

1 Socioeconomic and Political Development: Their Measurement
2 and Connections

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6

7 **Abstract**

8 The scope of the paper is to investigate the basic factors of development worldwide. By
9 following factor analysis, six variables that we consider of high importance for the overall
10 development of nations, namely the level of income per capita, the degree of human
11 development, the extent of government effectiveness, the level of perceived corruption, the
12 range of political rights and the extent of civil liberties are found to be integrated into two
13 basic factors of development: the socioeconomic factor and the political factor. The
14 socioeconomic factor comprises the level of income per capita, the degree of human
15 development, the extent of government effectiveness and the level of perceived corruption,
16 while the political factor comprises the range of political rights and the extent of civil liberties.
17 Our analysis unveils that both these factors are of crucial importance for the overall
18 development of countries. Based on these two factors or criteria of development, our empirical
19 work in the form of cluster analysis distinguishes four groups of countries that we describe and
20 discuss in length. The basic conclusion that emerges from our cluster analysis is that although
21 an effective strategy towards overall development demands integrated policies that incorporate
22 both the socioeconomic and the political dimensions of development, most countries
23 worldwide have not achieve both of them.

24

25 **Index terms**— socioeconomic development, political development, corruption, human development, govern-
26 ment effectiveness, political system, factor analysis, cluster

27 **1 Introduction**

28 empirical analysis approaches, measures and evaluates development mainly from its economic point of view. Social
29 and political factors although considered by theory as playing an important role towards the advancement of
30 the overall development of nations are mostly underestimated in empirical work. This is the outcome of several
31 reasons. The most significant one is that the sociopolitical dimensions of development cannot be easily defined
32 and measured in contrast to its economic dimension. Actually, economic development as a quantitative variable is
33 identified with economic growth and is measured by international organizations and national statistical services
34 for all countries of the world with relatively simple and widely acceptable indexes, such as real income per
35 capita, while social and political aspects of human action can only be successfully expressed by more complicated
36 procedures on which generally there is no wider agreement.

37 However, it has been established long ago that economic growth although a necessary is not a sufficient
38 condition for the development of nations. Development is a much wider concept than growth that incorporates
39 as well the social and the political transformation of countries. The identification and more importantly the
40 analysis of these sociopolitical transformations is associated with major difficulties. It must be realized, however,
41 that this problem should not be the reason for policymakers and academic researchers to reduce their concern for
42 the social and political dimensions of overall development. Actually, in modern societies there exist additional

43 needs for the reduction of wealth inequalities and for the more fair distribution of the economic result of human
44 activities, for the effective reduction of corruption, for a better social security system and what is called "social
45 state", for health and education systems of high quality, for increased government effectiveness in order the state
46 to satisfy social needs more efficiently and for high standards of political rights and democracy, so that citizens
47 to live in a comfortable, fair, secure and pleasant sociopolitical environment.

48 The recent worldwide economic crisis has unveiled that whenever an economic crisis is associated with a social
49 and political crisis, that might be hidden or unobservable to some extent, then the economic crisis is deeper
50 and more long lasting. In this way, symmetric economic disturbances or shocks, that is disturbances of economic
51 activity that have simultaneous impacts on all countries, might have country specific or asymmetric consequences,
52 that is they might have differential effects on various countries by affecting some economies more deeply than
53 others, and therefore they might require a different macroeconomic policy mix. Therefore, although economic
54 shocks might be symmetrical in their origins they might have asymmetrical effects on various countries due to
55 their differentiated sociopolitical environment. In other words, economic development is not guaranteed in the
56 longrun unless it is associated with high levels of social and political development. The countries more deeply
57 affected by the recent economic crisis and sovereign debt crisis seem to be those where the levels of social and
58 political development are not considered as very high. This is not astonishing since social cohesion and democratic
59 institutions are effective guides to the formulation and implementation of the appropriate policies to overcome
60 economic problems.

61 Fortunately, widely recognized international agencies and organizations have relatively recently developed
62 methodologies to measure variables that express social and political dimensions or aspects of development, as
63 it will be presented in the next section of the paper, that allow empirical research to incorporate them in
64 studies on the overall development. It must be stressed however from the outset that overall development is
65 a multidimensional phenomenon associated with a variety of social, economic and political factors or variables,
66 such as high per capita income, high human development, high government effectiveness, significant reduction
67 of income and wealth inequalities, large social transformations, reduced corruption and adoption of democratic
68 political mechanisms and procedures. In the following paragraphs we discuss in some detail the variables that
69 have been used in our factor analysis as the main characteristics of the level of overall development of nations.

70 The variable very widely used in empirical research as the best measure or the best available indicator of the
71 level of economic development is real income per capita. International organizations such as the United Nations,
72 the World Bank and the OECD classify countries as developed or developing according to their prevailing or
73 average income per capita levels. Although income per capita is criticized as an inadequate indicator of economic
74 development, mainly because it is an inefficient measure of the average living standards and quality of life
75 prevailing in a country, it is still recognized as the best available measure of the average level of economic
76 development.

77 We argue moreover that overall development is also associated with the degree of human development that is
78 by the level of health, the degree of access to knowledge and the level of well-being prevailing in a given country,
79 as a wider notion than economic development. Human development refers to the expansion of people's freedoms
80 and capabilities to live their lives as they choose (UNDP, 2009). Human development is both a process and an
81 outcome. It is not only concerned with the process through which human choices are enlarged, but it also focuses
82 on the outcomes of the enlarged choices (UNDP, 2002).

83 Moreover, we accept that overall development is also associated with the degree of government effectiveness.
84 An effective public sector promotes all the three dimensions of development, i.e. economic, social and political.
85 Kaufmann, Kraay and Mastruzzi define governance as "the traditions and institutions by which authority in a
86 country is exercised. This includes the processes by which governments are selected, monitored and replaced;
87 the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens
88 and the state for the institutions that govern economic and social interactions among them" (Kaufmann, Kraay
89 and Mastruzzi, 2009).

90 Another variable that we consider to be associated with all the three aspects or dimensions of the overall
91 level of development is the level of perceived public sector corruption prevailing in a country. Corruption is a
92 complex and a multidimensional phenomenon having several causes and effects. The factors that are associated
93 to corruption are numerous. The most important ones are the level of economic development, the type of political
94 authority, the quality of governance, the quality of the institutional framework, the effectiveness of the justice
95 system, the degree of globalization, the level of competition, the structure and the size of public sector, as well
96 as the cultural qualities, the geographic location and history. Public sector corruption is usually defined as the
97 abuse of public power for private benefit (Tanzi, 1998) or the abuse of public office for private gain (Martinez-
98 Vazquez, Arze del Granado and Boex, 2007). The World Bank defines public sector corruption as the abuse of
99 public authority for private interest (World Bank, 1997). OECD defines public sector corruption as the misuse of
100 public office, roles or resources for private benefit, material or otherwise (OECD, 1996). A definition provided by
101 the nongovernmental organization Transparency International that covers corruption in both the public and the
102 private sectors of the economy is the misuse of trusted power for own profit (Transparency International, 2011).

103 2 2

104 . In summary, widespread corruption largely unveils the existence of institutional and political weaknesses as well
105 as economic and social underdevelopment. It is recognized that corruption may be the single most significant
106 barrier to both democratization and economic development (Rose-Ackerman, 1999). The general attitude towards
107 corruption is also determined by the level of individual morality that is by the system of individual behavioral and
108 moral attributes (Rontos, Salvati and Vavouras, 2013a). Basically, corruption is detrimental to economic growth
109 and development by adversely affecting investment 3 1 It has been acknowledged from the first stages of human
110 civilization that whoever is in a position to exercise power may also be in the position to use his public office for
111 individual benefit. For an analysis of the concept and the various definitions of corruption, see Johnston (2001).
112 2 For an analysis of the determinant factors of corruption see among others Lambsdorff (2006) and Treisman
113 (2000). 3 It must be stressed however that some early works on the subject argued that corruption improves
114 economic efficiency and therefore promotes economic growth operating as the necessary "grease" to lubricate the
115 wheels of state bureaucracy. See for example Leff (1964) and Huntington (1968).

116 . The extent, however, of the consequences corruption has on economic development is largely determined by
117 the existing institutional framework (de Vaal and Ebben, 2011). On another account, corruption is a "disease"
118 which is caused by poverty, that is controlled only when economies develop (Treisman, 2000; Paldam, 2002) 4 In
119 this paper our first objective is to examine all the above factors, that is income per capita, human development,
120 government effectiveness, public sector corruption, and political freedom in the forms of political rights and civil
121 liberties, as the main indicators of the overall development and the ways that their combination in several levels
122 classifies countries and determines the patterns of development. Our analysis reveals that all the above factors are
123 correlated and in general are of crucial importance in determining the extent of overall development worldwide
124 . It is also acknowledged that there exists a strong connection between the level of overall development and the
125 quality of the political system. Underdevelopment is widely considered to be both a symptom and a cause for
126 the malfunctioning of democratic institutions (Warren, 2004). Moreover, democracy and the consequent public
127 accountability reduce the costs of development. In a sense, the political system or the "political macrostructure"
128 is responsible for determining the political motivation of all players in a state system and it is the very reaction
129 of these factors that determines the behavior of state bureaucracy (Lederman, Loayza and Soares, 2005). As
130 a result, a highly developed and well-functioning democracy serves as a tool for increasing the level of overall
131 development (Zhang, Cao and Vaughn, 2009).

132 3 5

133 . It is assumed that political rights and civil liberties represent or measure the level of political development of
134 countries while the rest variables in the model represent the socioeconomic one. In any case the methodology
135 used will confirm or not the above assumption on its specific worldwide application.

136 4 Data

137 Our analysis is based on six variables that have been derived for 176 countries (see list of countries in Table 6 and
138 full values of variables in Appendix 1). It is the total number of countries for which data for all these variables
139 existed in the year 2010. It could therefore be considered as a worldwide analysis. The variables have been derived
140 from official statistics and other reliable and well-known international data sources as it is explained below. 1. To
141 approximate the level of economic development in each country the variable Gross National Income per capita in
142 purchasing power parities or current international dollars was used (GNI.PC.PPP). GNI.PC.PPP is gross national
143 income (GNI) converted to international dollars using purchasing power parity rates. An international dollar has
144 the same purchasing power over GNI as a U.S. dollar has in the United States 6 2. The human development
145 index (HDI) has been used as a summary measure of the level of human development. It is estimated by the
146 United Nations Development Programme (UNDP) and it measures the average achievements in a given country
147 in three dimensions of human development: a long and healthy life, access to knowledge and a decent standard of
148 living. It is a composite index with life expectancy in birth, mean years of schooling, expected years of schooling
149 and gross national income (GNI) per capita as its main components. Despite its inherent limitations the index is
150 a useful comparative measure of the level of human development. According to this index countries are classified
151 in three categories: High human development, if the value of the index is higher than 0.800, medium human
152 development, if the value of the index is between 0.500 and 0.799 and low human development, if the value of
153 the index is lower than 0.500. The data used refer to the year 2010. They are provided by the UNDP (2010) and
154 for that year cover 169 countries and 25 territories. Since the HDI includes as one of its main components GNI
155 per capita that has already been used as the basic variable of economic development, we used the variable HDI.
156 NONINCOME, that is the HDI excluding its income dimension or component.

157 . GNIPC.PPP is very useful in economic analysis when the objective is to compare broad differences between
158 countries in living standards since, as we have stated, purchasing power parities take into account the relative
159 cost of living in various countries, while nominal GNI (or GDP) does not incorporate any such considerations.
160 GNIPC.PPP is an indicator widely used in international comparisons of economic development. The data used
161 refer to the year 2010 and are provided by the World Bank (2010a) and for that year cover 215 economies.

162 5 To express government effectiveness the relevant

163 World Bank government effectiveness indicator (GE) has been used. This indicator is very useful because it
164 aims at capturing the quality of public services provided, the quality of the civil service and the degree of its
165 independence from political pressures, the quality of policy formulation and implementation, 7 For an extended
166 analysis and assessment of the various indicators of corruption, see mainly UNDP (2008). 8 For more details see
167 Methodological Summary, Freedom House (2013).

168 6 Global Journal of Human Social Science

169 Volume XIII Issue V Version I It measures corruption in a scale from 0 to 10, where 0 represents the highest
170 possible corruption level, while as the scale increases there is the perception that corruption does not exist in a
171 given country. Despite the fact that the index is not the outcome of an objective quantitative measurement of
172 corruption, it is of great importance since it reveals how this phenomenon is being perceived. The major strength
173 of the CPI lies in the combination of multiple data sources in a single index, a fact that increases the reliability
174 of each country's score (Lambsdorff, 2006) 7 5. To approximate the quality of democracy in each country the
175 "political rights" index (PR) has been used. The index is based on the evaluation of three sub-indexes, namely
176 electoral process, political pluralism and participation and functioning of government. The index is estimated by
177 the Freedom . The data used for the CPI refer to the year 2010 and as it has already been stated are provided
178 by Transparency International (2010) and for that year cover 178 countries or territories.

179 House organization (2013). The PR index measures from 1, which ranks a country as very free, up to 7,
180 which ranks a country as not free. According to the PR index countries are characterized as free countries (F)
181 if they score 1.0-2.5 in the 1-7 scale, partly free countries (PF) if they score 3.0-5.0 in the 1-7 scale and not free
182 countries (NF) if they score 5.5-7.0 in the 1-7 scale. The data used for the PR index refer to the year 2010 and
183 are provided by the organization Freedom House (2010) and for that year cover 194 countries and 14 territories.
184 6. To approximate the extent of civil liberties in each country the "civil liberties" index (CL) has been used. The
185 index is based on the evaluation of four sub-indexes, namely freedom of expression and belief, associational and
186 organizational rights, rule of law, and personal autonomy and individual rights.

187 The index is estimated by the Freedom House organization (2013) 8 It must be stressed that the average of the
188 PR and CL ratings is known as the "freedom rating" index (FR) and determines the overall status of a country
189 as a free, partly free and not free. However, since the two indexes focus on different aspects of democracy and
190 freedom and since there are some deviations between the PR and CL ratings for several countries, we decided to
191 use the two separate ratings instead of the average FR index.

192 . The CL index measures from 1, which ranks a country as very free, up to 7, which ranks a country as not free.
193 According to the CL index countries are characterized as free countries (F) if they score 1.0-2.5 in the 1-7 scale,
194 partly free countries (PF) if they score 3.0-5.0 in the 1-7 scale and not free countries (NF) if they score 5.5-7.0
195 in the 1-7 scale. The data used for the CL index refer to the year 2010 and are provided by the organization
196 Freedom House (2010) and for that year cover 194 countries and 14 territories.

197 7 III.

198 8 Methodology

199 A two-step multivariate strategy has been developed in order to characterize the socioeconomic and the political
200 system of each country according to the selected economic and non-economic features describing the level of
201 economic, social and political development in each country. Analysis steps include: (i) a factor analysis and (ii)
202 a non-hierarchical cluster analysis.

203 Factor analysis was used to detect the internal relations and structures among the variables GNI.PC.PPP,
204 HDI.NONINCOME, GE, CPI, CL and PR by grouping and reducing their number.

205 The statistical measure Kaiser-Mayer Olkin (K.M.O.) of sampling adequacy and Bartlett's Test of Sphericity
206 were calculated. Principal components analysis was employed to extract the number of factors, with Eigenval-
207 ues>1 taken as a criterion, which was verified by Scree Plot. Conducting factors rotation the maximum likelihood
208 method was used as extraction method and Varimax with Kaiser Normalization as rotation method.

209 Then, a non-hierarchical k-means cluster analysis (CA) was carried out with the aim at separating countries
210 in a few groups exhibiting homogeneous socioeconomic and political patterns. The scores of the factors extracted
211 from the above analysis were used as clustering criteria. The aforementioned scores were calculated according to
212 the Bartlett method. The best partition (i.e. the optimal number of clusters in terms of group separation) was
213 chosen according to the Cubic Clustering Criterion (CCC) that works through the maximization of the ratio of
214 the intra-group variance to the inter-group variances. Variance Ratio Criterion (VRC), that also was applied,
215 suggested the same number of clusters. An ANOVA table, that was also constructed, indicates which variables
216 contribute mostly to the differentiation of the clusters. Moreover, the analysis has been extended to the indication
217 of the greatest similarities and dissimilarities between the clusters formed .

218 IV.

219 9 Results

220 First of all descriptive statistics of the six variables inserted in the model are presented in Table 1. We can also
221 see that 176 countries were inserted in the analysis for all the variables (N = 176). Factor analysis suggests the
222 existence of two factors according to the ?igenvalues criterion (Table 2) and the Scree Plot (Figure 1). As a result,
223 factor analysis confirms our hypothesis of the existence of two distinct factors of development, the socioeconomic
224 and the political one. Note that initially 86.49 % of the variation is explained by the model. It is important to
225 note, that the two factors retained, show that the total variance explained by the model is 80.54 % and that we
226 have only 19.46 % loss (Table 3). The contribution of each factor to the variance explanation is also presented in
227 the ?able 3. The results from the use of the Varimax Rotation with Kaizer Normalization method, in which the
228 basic hypothesis is that the factors that occur are independent with each other, are analyzed below. In fact, the
229 resulted factors could be labeled as follows: ? Factor 1 : Socioeconomic aspects of development with variance
230 explained = 46,248%. Four variables are loaded on this factor: GNI.PC.PPP, CPI, GE, and HDI.NONINCOME,
231 that represent actual socioeconomic aspects of development and count factor loadings which range from 0.879
232 to 0.666. All variables have very high loads, which fluctuate more than 0.6. The perceptual variables and their
233 factor loadings are presented in the Table 4. 4).

234 In Figure 2 it is shown how the six variables are located in a rotated factor space.

235 Figure 2

236 Cluster analysis identified four groups of homogeneous countries according to our socioeconomic and political
237 criteria as they are determined by the scores of the two aforementioned factors (Table 5). As it has already been
238 stated, the full list of countries according to the cluster membership is shown in Table 6. According to the above
239 cluster analysis we can observe the following:

240 Cluster 1 includes a considerable number of countries (55) characterised as mainly socially and economically-
241 disadvantaged and very politicallydisadvantaged in Africa, Asia and Latin America. Most of them are considered
242 as third world countries. Afghanistan, Armenia, Cameroon, Central African Republic, Colombia, Cuba, Egypt,
243 Ethiopia, Georgia, Iran, Iraq, Vietnam are examples of them. However, two countries included in this group are
244 not considered as third world countries, namely China and Russia.

245 Cluster 2 includes a total of 31 countries that can be classified as developed and consolidated democracies
246 placed mainly in the European Union and in the Northern America with high economic and social development
247 and considerable high political development (the lowest score of factor 2 on average among clusters). Examples
248 of countries belonging to this cluster are Australia, Austria, Belgium, Canada, Denmark, Germany, Finland,
249 France, Israel, Japan, Netherlands, New Zealand, Spain, Sweden, South Korea, United Kingdom and the United
250 States.

251 Cluster 3 includes a limited number of 9 countries that can be classified as those showing a considerably
252 higher socio-economic development (the highest score of factor 1 on average among clusters) but already unstable
253 political systems (the highest score of factor 2 on average among clusters). To this cluster belong some very rich
254 oil exporting countries of the Middle East (Bahrain, Qatar, Kuwait, Saudi Arabia and United Arab Emirates).
255 However three non oil exporting high income countries are also included in this cluster, namely Hong Kong,
256 Singapore and Brunei.

257 Finally, in the most populated cluster 4 have been classified 81 countries showing very low levels of socio-
258 economic development (the lowest score of factor 1 on average among clusters) but showing also fairly good
259 levels of political development. However, this forth most populated cluster presents an extended variation in
260 strictly economic terms as they are represented by GNI.PC.PPP. Actually the range of GNI.PC.PPP among the
261 78 countries of the cluster (3 of the 81 with missing income were omitted) is 31,300 \$, while the interquartile
262 range is 10,970 \$. With a median value of 4,625 \$, countries as Slovakia, Czech Republic, Trinidad and Tobago,
263 Greece and Italy have extremely high GNI values (21,870-31,740 \$), while some others as Mozambique, Malawi,
264 Sierra Leone, Niger and Liberia have extremely low GNI values (900-440 \$). The fact that the score of the
265 socioeconomic factor, which was used for countries' clustering (together with political factor), came from the
266 combination of GNI and three more variables (CPI, GE, HDI) may explain this variation of the strict economic
267 variable (GNI) of the model. Due to this heterogeneity, we could classify the countries in cluster four in two
268 sub-groups (Table 6), according to the median GNI.PC.PPP. According to Table 7, the greatest dissimilarities
269 exist between the countries of the third and fourth clusters, as they present opposite developmental characteristics
270 in their socioeconomic and political systems. Additionally, the lowest distance exists between the countries of
271 first and the forth cluster mainly due to the low levels of socioeconomic development that both of them present.
272 The ANOVA analysis presented in Table 8 indicates, that overall, each of the factor's score used in the present
273 clustering, i.e. the socioeconomic and political one differs significantly across the clusters (pvalue = 0.00 for both
274 factor scores). However, according to F values, the variable contributing slightly more to cluster's differentiation
275 is the political development.

276 V.

277 **10 Discussion and Conclusions**

278 Factor analysis indicated that the six variables considered as the main determinants of development, namely the
279 level of income per capita, the degree of human development, the level of perceived corruption, the extent of
280 government effectiveness, the extent of

281 **11 Global Journal of Human Social Science**

282 Volume XIII Issue V Version I () political rights and the extent of civil liberties are integrated into two
283 basic factors of development: the socioeconomic factor and the political factor, confirming therefore our initial
284 hypothesis. The socioeconomic factor comprises the level of income per capita, the degree of human development,
285 the level of perceived corruption and the extent of government effectiveness, while the political factor comprises
286 the extent of political rights and the extent of civil liberties.

287 Following this distinction of the two factors of development, countries can be classified as we have already
288 stated into four main distinct groups: The first group comprises those countries associated with low values of
289 the socioeconomic factor and low values of the political factor. Countries included in this group should pay
290 balanced efforts on their socioeconomic and political transformation in order to develop. The second group
291 comprises those countries associated with high values of the socioeconomic factor and high values of the political
292 factor. Countries included in this group seem to fulfill the conditions that guarantee their longrun development.
293 These two groups of countries (i.e. the first and the second) seem to confirm the prevailing hypothesis that
294 the socioeconomic and the political development are positively correlated (Needler, 1968). In fact until the mid
295 1970s only highly developed economies enjoyed political democracy 9 . That is, it was accepted that economic
296 development (to restrict only to that) generates political development and vice versa. Later, however, it was
297 realized that growth might have and negative effects on democracy (destabilizing growth hypothesis) 10 The rest
298 two groups of countries (i.e. the third and the forth) seem to contradict the above common assumption. As
299 we have shown, the third group comprises 9 countries associated with high values of the socioeconomic factor
300 and low values of the political factor. For these countries, the high levels of socioeconomic development are not
301 compatible with high political development. A "deficit" of political development seems to exist. As a result it
302 could be argued that the high levels of socioeconomic development of these countries are not long run guaranteed
303 or sustainable. The "deficit" of political development inhibits their development prospects. A primary objective
304 of the countries included in this group is the adoption of policies that promote their political development. The
305 forth group is a very large group comprising 81 countries. This is a very heterogeneous .

306 The destabilizing growth hypothesis was proposed by Paldam (1998). And in fact, some relevant empirical work
307 indicates that democracies do not appear to show different growth performance than non-democracies (Alesina,
308 Özler, Roubini and Swayel, 1992). However, most empirical work on this subject investigates the relationship
309 between political instability and economic growth.

310 group, mainly as far as its socioeconomic determinants, characterized by low values of the socioeconomic factor
311 and relatively high values of the political factor. As we have already pointed out, in this group of countries the
312 low level of socioeconomic development seems to be the basic factor inhibiting their long-run development.

313 The primary objective of the countries included in this group is the adoption of policies that promote their
314 socioeconomic development, not ignoring of course that the political development of these countries might also
315 require to be increased.

316 Considering that the first two groups of countries (including in total 86 countries) seem to confirm the prevailing
317 hypothesis that socioeconomic and political development are positively associated while the last two groups of
318 countries (including in total 90 countries) seem to contradict this hypothesis, we investigate the relationship
319 between the two factors of development taking all countries together. As it was expected, the correlation between
320 each one of the variables comprising the level of political development and each one of the variables comprising
321 the level of socioeconomic development is found to be moderate ($r<0.7$) 11 The main conclusion of the above
322 analysis is therefore that not all countries should follow identical strategies in order to increase their overall
323 long-run development levels. As we have already stated, in some . As a result, the prevailing hypothesis of the
324 positive correlation between the two factors cannot be empirically confirmed, at least completely and at least in
325 the specific form of model specification.

326 Moreover, our cluster analysis has revealed that the largest dissimilarities or divergences exist between the
327 third and the forth group of countries, while the smallest ones between the first and the forth group. Moreover,
328 the analysis has shown that the score of each basic factor of development (i.e. the socioeconomic and the political
329 one), differs significantly across the clusters. However, it has been established that the variable contributing more
330 to the differentiation of clusters seems to be the political development.

331 In summary, the above empirical work has highlighted that the level of socioeconomic development and the level
332 of political development are the most important dimensions that determine the overall long-run developmental
333 patterns worldwide. The basic outcome of our empirical analysis is that in order to increase the level of overall
334 development, not only economic but also social and political efforts should be undertaken. In some countries,
335 emphasis should be given to their socioeconomic development (countries belonging to group 4), in some to their
336 political development (countries belonging to group 3), and in some countries to both dimensions of development,
337 socioeconomic and political (countries belonging to group 1). countries emphasis should be given to their
338 socioeconomic development, in some to their political development and in some others to both of them. In line

339 of the above analysis we argue that a high overall level of development is achieved and maintained in the longrun
340 only when the socioeconomic development is associated with the consolidation of democracy. Rising incomes is
341 therefore a necessary but not a sufficient condition to increase overall development, unless it is associated with
342 the improvement of the other socioeconomic determinants of development as well as with the consolidation of
democracy.

1 2 3 4 5 6 7 8 9



Figure 1: F

343

¹Moreover, we must point out that corruption is extensive in low income countries, not because their inhabitants present a natural proclivity towards the said phenomenon, but because the conditions of life make them prone to that (Lalountas, Manolas and Vavouras, 2011).⁵ This outcome is compatible with our argument on the importance of these variables as determinants of the overall level of development presented in a relevant work. See Rontos, Salvati and Vavouras (2013b).⁶ See <http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD>. © 2013 Global Journals Inc. (US)

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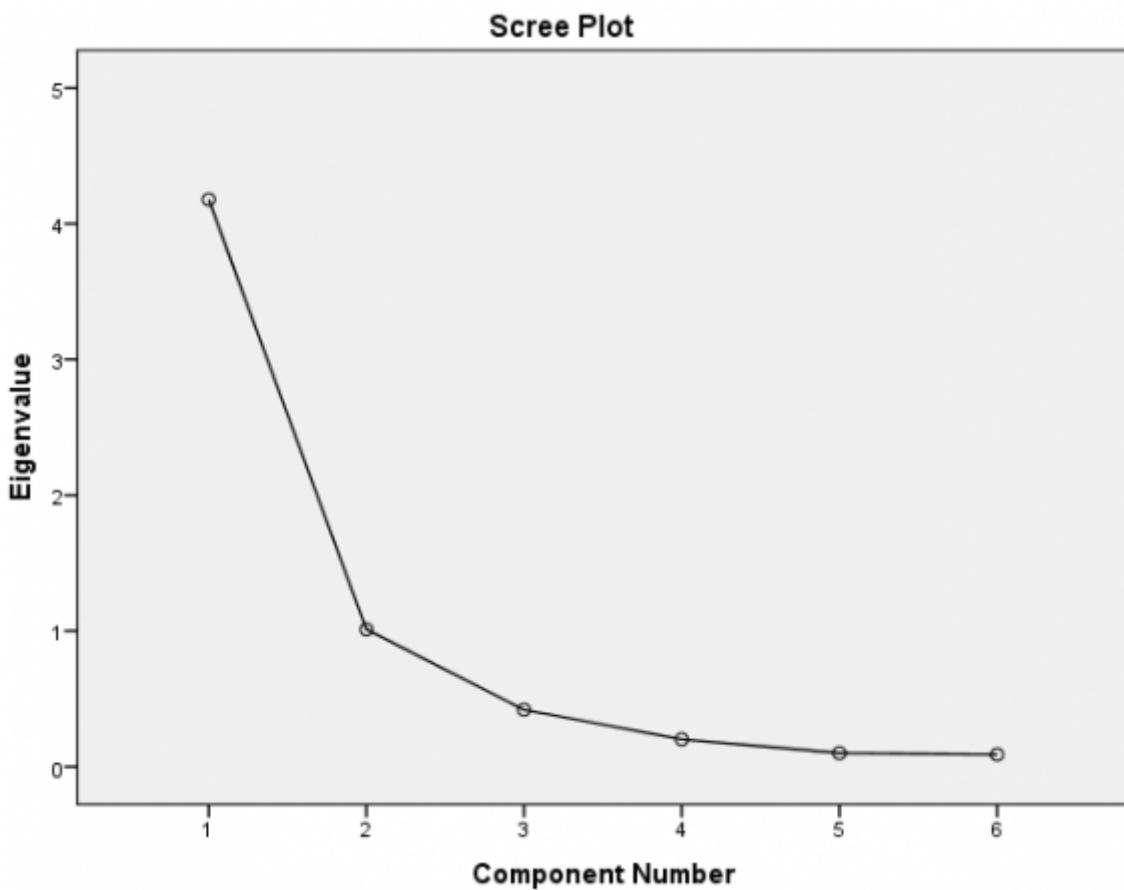
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⁶For a review of the theory explaining this relationship between development and democracy, see Romer (1994).

⁷See Rontos, Salvati and Vavouras (2013b). © 2013 Global Journals Inc. (US)

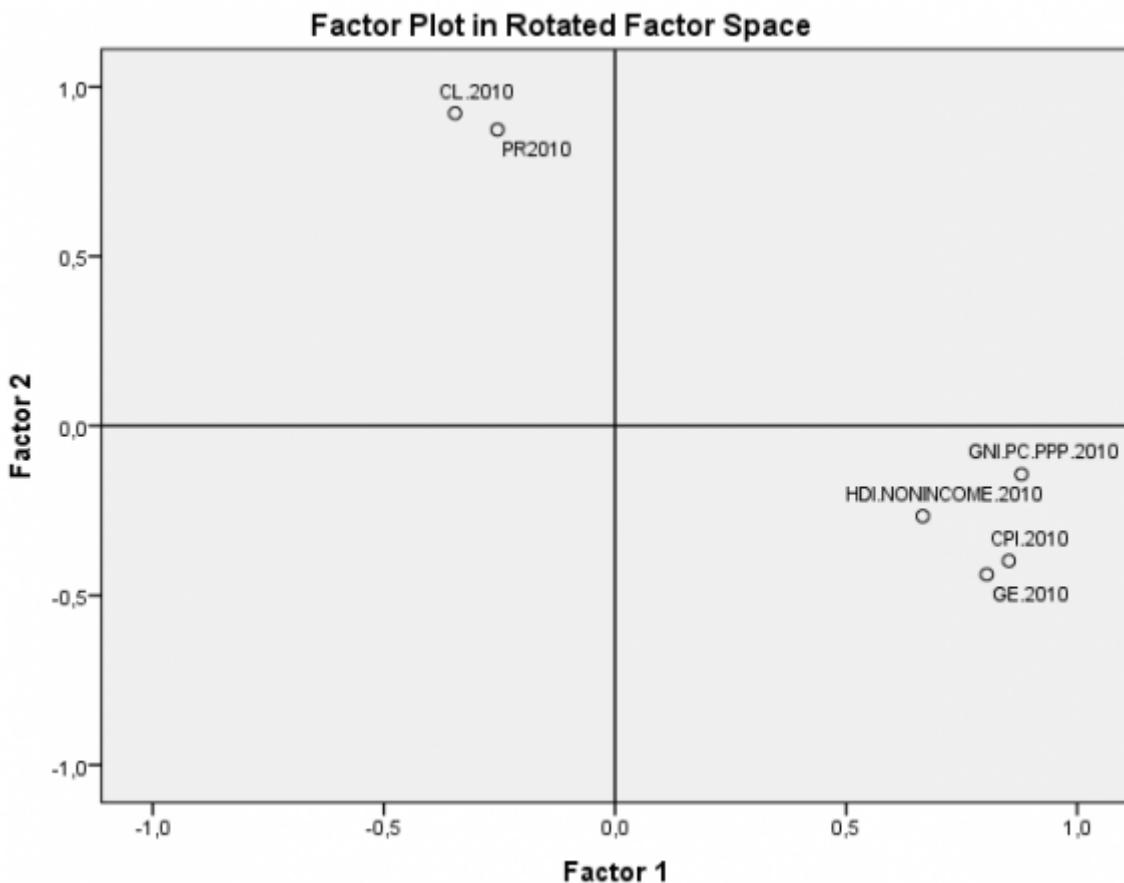
⁸Year 2013 Socioeconomic and Political Development: Their Measurement and Connections

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Figure 2: Figure 1 In



2

Figure 3: ? Factor 2 :

1

	Mean	Std. Deviation	Analysis N
CPI.2010	4.011	2.0933	176
GE.2010	-0.0593	.97877	176
CL.2010	3.3580	1.80230	176
HDI.NONINCOME.2010	.63461	.207620	176
PR2010	3.5227	2.14331	176
GNI.PC.PPP.2010	13,323.01	15,136.160	176

Figure 4: Table 1 :

2

Component	Total	Initial Eigenvalues	% of Variance	Cumulative %	Extraction Sums of Squared
1	4.178	69.633	69.633	4.178	69.633
2	1.011	16.857	86.490	1.011	16.857
3	.419	6.985	93.475		
4	.202	3.360	96.834		
5	.100	1.674	98.508		
6	.090	1.492	100.000		

Extraction Method : Principal Component Analysis.

Figure 5: Table 2 :

3

Factor	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.775	46.248	46.248
2	2.055	34.256	80.504

Extraction Method : Maximum Likelihood

Figure 6: Table 3 :

4

Factor	1	2

Figure 7: Table 4 :

5

Factors	1	2	Clusters	3	4
Factor 1: Socioeconomic	-.30821	1.46801	2.18501	-	.59533
development					
Factor 2: Political	1.10621	-.78835	1.59198	-	.62630
development*					
Number of countries (N = 176)	55	31		9	

[Note: 81According to the scale of PR and CL positive average score here means low political development and vice-versa.© 2013 Global Journals Inc. (US)]

Figure 8: Table 5 :

Volume	Cluster 1	Macau	Timor	Cluster 2	Australia	Cluster	Cluster 4	Countries
XIII	-Leste	Afghanistan	Al-	Austria	Barbados	3	with high GNI (Higher	
Issue	geria	Angola	Armenia	Belgium	Canada	Bahrain	than the median	
V				Chile		Brunei	GNI.PC.PPP = 4,625	
Ver-						Hong	\$) Albania	Argentina
sion						Kong		
I						Kuwait		
						Oman		
						Qatar		
Global	Azerbaijan	Belarus	Cyprus	Denmark	Saudi	Hungary	Brazil	Bulgaria
Jour-	Bhutan	Burundi	Estonia	Finland	Arabia	Costa Rica	Croatia	Czech Republic
nal	Cambodia	Cameroon	France	Germany	Singa-	Dominica	Dominican Re-	public
of	Central	African	Iceland	Ireland	pore	Ecuador	El Salvador	FYR Macedonia
Hu-	Republic	Chad	Ireland	Israel	Emi-			Greece
man	China	Colombia	Japan	Korea (South)	rates			Guatemala
Social	Congo	-Brazzaville	Luxembourg	Malta	United			Bosnia and Herzegovina
Sci-	Cote d'Ivoire	Cuba	Netherlands	New	Arab			Botswana
ence	Democratic Rep, of	Portugal	Zealand	Norway				
()	Congo	Djibouti	Portugal	Seychelles				
	Egypt	Egypt	Slovenia	Sweden				
	Equatorial	Guinea	Spain					
	Eritrea							
	Ethiopia							
	Gabon	Gambia	Switzerland					
			United	Kingdom				
			United	States				
	Georgia		Uruguay					
	Guinea							
	Haiti	Iran						
	Iraq							
	Jordan							

Figure 9: Table 6 :

Cluster	1	2	3	4
1		2.597	2.540	1.756
2	2.597		2.486	2.070
3	2.540	2.486		3.557
4	1.756	2.070	3.557	

Figure 10: Table 7 :

8

	Cluster Mean Square	df	Error Mean Square	df	F	Sig.
Factor 1: Socioeconomic development	47.903	3	.281	172	170.298	.000
Factor 2: Political development	47.050	3	.251	172	187.713	.000

Figure 11: Table 8 :

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