of these two terms as well as their most important definitions.

---

<sup>2</sup> See pages 5-6.

<sup>3</sup> See page 8.

The term democracy originates from the Greek word *demokratia*, which means rule of the people. Modern definitions of democracy connect democracy with elections. For Joseph Schumpeter (1947, 269), “the democratic method is that institutional arrangement for arriving at political decision in which individuals acquire the power to decide by means of a competitive struggle for the people’s vote.” Przeworski and Limongi (1997a, 179) define democracy as “a regime in which some governmental offices are filled as a consequence of contested elections.” For Robert Dahl (1971, 8) polyarchies (democracies) “are regimes that have been substantially popularized and liberalized, that is, highly inclusive and extensively open to public contestation.” Not all the authors accept minimalist definitions of democracy that associate democracy only with elections. According to Mainwaring, Brinks, and Perez-Linan (2001, 41), “without respect for the core civil liberties traditionally associated with democracy, a regime is not democratic as we understand that word today. Without protection of civil liberties, the electoral process itself is vitiated.” Therefore, the authors propose their own definition. “We define a democracy as a regime (1) that sponsors free and fair competitive elections for the legislature and executive; (2) that allows for inclusive adult citizenship; (3) that protects civil liberties and political rights; and (4) in which the elected governments really govern and military is under civilian control” (Mainwaring, Brinks, and Perez-Linan 2001, 38). Giovanni Sartori (1962, 354) formulates the main problem in defining democracy. “The misunderstanding springs from the fact that we say democracy sometimes to indicate “liberal democracy,” and sometimes to indicate only “democracy”.” “Nevertheless, all the important modern definitions of democracy involve free elections as *conditio sine qua non*.”

The term dictatorship has an origin in the Latin word *dictatura*, which means dictation. Up until modern time the term dictatorship did not necessarily have negative connotations. For Machiavelli (1970) and Rousseau (1978) dictatorship is justified under extraordinary circumstances. In Machiavelli’s works, a system that has negative connotation is tyranny – unlimited personal ruling. For Marx, Engels and Lenin, dictatorship of the proletariat is a system that should end the exploitation of the working class (Bobbio 1989, 161). Today, however, dictatorship is usually a synonym for an illegitimate government.

The challenge in using categories as defined above is operationalizing them. In other words, it is not always easy to decide whether a country is a democracy or not. It is even more difficult to compare levels of democracy in different countries. Certain organizations, like the Freedom House, and certain authors, like Jagers and Gurr, Bollen, etc. accepted the challenge and tried to measure levels of democracy. However, these measurements have been highly subjective, especially Freedom House’s measurement (this measurement is the most frequently used in the literature). To illustrate, in 1989, all the parties except the Communist party were banned in Yugoslavia, and free elections were not held for 50 years. In contrast, in 1990,

all the republics in Yugoslavia held multiparty elections and in four out of the six republics, the elections were held according to the highest democratic standards.<sup>4</sup> In these four republics, Communist parties lost the elections and peacefully transferred power to the opposition. Nevertheless, according to the Freedom House, Yugoslavia had the same level of political rights (5) and civil rights (4) in 1989 and in 1990.<sup>5</sup> Many authors have criticized the subjectivity of the Freedom House. Bollen and Paxton (2000, 77) found that the Freedom House has a systematic bias against leftist governments. Mainwaring, Brinks, and Perez-Linan (2001, 53-5) showed, in an analysis of Latin America, that the Freedom House rating was inappropriate for the following countries: Nicaragua, El Salvador, Mexico, Colombia, Dominican Republic and Guatemala. Therefore, the authors concluded that “Freedom House scores might be misleading because of its systematic biases, and the reliability and validity of its scores are subject to question because of the lack of explicit coding rules.” Similar criticism can be applied to other measurements of the level of democracy. They are also highly subjective (due to the absence of explicit coding rules) and/or ideologically biased (against leftist governments). On the basis of all the arguments mentioned above one cannot but agree with Vanhanen (1997, 34) who argues that these classifications are “too complicated, with too many indicators, which makes it extremely difficult to gather empirical data from all countries of the world and even more difficult to find objective grounds to weight the importance of different indicators. Besides, all of them require too many subjective judgments.”

The author of this article considers classification of regimes by Przeworski et al (2000) as the best one available in the literature. Their classification is based of the following definition. Democracy is a regime “in which those who govern are selected through contested elections” (Przeworski et al 2000, pp. 15, 18) whereas dictatorships are regimes that are not democracies. Furthermore, Przeworski et al (2000, 16) use an objective criterion<sup>6</sup> for classification: “whenever in doubt, we classify as democracies only those systems in which incumbent parties actually did lose elections.” The attractiveness of Przeworski’s measure is not in its refinement in measurement of democracy but in its bluntness: a country is either a democracy or not. If it is so difficult even to decide whether a country is democracy or not, than there is no justification for subjective evaluations of level of democracy at the scales of seven, ten or even a hundred. Therefore, Przeworski et al (2000) definition and

---

<sup>4</sup> For example, all the candidates had access to media for free during prime time. In addition, both small and big parties were treated equally. Finally, transfer of power from communist to opposition occurred without any incident.

<sup>5</sup> According to Freedom House, 1 is the best grade and 7 is the worst grade. Country ratings are available at [www.freedomhouse.org/ratings](http://www.freedomhouse.org/ratings)

<sup>6</sup> Objectivity is a consequence of measurability – incumbent’s party either did or did not lose elections.

classification of regimes are the bases for investigation in this article. The dependent variable is GDP per capita growth, defined as “the sum of the gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products” ([www.worldbank.com/data](http://www.worldbank.com/data)).

### *Data*

In this investigation, all of the political data for the 1820-1990 period are from Przeworski et al (2000). For the 1991-9 period this article uses an unpublished classification of regimes made by Antonio Cheibub.<sup>7</sup> This classification is a continuation of classification that was conducted for book *Democracy and Development*.

The best quality of data regarding development is for the 1951-90 period. Therefore, the investigation of this period includes control variables. The data for the 1951-90 period are available on the Internet site [www.ssc.upenn.edu/~cheibub/data/Default.htm](http://www.ssc.upenn.edu/~cheibub/data/Default.htm). Economic data for the 1991-99 period are from CD-ROM *World Development Indicators 2001*, published by The World Bank. Economic data for the 1820-1950 period are from Madison (1995). For this period, only population data, level of GDP and GDP per capita growth are available. In addition, these data are not as precise as the data for the 1951-90 period.

This research faced problems with availability and reliability of data. The data about GDP per capita growth are not available for the entire 1820-99 period for all the countries. Moreover, dictatorships with bad economic results (for example, Cuba, N. Korea, Iraq) tend to disguise these bad economic performances and do not publish data about economic growth. This tendency might bias the data. Most likely, dictatorships have had worse results in reality than the data suggests. However, there is also a tendency of biasing data in the opposite direction - in favor of democracies. As Przeworski (1995, 19) pointed out:

You are unlikely to observe poor economic performance in democracies, particularly poor democracies... When democracies face bad economic conditions, they die, and we do not observe them anymore: if a democracy does poorly, it becomes a dictatorship, so that in the observed population we are going to observe that democracies do better. Yet this finding results not because democracy has an effect on economic growth, but because democracies are more sensitive to economic crises.

Even though it may be likely that the bias favoring dictatorships may be stronger than the bias favoring democracies, it is worth noting that data are biased in both directions and that, consequently, it is possible to make inferences on the basis of available data. In addition, since GDP per capita was measured in connection with

---

<sup>7</sup> I am grateful to Antonio Cheibub for allowing me to use his data set.

the total population and since countries for which data are not available do not have large populations, unavailability of data could not significantly influence the overall result for weighted regressions, weighted averages and median growth.

### *Calculation methodologies: simple average versus weighted average*

Majority of authors compare GDP per capita growth in democracies and dictatorships on the basis of simple averages. Dick (1974) was the first author who implemented the use of weighted average (by population) of GDP growth to compare economic successes of democracies and dictatorships. Later, Scully (1992) also compared economic successes of regimes on the basis of the same method. Grier and Tullok (1989) introduced the population-weighted regression in the investigation of the efficiency of regimes.

If economic success is measured exclusively by simple average, then small countries have a disproportionately strong influence on the results. According to Nachmias and Nachmias (2000, 419), “simple aggregates may conceal the relative influence exerted by each indicator used in the index. To prevent such misrepresentation, weighted averages are often used.” Therefore, to mitigate the potential problems caused by the calculation of simple average, economic results of democracies and dictatorships, as well as the results of their subtypes, will also be compared on the basis of weighted averages.

The weighted average methodology has an additional advantage – it enables the inclusion of all the countries in an investigation. Since small countries have disproportionally strong influence on the simple average, authors that use simple averages must exclude small countries. According to Lijphart (1999, 52), “in comparative analyses of democracy, the smallest and least populous ministates are usually excluded; the cutoff point tends to vary between populations of one million and of a quarter of a million.” It is not clear why the cutoff point should be a quarter of a million or a million. Why is the cutoff not 100,000 inhabitants or 10 million inhabitants? It is clear that the simple average forces authors to make an arbitrary exclusion of countries. If economic growth is measured by the weighted average, arbitrariness does not exist. Each country can be included because all the results are weighted on the basis of the population. However, weighted average also has a very important disadvantage – big countries have a very strong influence on the average for a group of countries. Therefore, data calculated on the basis of both simple and weighted average will be presented. In addition, political regimes will also be compared on the basis of median growth.

### *Selection of cases*

This investigation includes all the countries for which data are available for the 1820-99 period.<sup>8</sup> Lijphart (1999, 262-3) explains the main advantage of such a comprehensive investigation.

Fortuitous events may also affect economic success, such as the good luck experienced by Britain and Norway when they discovered oil in the North Sea. The effects of such fortuitous events as well as external influence that cannot be clearly identified and controlled for can be minimized when economic performance is examined over a long period and for many countries.

Accordingly, all the possible biases mentioned previously could be minimized with the inclusion of all the countries and all the years for which data are available. In addition to the comprehensive investigation that includes all the countries for the 1820-99 period, this article also includes a separate global statistical analysis, for the 1820-1950 period, for the countries that switched their political systems from democracy to dictatorship and vice versa. This additional investigation provides an effective means for isolating the political regime as the independent variable.

### *Models of investigation*

Since this is a statistical study and since analysis is based on time-series cross-sectional data, the following OLS regression model of investigation is used:

GDP per capita growth = a + b<sub>1</sub>political regime + b<sub>2</sub>age of regime - b<sub>3</sub>level of GDP per capita (lagged) - b<sub>4</sub>war + b<sub>5</sub>openness - b<sub>6</sub>population growth - b<sub>7</sub>population (natural log) + b<sub>8</sub>regional growth + b<sub>9</sub>investment + b<sub>10</sub>education + ε

a = intercept

ε = standard error

The second model of investigation is based on observations weighted by population. Here, it is not possible to include population as a variable. Therefore, the following OLS regression model of investigation is used:

(GDP per capita growth = a + b<sub>1</sub>political regime + b<sub>2</sub>age of regime - b<sub>3</sub>level of GDP per capita (lagged) - b<sub>4</sub>war + b<sub>5</sub>openness - b<sub>6</sub>population growth - b<sub>7</sub>regional growth + b<sub>8</sub>investment + b<sub>9</sub>education + ε)\*population

---

<sup>8</sup> Cheibub's classification of regimes ends with 1999. Therefore, this is the last year for the global statistical investigation in this article.

## **GDP per capita growth in democracies and dictatorships**

Although it is possible to compare economic results on the bases of many different criteria (GDP growth, inflation, productivity etc.), GDP per capita growth is the most objective measurement of economic success. According to Przeworski et al (2000, 5), “income is simply the best overall indicator of the choices people enjoy in their lives.” Since the quality of data for the pre-1950 period differs from the quality of data for the years since 1951,<sup>9</sup> economic success of democracies and dictatorships is analyzed separately for these two periods.

### ***GDP per capita growth pre-1950***

For the 1500-1820 period, it is not possible to compare economic success of democracies and dictatorships because there were no democracies in existence. Therefore, for this period, it is only possible to approximate economic results of dictatorships, and these results were poor. On average, the annual growth of GDP per capita during the 1500-1820 period was only .04 percent (Maddison 1995, 20). In contrast, during the 1820-1992 period, when many countries became democracies, the average rate of growth of GDP per capita, for the entire world, was 30 times higher (1.21 percent). Of course, it does not necessarily mean that dictatorships caused the stagnation during the 1500-1820 period; and it also does not mean that democratization of the world caused economic success in the post-1820 period. It is possible that, as Helliwell (1992) argues, economic growth caused democratization, not vice versa. Since 1820, both democracies and dictatorships have had much higher rates of growth of GDP per capita than in the pre-1820 period. Therefore, it is most likely that scientific and technological progress caused the acceleration of growth in both types of political regimes. Still, economic results in the pre-1820 period do not support the hypothesis that dictatorships enable faster economic growth of GDP per capita than democracy.

As it was mentioned above, the first modern democracy (the US) emerged in 1830.<sup>10</sup> Hence, from this year it is possible to compare economic results of demo-

---

<sup>9</sup> Difference in the quality of data means that data for pre-1950 period are not as accurate as data for the period after 1950. Nevertheless, since Maddison's data for the 1820-1950 period are a result of a rigorous scientific investigation it is possible to use them for comparison of economic growth in different political regimes. For information on the technique employed to calculate economic growth see Maddison (1995, 118-47).

<sup>10</sup> According to Przeworski et al (2000, 104), prior to 1830, the United States did not fulfill minimum requirements for one country to be considered as a democracy.

cracies and dictatorships. However, for the 1820-1950 period, data about GDP per capita growth are not available for all countries. Furthermore, even for countries for which data are available, they are not available for every year. For example, data about the level of GDP per capita in the US prior to 1871 are available only for the following years: 1820, 1850 and 1870. In addition, it is not possible to add control variables because data for the 1820-1950 are very scarce. Therefore, it is not possible to employ linear regressions. Instead, an average rate of growth in democracies and dictatorships will be calculated on the basis of data about the level of GDP per capita in the first and in the last year of democratic (dictatorial) regimes.<sup>11</sup> Despite the absence of data for certain years, it is important to conduct an investigation of GDP per capita growth in democracies and dictatorships during the 1820-1950 period because such an analysis does not currently exist in the literature.

Since it is not possible - because of lack of data - to conduct a global statistical analysis of GDP per capita growth that includes all the countries in the 1820-1950 period, this section first compares the results of countries that changed political system from dictatorship to democracy or vice versa. Results are presented in Table 1.<sup>12</sup>

On the basis of simple averages,<sup>13</sup> countries in Table 1 had 1.19 percent faster growth during the period of democracy than during the dictatorship period. The average rate of GDP per capita growth was 2.05 percent during the period when these countries experienced democracy and only .86 percent when the same countries were dictatorships.

---

<sup>11</sup> When required, this article approximates the level of GDP per capita for the years missing in Maddison's data set. This approximation is calculated by averaging GDP per capita for a certain period of time. To illustrate, data for GDP per capita in the US in 1830 is calculated by averaging the rate of growth for the 1820-50 period.

<sup>12</sup> The average rates of growth are calculated in accordance with the following formula:

$$r = 10^{(\log(l/f)/y)} - 1$$

r = rate of GDP per capita growth;

l = level of GDP per capita in the last year of democracy (dictatorship);

f = level of GDP per capita in the first year of democracy (dictatorship);

y = number of years a country was democracy (dictatorship).

<sup>13</sup> Even though in this calculation the result was not weighted by population, it was weighted according to number of years a country was a democracy (dictatorship). It would be inappropriate, for example, to weight equally the results of the US, which was democracy for 120 years, during the 1820-1950 period, with the results for Pakistan that was a democracy for only 3 years during that period. Therefore, an average of GDP per capita annual growth for each country was multiplied by the number of years this country was a democracy (dictatorship). These multiplications were summed and divided by the sum of the total number of years during which these countries were democracies (dictatorships).

Data in Table 1 show the superiority of democracies in economic growth in comparison to dictatorships during the 1820-1950 period. Twenty-one out of thirty countries, which changed regimes in this period, had higher rates of economic growth during the period when they were democracies and only nine countries had faster growth during the period of dictatorship. The average rate of GDP per capita growth for the entire world for the 1820-1950 period was .92. Since twenty-five out of the thirty countries that experienced democracy had average rates of GDP per capita higher than the world average, it can be concluded that democratic countries were very successful during this period. Only five democracies posted rates below the world average. Furthermore, only two democracies had negative rates of growth – Spain (-3.22) and India (-2.34). Yet, Spain experienced a civil war during the period of democracy and India experienced violence after achieving independence. In addition, democracy in these countries lasted for a short period of time – in Spain five years (1931-6) and in India three years (1947-50).

*Table 1*

AVERAGE ANNUAL RATES OF GROWTH IN COUNTRIES  
THAT EXPERIENCED DEMOCRACY (1820-1950)

Country	Period(s) when country was dictatorship	GDP per capita growth (%) during dictatorship	GDP per capita growth (%) during democracy	Period(s) when country was democracy
Venezuela	1900-45,1948-	3.98	13.17	1945-8
Chile	1925-32	-3.30	2.14	1900-25,1932-
Austria	1820-1918,1934-45	0.18	4.46	1918-34,1945-
Greece	1913-26(29),1936-46	-0.63	3.49	1926(29)-36, 1946-
Italy	1820-1919,1922-46	0.79	3.90	1919-22,1946-
Brazil	1820-1946	0.62	3.46	1946-
Finland	1820-1919,1930-44	0.96	3.71	1919-30,1944-
Yugoslavia	1913-21,1929-	0.52	3.27	1921-29
Sweden	1820-1918	0.77	3.10	1918-
Germany	1820-1919,1933-49	0.81	2.93	1919-33,1949-
Bulgaria	1913-26,1934-	-0.04	1.42	1926-34
Norway	1820-84	0.59	1.87	1884-

Pakistan	1820-1947	0.14	0.99	1947-50
Canada	1820-1920	1.42	2.21	1920-
Czechoslovak.	1820-1920,1948-	0.94	1.69	1920-48
Belgium	1820-1919	0.96	1.55	1919-
Denmark	1820-1901	1.11	1.66	1901-
USA	1820-30	1.30	1.58	1830-
Ireland	1820-1923(26)	0.96	1.23	1923(26)-
Portugal	1850-1910(13),1926(29)-	0.64	0.79	
France	1820-1875	1.08	1.16	1875-
Netherlands	1820-68(70)	1.06	1.00	1868-
Australia	1820-1901	1.23	1.15	1901-
Colombia	1900-10(13),1949-	1.66	1.49	1910(13)-49
UK	1820-1911	1.17	0.78	1911-
New Zealand	1870-1907	1.48	1.07	1907-
Peru	1900-39,1948-	2.25	1.18	1939-48
Argentina	1870-1912,1930-46	2.14	0.51	1912-30,1946-
India	1820-1947	0.15	-2.34	1947-
Spain	1820-1931,1936-	0.78	-3.22	1931-36
Average <sup>14</sup>		0.86	2.05	

Moreover, both countries had low annual rates of GDP per capita annual growth when they were dictatorships – Spain .78 and India .15.

It is also worth mentioning that democracies were more successful during the entire 1820-1950 period. During the 1830-70 period, the United States (the only democratic country in the world until 1868) had an average rate of GDP per capita growth of 1.3 percent per year. In this period, the average rate of growth in dictatorships was less than .6 percent per year. During the 1870-1950 period democracies had GDP per capita growth of more than 2.05 percent per year. In contrast, dictatorships posted less than 1.3 percent annual GDP per capita growth from 1870-1913 and less than .9 percent annual growth during the 1913-50 period.

As Table 2 shows, countries that were dictatorships during the entire 1820-1950 period had worse economic results than countries that experienced democracy during the same time frame. These countries had, on average, only .5 percent rate of annual growth.

<sup>14</sup> The weighted average is not calculated because data about population are not available for many country-years.

Table 2

GDP PER CAPITA ANNUAL GROWTH (%) IN COUNTRIES THAT WERE  
DICTATORSHIPS DURING THE ENTIRE 1820-1950 PERIOD<sup>15</sup>

Country	Periods for which data are available	GDP per capita average annual growth (%)
Russia <sup>16</sup>	1820- 1950	1.03
Hungary	1870- 1950	0.84
Mexico	1820- 1950	0.78
Turkey	1913- 50	0.77
Japan	1820-1950	0.76
Poland	1926(29)- 50	0.69
Thailand	1870- 1950	0.21
China	1820- 1950	0.12
Egypt	1900- 50	0.03
Romania	1926- 50	-0.26
Average		0.5

At the end of this period, the oldest democracy – the United States – became the strongest economic and military power in the world. In 1945, the US produced approximately 50 percent of world's GDP and was the only nuclear power in the world. It is difficult to say whether the American political regime caused this economic and social development. The same question can be formulated more broadly: Did economic development cause democratization or did democratization spur economic growth during the 1820-1950 period? There is no doubt that democracy emerged in countries that were the most developed economically. Therefore, it can be concluded that economic growth fostered democratization. However, data in Table 1 show that the same countries drastically increased GDP per capita growth when they changed the political system from dictatorship to democracy. Accordingly, it can be concluded that democratic political regime had a positive influence on economic development during the 1820-1950 period.

<sup>15</sup> Data are not available for all the countries that were dictatorships during this period of time. Table 2 includes only those countries that were independent at least for a period of time during the 1820-1950 period.

<sup>16</sup> Since 1917 USSR.

### *GDP per capita growth in democracies and dictatorships from 1951-90*

It is not completely clear which political regime had better results during the 1951-90 period. As Table 3 shows, if results are compared on the basis of simple average or on the basis of median growth, democracies had faster GDP per capita growth than dictatorships.

Table 3

#### GDP PER CAPITA GROWTH DURING THE 1951-90 PERIOD (%)

	Dictatorships	Democracies
Simple average	2.00	2.46
Median	2.09	2.55
Weighted average	2.97	2.47

Nevertheless, if results are compared on the basis of weighted average (by population), dictatorships had higher rates of GDP per capita growth than democracies. The reason is simple – small democratic countries had faster growth than small dictatorships but more populous dictatorships had faster growth than populous democracies.<sup>17</sup> It is worth mentioning that, in contrast to the 1820-1950 period, differences between democracies and dictatorships became negligible during the 1951-90 period. Democracies increased GDP per capita growth by approximately .5 percent in the last 50 years. However, dictatorships improved their results materially. The previous sections showed that during the 1820-1950 period dictatorships had, on average, GDP per capita growth of less than .9 percent a year. In contrast, during the 1951-90 period dictatorships had, on average, GDP per capita growth of 2 percent or higher.

---

<sup>17</sup> An additional trend is that democracies have decreased and dictatorships have increased size of population in the last 40 years. For example, a median size of population in democracies was 7,593,500 inhabitants in 1960 and 5,750,500 inhabitants in 1999. In contrast, a median size in dictatorships was 5,367,000 in 1960 and 7,983,000 in 1999. There are two factors that caused these differences. First, dictatorships have had faster population growth than democracies in the last 40 years. Second, and even more important, democratization is connected with the right of self-determination. Therefore, many democracies disintegrate during the process of democratization (for example, Soviet Union, Yugoslavia, Czechoslovakia, etc.). As a result, an increasing number of democracies are relatively small in territory and population. In contrast, dictatorships do not allow self-determination.

*GDP per capita growth in democracies and dictatorships from 1991-9*

Scientific discussions concerning economic results of democracies and dictatorships were intensive – as discussed in the literature review – during the cold war period. Data that were used in these investigations were for pre-1990 period. Even the most recent investigations, written by Przeworski at al. (2000), Gasiowski (2000), and Kurzman, Werum and Burkhart (2002), use data that finish with 1990, 1992, and 1980, respectively. However, the best period for comparison of democracies and dictatorships was the 1990s because many countries changed their political regime during these years. This enables a comparison of results under two different political regimes. Nevertheless, as Table 4 shows, this period of time also does not provide an unequivocal answer on the main research question in this article – which political regime enables faster economic growth?

*Table 4*

## GDP PER CAPITA GROWTH DURING THE 1991-9 PERIOD (%)

	Dictatorships	Democracies
Simple average	.83	1.11
Median	1.46	1.87
Weighted average	5.17	1.78

As shown in Table 4, if growth is calculated on the bases of simple average and median, then democracies have faster growth of GDP per capita than dictatorships during the 1991-9 period. However, if growth is calculated on the basis of weighted average, then dictatorships post economic growth that is 2.9 times faster. The reason for conflicting results is China. The most populous dictatorship achieved tremendous economic success during 1990's, having an average rate of growth of GDP per capita of 9.3 percent a year. Therefore, dictatorships had much better results on the basis of weighted average. Table 4 shows how misleading it can be to compare results solely on the basis of weighted average. On the basis of this indicator alone, one may conclude that many more dictatorships have better economic results than democracies. In reality, more countries benefited from democracy than from dictatorship. However, this table also shows how misleading it can be to compare results solely on the basis of simple average. Relying solely on this indicator one may conclude that many more people benefited from democracy

than from dictatorship. In reality, hundreds of millions of people benefited from fast economic development in dictatorships. Therefore, the analysis above shows that the best scientific approach is to use different indicators for comparison. This is especially important if previous investigations produced contradictory results.

Results for the 1991-9 period are similar to results for the 1951-90 period. In both periods democracies had better results on the basis of simple average and median but dictatorships had better results on the basis of weighted average. Therefore, it is possible to conclude that, during the last fifty years, large (populous) dictatorships had better results than large democracies and, vice versa, small democracies had better results than small dictatorships. Of course, it is not possible to conclude, on the basis of the above data, that democracy causes better results in small countries or that dictatorship causes better results in big countries. The results above could be a consequence of spurious correlation. For example, it is possible that big dictatorships developed faster because of lower level of GDP per capita. Therefore, this article conducts a linear regression for the 1951-99 period that includes control variables.

### *Linear regression with a dummy variable for political regime*

In the linear regressions below, the influence of political regime is investigated with a dummy variable (democracy – dictatorship).<sup>18</sup> The value assigned to democracy is 0 and the value for dictatorship is 1. The dependent variable is GDP per capita.

#### Control variables

In order to prevent spurious correlations, a set of control variables is included.<sup>19</sup> Age of a regime is included as a control variable because Huntington (1968) argues that regime stability fosters economic growth. Data for this variable are from Przeworski et al (2000) and from unpublished classification of regimes by

---

<sup>18</sup> For sources of data see pages 8-9. Democracy and dictatorship have already been defined (see page 8).

<sup>19</sup> When nothing else is specified, data for control variables are from Przeworski et al (2000). Data are available on the Internet site [www.ssc.upenn.edu/~cheibub/data/Default.htm](http://www.ssc.upenn.edu/~cheibub/data/Default.htm).

Cheibub.<sup>20</sup> Age of a regime is defined as number of years that a country has an uninterrupted political regime.<sup>21</sup>

The level of GDP per capita is included because economic theory argues that poor countries develop at a faster rate than developed countries. According to the economic law of diminishing returns, “we will get less and less extra output when we add successive doses of inputs while holding other inputs fixed” (Samuelson and Nordhaus 1989, 33). In other words, it is easier for low-income countries to achieve high levels of economic growth. Indeed, during the 1990-7 period, low-income countries had a 3.9 percent average annual GDP growth; middle-income countries had 2.8 percent growth and high-income countries had 2.2 percent growth (The World Bank 1999a). Since low-income countries are predominately dictatorships and since high-income countries are predominately democracies, an investigation without a control variable for the level of economic development may produce spurious correlation. Faster economic development in dictatorships can be a result of lower income level rather than a result of a lower level of democracy. According to Hicks (1988, 680-1), “growth during a period will be relatively high where “development” at the beginning of the period was relatively low, and relatively low where “development” was high”. Therefore, the level of GDP per capita will be one of the control variables in the linear regression. The level of GDP is defined as real GDP per capita based on 1985 international prices (Przeworski et al 2000, 295). In order to make this variable a little predetermined, the lagged value of per capita GDP is used in the regressions.

War is another control variable because Huntington and Dominguez found that a low rate of per capita growth prevailed among countries that suffered from violence and conflict. This finding was confirmed by Landau (1986) who concluded that war, fought on the country’s soil, significantly decreases economic growth.<sup>22</sup> In the linear regression, war is a dummy variable with a value of 1 when there is conflict of any type (international or civil) on the country’s territory, 0 otherwise.<sup>23</sup>

---

<sup>20</sup> See page 8.

<sup>21</sup> The base year is 1870. This means that, for example, the age of the regime for the United States is now 134 years because this country had a democratic political regime during the entire 1870-2003 period. For the year 1870 the value is 1.

<sup>22</sup> An additional reason for inclusion of this variable is the fact that this article is based on Przeworski et al. (2000) classification of regimes. For these authors all the countries that are not democracies are dictatorships. However, a great majority of the countries that have civil war on their soil are neither democracies nor dictatorships (according to classical definitions of dictatorship) – rather they are in a state of anarchy. Their bad economic performances are assigned to dictatorships. Therefore, inclusion of war as a control variable should prevent biasing of results against dictatorships.

<sup>23</sup> Data for the 1951-90 period are from (Przeworski et al, 2000). Data about wars for the 1991-9 period are from Stockholm International Peace Research Institute (2001).

An additional control variable is the degree of openness of an economy. This variable should also isolate political regime as the independent variable in the investigation. Openness is defined as “exports and imports as a share of GDP” (Przeworski et al 2000, 297). Population growth is included because Przeworski et al (2000, 217-68) found that population growth has a negative influence on GDP per capita growth. Furthermore, total population (natural log)<sup>24</sup> is also a control variable because Landau (1986) found that total population has a negative influence on growth – less populous countries have higher rates of GDP per capita growth.

An additional control variable is regional growth of GDP per capita. Variable “regional growth” was not included in the previous regressions about GDP per capita growth. However, the spillover effect of economic growth on neighboring countries has already been noticed in the literature. According to Amsden (2001, 20), “when one country began introducing developmental machinery, other countries in close proximity followed suit: The industrial promotion systems of Malaysia, Indonesia, and Thailand, for example, were introduced at roughly the same time and closely resembled one another.” Hence, it is important to include this variable because fast economic growth in a country could be a result of strong economic growth in neighboring countries. Throughout the history different regions achieved the fastest economic growth. Up until the 15<sup>th</sup> century the Mediterranean region was the most developed. From the 16<sup>th</sup> to the 20<sup>th</sup> century, Europe and North America had the fastest economic growth. During the last decades, countries in the Pacific basin achieved the fastest strides in economic development. Since trade routes change and economic and political conditions can be more favorable in one region than another, a “regional growth” variable helps to isolate political regime as the independent variable in the investigation. In other words, this variable shows whether, for example, South Korea developed quickly due to its political regime or due to the fact that it is located on the Asian continent, which developed very rapidly during the last few decades. Hence, the “regional growth” variable enables a comparison of the results of regimes inside a group that is relatively homogeneous. For example, it is more logical to compare results of democracies and dictatorships in the sub-Saharan Africa than to compare results of a democracy in Africa with a dictatorship in East Asia.<sup>25</sup>

---

<sup>24</sup> Source of data is Przeworski et al (2000) and The World Bank (2001).

<sup>25</sup> The variable “regional growth” is calculated in the following way. First, all the countries are divided into five groups: 1) Sub-Saharan Africa; 2) Asia and Pacific islands/Oceania; 3) Middle East/North Africa; 4) Latin America; 5) Industrial countries including Eastern-Europe/ Soviet Union. Second, GDP per capita growth is calculated for each region and for each year. Finally, GDP per capita growth for a certain country is excluded from the calculation of regional growth. This means that, for example, the value for regional growth for Argentina is equal to the average GDP per capita growth for all the Latin American countries except Argentina.

Since Huntington and Dominguez (1975) argued that the main advantage of dictatorships was a higher level of investment, “investment” will also be a control variable in the regression. Investment is defined as “real gross domestic investment (private and public) as a percentage of GDP” (Przeworski et al 2000, 295). The last control variable is education, which is a standard variable in the studies of economic growth. This variable is defined as “cumulative years of education of the average member of the labor force” (Przeworski et al 2000, 293).

## Hypotheses

The following hypotheses have been formulated on the basis of a review of the relevant literature and of preliminary investigations set for in this article:

Hypothesis 1:

Democracies have higher rates of growth than dictatorships.

Hypothesis 2:

The longer that the current regime exists the higher the rate of GDP per capita growth.

Hypothesis 3:

The higher the level of GDP per capita (lagged) the lower the annual growth of GDP per capita.

Hypothesis 4:

In years where a country has a war on its own territory the lower the GDP per capita.

Hypothesis 5:

The more open an economy the higher the growth of GDP per capita.

Hypothesis 6:

The higher the rate of population growth the lower the growth of GDP per capita.

Hypothesis 7:

The higher the number of people (natural log) in one country the lower the rate of GDP per capita growth.

Hypothesis 8:

The higher the regional economic growth the higher the growth of GDP per capita.

Hypothesis 9:

The higher the level of gross domestic investment (percent of GDP) the higher the rate of GDP per capita growth.

### Hypothesis 10:

The bigger the number of years of education of the average member of the labor force the higher the rate of GDP per capita growth.

### Results of the linear regression

On the basis of the models set forth above (see page 12), two linear regressions are conducted with a dichotomous independent variable (democracy – dictatorship) and several control variables. In the first regression there is no weighting and in the second regression observations are weighted by population. Results are presented in Table 5.

The main question that this article tries to answer is whether regime type has an influence on GDP per capita growth. Yet, as it is evident from the table, the linear regression does not provide an unequivocal answer. According to the simple model, regime type does not have significant influence on GDP per capita growth. However, according to the weighted model, dictatorship has significant positive influence (at .05 level) on GDP per capita growth. Here, very dictatorship increases GDP per capita growth by .51% a year. A logical possible explanation for differences in results of the two regressions is that more populous countries have some benefits from order that a dictatorship may provide. It is important to stress that results in Table 5 are in accordance with the data presented in tables 3 and 4.

As it was expected, level of GDP per capita (lagged) has statistically very significant (at .0001 level) negative influence on GDP per capita growth in both models. A \$1,000 increase in the level of GDP per capita decreases GDP per capita growth by .3% a year. In other words, it can be expected that, in a long term, the gap between rich and poor countries will gradually decrease.

War on the territory of a country also has statistically significant (at .01 level in the simple model and at .001 level in the weighted model) influence on GDP per capita growth. According to the simple model war decreases GDP per capita growth by 1.1 percent a year. The same figure in the weighted model is -.92.

Degree of openness has statistically very significant positive influence (at .0001 level) on GDP per capita growth in the simple model. Here, a one percent increase in export and import increases GDP per capita growth by .02 percent. Nevertheless, according to the weighted model, degree of openness does not have significant influence on GDP per capita growth. Obviously, degree of openness is not so important for populous countries because these countries have huge internal markets.

Table 5

POOLED CROSS-SECTIONAL TESTS OF EXPLANATIONS OF GDP  
PER CAPITA GROWTH FOR THE 1951-90<sup>26</sup> PERIOD

Variables <sup>27</sup>	Simple average	Weighted observations
Regime <sup>28</sup>	.0321(.319)	.5056(.2533)*
Age of regime	.0003(.0037)	.0016(.0029)
Level of GDP per capita (lagged)	-.0003(.0001)***	-.0003(.00005)***
War	-1.1034(.3758)**	-.9197(.2635)***
Degree of openness	.0162(.0036)***	.0062(.0048)
Population growth	-.7642(.0873)***	-.8837(.0964)***
Population size(natural logarithm)	.6304(.2154)**	X
Regional growth	.1776(.068)**	.2032(.0644)**
Educational level	.0041(.0636)	.1336(.0719)
Investment	.1357(.0166)***	.1327(.0164)***
R-squared	.1418	.212
N	2893	2893

Note: Main entries are unstandardized OLS coefficients. Fixed effects for time<sup>29</sup> are included in order to control for autocorrelation. <sup>30</sup>The robust standard errors, which were used to control for heteroscedasticity (Beck et al. 1993; White 1980), are in parentheses.

\*p < .05 (two-tailed test).  
\*\*p < .01 (two-tailed test).  
\*\*\* p < .001 (two-tailed test).

<sup>26</sup> Due to availability of data, it was possible to conduct a linear regression only for the 1951-90 period. However, as it is evident from Table 4, data about GDP per capita growth for the 1991-9 period do not differ much in comparison with data for the 1951-90 period (when the two regimes are compared).

<sup>27</sup> The coefficients for each time period dummy variable are not reported by Limdep; see footnotes 29 and 30.

<sup>28</sup> This is a dummy variable; value for democracy is 0 and value for dictatorship is 1.

<sup>29</sup>Fixed effects for time are controlled by a dummy variable for each unique year in data. Therefore, the degree of freedom (number of observations minus number of independent variables) is 2843 – ie, there are additional 40 independent variables being estimated (one for each year 1951-1990).

<sup>30</sup> Fixed effects are included because Breusch-Godfrey test indicted presence of autocorrelation.

Population growth has a very significant negative (.0001 level) impact on GDP per capita growth. A one-percent increase in population growth decreases GDP per capita growth by .76 percent (simple model) and by .88 percent (weighted model). In contrast, population size (natural logarithm) has a positive influence on GDP per capita growth. There is only .3% chance that the null hypothesis is true – that population size does not have influence on GDP per capita growth. Here, the result is not in accordance with the hypothesis above. A possible explanation for the result is that a huge internal market may have positive influence on GDP per capita growth in populous countries. Of course, since the entire model is weighted by population, this variable does not exist in the weighted model. It might look illogical that, on one side, population growth decreases economic growth and that, on other side, population size stimulates economic growth. However, it is possible to find a logical explanation. In short term, population growth decreases GDP per capita growth. However, when previous children - who were once only economic burden - enter working force they stimulate economic growth. Hence, population size stimulates GDP per capita growth.

The authors who previously investigated the influence of political regime on GDP per capita growth did not use variable “regional growth.” However, the results above justify a small innovation in this article – inclusion of this new variable.<sup>31</sup> In both models there is less than .01 percent probability that the null hypothesis is true – that regional growth does not have an influence on GDP per capita growth. In the simple model, a one-percent increase in regional growth increases GDP per capita growth by .18 percent. In the weighted model, a one-percent increase in regional GDP per capita growth increases GDP per capita growth by .2 percent.

Finally, according to both models, investment also has statistically very significant influence (at .0001 level) on GDP per capita growth. A one percent increase in investment increases GDP per capita growth by .14 percent (simple model) and by .13 percent (weighted model).

Surprisingly, age of regime and educational level do not have significant influence on GDP per capita growth. Regression models are significant at .0001 level. R-squared are relatively low (.14 and .21). However, the purpose of this article is not to explain fully what causes GDP per capita growth but to investigate the influence of political regime on GDP per capita growth.

Finally, a Granger causality test was conducted in order to investigate the causal direction between political regime and GDP per capita growth. The test was conducted with four lags and it showed bilateral causality.<sup>32</sup> This means that political regime does have significant influence on GDP per capita growth but GDP

---

<sup>31</sup> I am grateful to Michael Herb for suggesting this innovation to me.

<sup>32</sup> F values in tests were 16.83 and 39.5. Since critical value was 5.63, test showed bilateral causality.

per capita growth also has a significant influence on type of political regime. There is a logical explanation for this bilateral causality: Economic situations may dictate political arrangements. To illustrate, in many Latin American countries political arrangements were the result of struggles between landlords and the urbane elite.<sup>33</sup> Furthermore, economic growth may stimulate democratization. This phenomenon has been extensively investigated in the literature.<sup>34</sup> However, the Granger test shows that it is also legitimate to investigate opposite causality – influence of political regime on economic growth. Type of political regime may spur or hinder economic growth. In other words, the Granger test confirmed the validity of the investigation in this article.

### **Conclusion and the policy implications**

Democracies had much faster growth of GDP per capita than dictatorships during the 1820-1950 period. Furthermore, if results are calculated on the basis of simple average and median, democracies had faster growth of GDP per capita than dictatorships during the 1951-99 period. Therefore, one must agree with Olson (2000) who argues that dictatorships may produce economic miracles for a short period of time but only democracies produce long lasting economic success. However, if results are calculated on the basis of weighted average, dictatorships had faster growth of GDP per capita than democracies during the 1951-99 period. In addition, weighted linear regression in this article showed that dictatorship had a significant positive influence on GDP per capita growth during the same period of time. Obviously, there were many miracles among dictatorships during the last fifty years, especially among populous dictatorships. Therefore, it can be concluded that democracy did not show positive influence on GDP per capita growth during the last fifty years.

Finally, it is important to mention the policy implications of the analyses above. As Table 5 shows, this article does not offer much surprise concerning economic factors that stimulate economic growth. Hence, policy recommendations are the following: countries should stimulate investment and regional economic integration and should reduce population growth. Small countries should have open economies, and it is advisable for all countries to avoid having war on their own territories. Furthermore, in long term, it is preferable to have democracy than dictatorship. There is no developmental justification for dictatorship, especially not for small countries.

---

<sup>33</sup> I am grateful for this comment to Carrie Manning. See also Rogowski (1989).

<sup>34</sup> See, for example, Dahl (1971), Huntington (1993), Lipset (1959), Przeworski and Limongi (1997), etc.

However, the investigation in this article produced one surprising finding. During the last fifty years populous dictatorships were more successful in promoting economic development than populous democracies. During this period of time, dictatorship had significant positive influence on economic growth in populous countries, and democracy did not have significant positive influence on economic growth even in small countries. Therefore, it can be concluded that countries should not expect economic miracles from democratization. Former Soviet Union is the prime example for this claim. In other words, democracy should be considered as a value by and on itself but democracy should not be considered as a precondition for economic growth. Populous countries should even expect a short term economic decline after democratization. Therefore, analysis in this article suggests that dictatorships which have excellent developmental results should postpone democratization as long as dictatorship produces economic miracles. To illustrate, during the 1990-2000 period, three fastest growing economies in the world were three dictatorships – China, Singapore and Vietnam (see World Development Report, 2003, pp. 238-9). For these countries it is probably not advisable to change their political system as long as it yields such excellent economic results. However, these countries are exceptions. Economic results during the last 180 years suggest that democracy is better solution for a long lasting economic success.

*Appendix A*

THE MOST IMPORTANT EMPIRICAL INVESTIGATIONS ABOUT  
 THE INFLUENCE OF POLITICAL REGIME ON GDP  
 PER CAPITA GROWTH

INVESTIGATIONS THAT FOUND DICTATORSHIPS TO BE MORE SUCCESSFUL	INVESTIGATIONS THAT FOUND DEMOCRACIES TO BE MORE SUCCESSFUL
Adelman and Morris (1967)	Dick (1974)
Huntington and Dominguez (1975)	Koremendi and Meguire (1985)
Marsh (1979,1988)	Pourgerami (1988)
Weede (1983)	Scully (1988, 1992)
Kohli (1986)	Barro (1989)
Landau (1986)	Grier and Tullok (1989)
Sloan and Tedin (1987)	Remmer (1990)
Helliwell (1992)	Przeworski, Alvarez, Cheibub and Limongi ( 2000)
Gasiorowski's (2000)	Kurzman, Werum and Burkhart (2002)

## REFERENCES

1. Adelman, Irma and Cynthia Morris. 1967. *Society, Politics and Economic Development*. Baltimore: John Hopkins University Press.
2. Alam, Shahid M. 1989. *Governments and Markets in Economic Development Strategies: Lessons from Korea, Taiwan, and Japan*. New York: Praeger.
3. Amsden, Alice H. 2001. *The Rise of the "Rest:" Challenges to the West from Late-Industrializing Economies*. Oxford: Oxford University Press.
4. Aristotle. 1950. *The Politics*. Cambridge, Massachusetts: Harvard University Press.
5. Barro, Robert J. 1989. A Cross-Country Study of Growth, Saving, and Government. *NBER Working Paper* 2855.
6. Beck, Nathaniel, Jonathan N. Katz, R. Michael Alvarez, Geoffrey Garret and Peter Lange. 1993. Government Partisanship, Labor Organization, and Macroeconomic Performance: A Corrigendum. *American Political Science Review* 87. Pp. 945-8.
7. Berg-Schlosser, Dirk. 1984. African Political Systems: Typology and Performance. *Comparative Political Studies* 17. Pp. 121-51.
8. Bobbio, Norberto. 1989. *Democracy and Dictatorship: The Nature and Limits of State Power*. Minneapolis: University of Minnesota Press.
9. Bollen, Kenneth A. 1993. Liberal Democracy: Validity and Method Factors in Cross-National Measures. *American Journal of Political Science* 37 (November). Pp. 1207-30.
10. Bollen, Kenneth A. and Pamela Paxton. 2000. Subjective Measures of Liberal Democracy. *Comparative Political Studies*. No. 33. Pp. 58-86.
11. Dahl, Robert. 1971. *Poliarchy*. New Haven and London: Yale University Press.
12. De Schweinitz, Karl, Jr. 1959. Industrialization, Labor Controls, and Democracy. *Economic Development and Cultural Change* 7:4. Pp. 385-404.
13. Dick, William G. 1974. Authoritarian versus Nonauthoritarian Approaches to Economic Development. *Journal of Political Economy*. Vol. 82:4. Pp. 817-27.
14. Dodd, Lawrence C. and Bruce I. Openheimer (ed.). 2001. *Congress Reconsidered*. Washington D.C.: CQ Press.
15. The Economist. 2003. *World in Figures*. London: Profile Books Ltd.
16. Etzioni, Amitai. 1984. *Capital Corruption: The New Attack on American Democracy*, New York: Harcourt: Brace, Jovanovich.

17. Galenson, Walter (ed.). 1959. *Labor and Economic Development*. New York: Wiley.
18. Gasiorowski, Mark J. 2000. Democracy and Macroeconomic Performance in Underdeveloped Countries. *Comparative Political Studies*. Vol. 33:3. Pp. 319-49.
19. Gastil, Raymond D. 1990. The Comparative Survey of Freedom: Experiences and Suggestions. *Studies in Comparative International Development*. No. 25. Pp. 25-50.
20. Goodell, Grace. 1985. The Importance of Political Participation For Sustained Capitalist Development. *Archives Europeennes de Sociologie*. Vol 26:1. Pp. 93-127.
21. Grier, Kevin B. and Gordon Tullock. 1989. An Empirical Analysis of Cross-national Economic Growth, 1951-80. *Journal of Monetary Economics* 24 (September). Pp. 259-76.
22. Gujarati, Damodar N. 1995. *Basic Econometrics*. New York: McGraw – Hill, Inc.
23. Gunlics, Arthur B. (ed). 1993. *Campaign and Party Finance in North America and Western Europe*. Boulder, San Francisco. Oxford: Westview Press.
24. Haggard, Stephan. 1990. *Pathways from the Periphery : The Politics of Growth in the Newly Industrializing Countries*. Cornell University Press
25. Helliwell, John F. 1992. Empirical Linkages between Democracy and Economic Growth. *Working Paper*. No. 4066. Cambridge: National Bureau of Economic Research.
26. Herrnson, Paul S. 2000. *Congressional Elections: Campaigning at Home and in Washington*. Washington D.C.: Congressional Quarterly Inc.
27. Hewlett, Sylvia Ann. 1980. *The Cruel Dilemmas of Development: Twentieth Century Brazil*. New York: Basic Books.
28. Hicks, Alexander, 1988. Social Democratic Corporatism and Economic Growth. *Journal of Politics*. Vol. 50:3 (August). Pp. 677-704.
29. Hirschman Albert O. 1987. The Political Economy of Latin American Development: Seven Exercises in Retrospection. *Latin American Research Review*. Vol. 22: 3. Pp. 7-36.
30. Huntington, Samuel P. 1968. *Political Order in Changing Societies*. New Haven and London: Yale University Press.
31. Huntington, Samuel P. 1993. *The Third Wave*. Norman: University of Oklahoma Press.
32. Huntington, Samuel P. and Jorge I. Dominguez. 1975. Political Development. In *Handbook of Political Science*. Volume 3. Macropolitical Theory. Reading. Addison-Wesley.

33. Jacobson, Gary C. 1990. *The Electoral Origins of Divided Government*. Boulder: Westview Press.
34. Jagers, Keith and Ted Robert Gurr. 1998. *Polity III. Regime Type and Political Authority, 1800-1994*. Available at <http://weber.ucsd.edu/~kgledits/Polity.html>.
35. Kohli, Atul. 1986. Democracy and development. In Lewis, John and Valeriana Kallab. *Development Strategies Reconsidered*. New Brunswick and Oxford: Transaction Books.
36. Koremendi, Roger C. and Philip G. Meguire. 1985. Macroeconomic Determinants of Growth: Cross-Country Evidence. *Journal of Monetary Economics* 162. Pp. 141-63.
37. Kuhn, Thomas S. 1970. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
38. Kurzman Charles, Regina Werum, and Ross E. Burkhart. 2002. Democracy's Effect on Economic Growth: A Pooled Time-Series Analysis, 1951-80. *Studies in Comparative International Development* (Spring). Pp. 3-33.
39. Landau, David. 1986. Government and Economic Growth in Less Developed Countries: An Empirical Study for 1960-1980. *Economic Development and Cultural Change*. 35:1.
40. Lijphart, Arend. 1994. Democracies: Forms, Performance, and Constitutional Engineering. *European Journal of Political Research* 25. Pp. 1-17.
41. Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven and London: Yale University Press.
42. Lipset, Seymour M. 1959. Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *American Political Science Review*. Vol. 53:1. Pp. 69-105.
43. Lowenstein, Daniel H. April 1985. Political Bribery and the Intermediate Theory of Politics. *UCLA Law Review*. No. 32. Pp. 784-851.
44. Machiavelli, Niccolo. 1970. *Discourses*. Harmondsworth: Penguin Books.
45. Maddison, Angus. 1995. *Monitoring the World Economy 1820-1992*. OECD.
46. Mainwaring, Scott, Daniel Brinks and Anibal Perez-Linan. 2001 (Spring). Classifying Political Regimes in Latin America, 1945-1999. *Studies in Comparative International Development*. 36:1. Pp. 37-65.
47. Marsh, Robert M. 1979. Does Democracy Hinder Economic Development in the Latecomer Developing Nations. In Tomasson, Richard F. *Comparative Social Research*. Volume 2. Greenwich: Jai Press Inc.

48. Marsh, Robert M. 1988. Sociological Explanation of Economic Growth. *Studies in Comparative International Development*. 23:4 (Winter). Pp. 41-76.
49. Nachmias, David and Chava Frankfort-Nacmias. 2000. *Research Methods in the Social Sciences*. New York: Worth Publishers.
50. North, Douglass. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
51. Olson, Mancur. 1993. Dictatorship, Democracy and Development. *American Political Science Review*. Vol. 87:3. Pp. 567-76.
52. Olson, Mancur. 2000. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic Books.
53. Peters, Guy B. 1998. *Comparative Politics: Theory and Methods*. New York: New York University Press.
54. Plato. 1995. *The Statesman*. Cambridge: Cambridge University Press.
55. Pourgerami, Abbas. 1988. The Political Economy of Development: A Cross-National Causality Test of Development – Democracy – Growth Hypothesis. *Public Choice*. 58:2. Pp. 123-41.
56. Prpic, Ivan (ed.). 1990. *Leksikon Temeljnih Pojmova Politike: Abeceda Demokracije*. Zagreb: Skolska knjiga.
57. Przeworski, Adam et al. 1995. The Role of Theory in Comparative Politics: A Symposium. *World Politics* 48. Pp. 1-49.
58. Przeworski Adam and Ferdinando Limongi. 1993. Political Regimes and Economic Growth. *Journal of Economic Perspectives*. Vol. 7: 3 (Summer). Pp. 51-69.
59. Przeworski Adam and Fernando Limongi. 1997. Modernization: Theories and Facts. *World Politics*. Vol. 49:2. Pp. 155-83.
60. Przeworski, Adam and Fernando Limongi. 1997a. Democracy and Development. In Axel Hadenius (ed.). *Democracy's Victory and Crisis*. Cambridge, New York: Cambridge University Press. Pp. 163-194.
61. Przeworski, Adam, Michael E. Alvarez, Jose Antonio Cheibub and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge, New York: Cambridge University Press.
62. Rao, Vaman. Winter 1984-5. Democracy and Economic Development. *Studies in Comparative International Development*. Pp. 67-80.
63. Remmer, Karen. 1978. Evaluating the Policy Impact of Military Regimes in Latin America. *Latin American Research Review*. Vol. 13: 2. Pp. 39-54.
64. Remmer, Karen. 1990. Democracy and Economic Crisis: The Latin American Experience. *World Politics*. 42:3. Pp. 315-35.

65. Rogowski, Ronald. 1989. *Commerce and Coalitions: How Trade Affects Domestic Political Alignments*. Princeton, N.J.: Princeton University Press.
66. Rousseau, Jean-Jaques. 1978. *On the Social Contract*. Roger D. Master (ed.). New York: St. Martins.
67. Salkind, Neil J. 2000. *Statistics for the People who (Think They) Hate Statistics*. Thousand Oaks: Sage Publications, Inc.
68. Samuelson, Paul A. and William D. Nordhaus. 1989. *Economics*. New York: McGraw Hill Book Com.
69. Sartori, Giovanni. 1962. *Democratic Theory*. Detroit: Wayne State University Press.
70. Sartori, Giovanni. 1987. *The Theory of Democracy Revisited*. Chatman: Chatman House Publishers.
71. Schumpeter, Joseph. 1947. *Capitalism, Socialism and Democracy*. New York, London: Harper & Brothers.
72. Scully, Gerlad W. 1988. The Institutional Framework and Economic Development. *Journal of Political Economy*. Vol. 96:3. Pp. 652-62.
73. Scully, Gerlad W. 1992. *Constitutional Environment and Economic Growth*. Princeton: Princeton University Press.
74. Segal, Jeffrey A. and Harold J. Spaeth. 1993. *The Supreme Court and the Attitudinal Model*. New York: Cambridge University Press.
75. Sen, Amartya. 2000. *Development as Freedom*. New York: Anchor Books.
76. Sirowy, Larry and Alex Inkeles. 1990. The Effects of Democracy on Economic Growth and Inequality: A Review. *Studies in Comparative International Development* 25 (Spring). Pp. 126-57.
77. Sloan, John and Kent L. Tedin. 1987. The consequence of Regime Type for Public-Policy Outputs. *Comparative Political Studies*. 20 (April). Pp. 98-124.
78. Sorauf, Frank J. 1992. *Inside Campaign Financing*, New Haven and London: Yale University Press.
79. Stockholm International Peace Research Institute. 2001. *World Armaments and Disarmament 1990-2000*. London: Taylor & Francis.
80. Thurow, Lester C. 1996. *The Future of Capitalism*. New York: Penguin Books.
81. Vanhanen, Tatu. 1990. *The Process of Democratization. A Comparative Study of 147 States, 1850-1979*. Helsinki: The Finish Society of Sciences and Letters.
82. Vanhanen, Tatu. 1997. *Prospect of Democracy: A Study of 172 Countries*. London and New York: Routledge.

83. Weede, Erich. 1983. The Impact of Democracy on Economic Growth: Some Evidence from Cross-National Analysis." *Kyklos*. 36 (February). Pp. 21-39.
84. White, Halbert. 1980. A Heteroscedasticity Consistent Covariance Matrix Estimator and a Direct Test for Heteroscedasticity. *Econometrica* 48. Pp. 817-38.
85. The World Bank. 1999. *World Development Indicators*. Oxford University Press.
86. The World Bank. 1999a. *World Development Indicators*. CD ROM.
87. The World Bank. 2001. *World Development Indicators*. CD ROM.
88. The World Bank. 2003. *World Development Report: Sustainable Development in a Dynamic World*. Oxford University Press.

## DEMOKRACIJA PROTIV DIKTATURE: UTJECAJ POLITIČKOG REŽIMA NA PER CAPITA RAST DRUŠTVENOG PROIZVODA

### Sažetak

Članak istražuje utjecaj tipa režima na per capita rast društvenog proizvoda. Statističko istraživanje je pokazalo da su u razdoblju 1820.-1950. demokracije bile mnogo uspješnije od diktatura u promoviranju ekonomskog rasta. Međutim u posljednjih pedeset godina, diktature su postigle jednako značajne rezultate kao i demokracije u promoviranju per capita rasta društvenog proizvoda.

Ključne riječi: politički režim, demokracija, diktatura, per capita rast društvenog proizvoda