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Classify Countries by the Degree of Interest Groups Influence on the Economies

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Abstract: As it emerges from Olson's theory and as confirmed by the studies that followed, interest groups affect the economies of the countries. This impact of interest groups on the economy of each country is very difficult to quantify, as well as the corruption. The aim of this study is to classify a group of countries by the degree of influence of the interest groups on the economy, following the same methodology as for the countries classification process based on the corruption perception index.

Key words: group of interests; retardants of growth; corruption; Olson hypothesis
JEL codes: D72, D02

1. Introduction

A special interest group is an organized collective that operates in order to promote the common interests of its members. It is a term that includes pressure groups, business groups, monopolistic or oligopolistic firms in the same industry which forms cartels, labor unions, government vendors, professional associations etc.

The role of interest groups in society has been a fertile ground for study among economists, political scientists, sociologists and historians, among others. As analyzed by Coates et al. (2010), in a seminal work on economic growth, Mancur Olson (1965, 1982) outlined the macroeconomic consequences of rent-seeking by interest groups and argued that special interest groups form and accumulate over time in stable societies using their privileged positions to influence policy, preserve the status quo and protect their interest. The exactly process, groups hinder economic process, through their impact on public policy through the diversion of resources from productive activity to rent seeking efforts, is still unknown in the scientific society.

Mancur Olson in his second book “The rise and decline of nations” (1982) where he clearly indicates the actual impact on society due to the action of interest groups and clarifies its nine consequences for the economy of each country. Is a fact that special interest groups effect on the economy of the countries in a different manner and as well as with different results. Relevant studies have been published from Gustafsson (1986) for Sweden and from Atsalakis et al. (2016) for Greece.

Making a thorough and comprehensive literature search in this field of research, one finds out that there is a significant lack of papers to quantify mainly the influence of special interest groups on the economies of the countries. Has not been precisely defined the lavish way of the special interest groups influence on the economy

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of each country. In any case, each country has its own peculiarities and characteristics that make its economy a separate one.

For this reason we expand our research on similar issues which is possible to encounter the same difficulty of quantification. One such issue is the determination of the degree of corruption in a country.

Corruption is a complex of social, political and economic phenomenon that is prevalent in all countries in varying degrees. There is no international consensus on the meaning of corruption. In the literature, corruption is commonly defined as the misuse of public power for private benefit (UNDP, 2008, Anja Rohwer, 2009). Although this definition has been widely adopted, several critics have observed that such a definition is culturally biased and excessively narrow (Anja Rohwer, 2009). *Corruption occurs basically in four main forms: bribery, embezzlement, fraud and extortion.*

Corruption is a variable that cannot be measured directly just as the impact of interest groups on the economy of the countries. It is possible to measure it relatively. However, the number of indices focused on corruption can be evaluated.

Usually a Corruption Perception Index (CPI) is measured for every country from a considered group of countries.

In the present work, we apply the same methodology for classifying countries by the degree of corruption in each country, to ranking countries by the degree of impact of interest groups on the economies. For this reason an existing in the literature conventional algorithm (Corruption Perceptions Index 2012) is applied, considering the appropriate variables related to the impact of interest groups.

2. Mathematical Interpretation of An Existing Algorithm for Calculating the Impact of Interest Groups

A mathematical formulation of the algorithm for computing CPI is given in this section. The algorithm is based on the conventional technique, described e.g., in (CPI, 2012).

Usually the countries of the considered group are rated with the scale 0-100, where "0" corresponds to the most corrupted country (highest level of perceived corruption) and "100" corresponds to the cleanest country (lowest level of perceived corruption).

According to the algorithm, presented in the papers (CPI, 2012), (Anja Rohwer) the following steps should be performed in order to calculate the degree of the influence of interest groups for each country.

1) *Select data sources (categories) for each country of the experimental group*. They should be at least 3. Suppose, we choose $N \geq 3$ sources (categories) with M countries. Then x_i^j is the i-th source/variable of the j-th country, $i = 1,2,...N,\ j = 1,2,...,M$.
2) *Standardize data sources*. For this purpose a standard deviation for each source of every country must be calculated. A low standard deviation indicates that the data points tend to be close to the mean (expected value) of the set, while a high deviation indicates that the data points are spread out over a wider range of values. Thus, the following formula for standard deviation is used

$$\sigma_i = \sqrt{\frac{\sum_{j=1}^{M} \left(x_i^j - \overline{x}_i\right)^2}{N-1}},\ i = 1,2,...,N,$$

Here $\overline{x}_i = \frac{1}{M}\sum_{j=1}^{M} x_i^j$ is the mean value of the i-th variable.

3) *Compute the basic z - score*. The z formula for each variable is written as

$$z_i^j = \frac{x_i^j - \overline{x}_i}{\sigma_i}$$

It shows how many standard deviations each source has from the mean value.

4) *Use the computed on the Step 3 the basic z - score in calculating scaled sources.* The data sources are adjusted to have a mean value of approximately 45 and a standard deviation of approximately 20 so that the data set fits the 0-100 scale. Therefore, we have

$$z_i^j = \frac{y_i^j - 45}{20}$$

Hence, the standardize (new) data y_i^j are computed as follows

$$y_i^j = 20z_i^j + 45,$$

and the range of y_i^j are approximately between 0 and 100.

The average numbers, $\overline{y}_j = \frac{1}{N}\sum_{i=1}^{N} y_i^j$ is the score that express the influence of interest groups on the economy in every j-th country.

2. Variables

The choice of the appropriate variables to be used in this methodology has emerged, after studying the surveyed papers. Therefore, we have reached the following eleven variables, which in their respective studies have shown their correlation, their dependence on lobbying and their expected impact on the economy of each country.

The variable are:

1) GDP
2) GDP per capita
3) GDP per capita growth (annual %)
4) Tax revenue (% of GDP)
5) Population
6) General government final consumption expenditure
7) Revenue, excluding grants (% of GDP)
8) Government Effectiveness: Estimate
9) Duration of political stability
10) Internet users (per 100 people)
11) Mobile cellular subscriptions (per 100 people)

These variables are the most widely and most important variables as emerged from the next references of each one. For the first variable GDP, has been used in the studies of Heckelman (2000), Coates et al. (2007),

Coates et al. (2007a), Coates et al. (2007b), Horgos et al. (2009) and Heckelman et al. (2013).

The variable, GDP per capita, has the following references, Mueller et al. (1986), Weede (1986), Vedder et al. (1986), Lane et al. (1986), McCallum et al. (1987), Chan (1987), Nardinelli et al. (1987), Walis et al. (1998), Gray et al. (1988), Kennelly et al. (1991), Quiggin (1992), Crain et al. (1999), Coates et al. (2003), Knack (2003), Coates et al. (2007), Coates et al. (2010).

GDP per capita growth, is referred in the following studies, Weede (1986), Tang et al. (1998), Coates et al. (2007(, Cole (2014). The variable, tax revenue, has the following references, Mueller et al. (1986), Vedder et al. (1986), Crain et al. (1999), Cole (2014).

The variable Population, is referred in the papers, Murrell P 1984, Mueller et al. 1986, McCallum et al. 1987, Crain et al. 1999, Heckelman 2000, Coates et al. 2007, Coates et al. 2007, Coates et al. 2007a, Coates et al. 2007b, Heckelman 2013.

The government spending is related with the action of the interest groups as described by the following studies, Muellerr et al. (1986), McCallum et al. (1987), Heckelmann (2000), Cole et al. (2002), Coates et al. (2007a), Coates et al. (2007b), Coates et al. (2010), Heckelman et al. (2013). For the purpose of this research has been used the data by the variable "General government final consumption expenditure", as announced by World Bank, and the variable Revenue, that is referred in Crain et al. (1999).

Government effectiveness as measured and defined by World Bank, captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies.

Duration of political stability, is one of the implications which is presented in detail in pioneering study of Mancur Olson (1982),and is referred also in, Murrell P. (1984), Weede (1986), Lane et al. (1986), McCallum et al. (1987), Chan (1987), Kennelly et al. (1991), Quiggin (1992), Tang et al. (1998), Coates et al. (2007a), Coates et al. (2007b).

As is mentioned in Coates and Wilson (2007), interest groups are thought to influence economic activity through two primary channels: resource allocation and technological change (or lack thereof). Also Coates Heckelman & Wilson (2007a), examine the impact of groups on two sources of growth — capital accumulation and technological change — in addition to the impact of groups on output growth. Because the research on this study is concerned the years between 2000-2014, the number of internet users (per 100 people) and the Mobile cellular subscriptions (per 100 people), are variables that express the technological change of this time period.

The data for all the above variables comes from the World Bank and concern, 10 developed European countries for the period of 2000-2014.

The European countries are:

1) Greece
2) Italy
3) Finland
4) France
5) Germany
6) Portugal
7) Spain
8) Sweden

9) Belgium
10) Netherland

3. Results

For implementation of the technique $N_c = 10$ countries and $N_v = 11$ variables have been taken. Let x_i^j is the i-th source-variable of the j-th country, $i = 1,2,...N_v$, $j = 1,2,...,N_c$. Further, $y_i^j(t_k)$ are standardized (see Section 5) or scaled data sources and $\overline{y}_j(t_k)$ is the result. The values of the variables for $T_y = 15$ years (2000-2014) are given. The degree of the interest groups impact on an economy for each year in every country is calculated, based on the algorithm described in previous Section . Then the data are sorted in a descend manner. The results are given in Tables 1, 2, 3 and 4.

Table 1 The Values Rated with the Scale 0-100, and Sorted in Descend Manner for the Years 2000-2008

2000	2001	2002	2003	2004	2005	2006	2007	2008
68	65	68	70	69	68	67	65	61
50	52	49	50	50	50	51	51	53
50	50	49	49	49	49	50	50	52
50	49	48	48	48	49	49	50	51
49	49	46	46	48	47	49	49	47
49	48	46	45	47	47	48	47	46
43	41	44	44	46	43	42	42	41
36	38	37	39	35	38	35	34	34
31	31	31	31	33	32	31	33	33
24	26	30	29	27	27	27	28	32

Table 2 The Values Rated with the Scale 0-100, and Sorted in Descend Manner for the Years 2009-2014

2009	2010	2011	2012	2013	2014
63	68	65	64	67	65
52	52	52	53	54	54
50	51	52	53	48	51
49	50	51	49	48	48
48	49	48	47	47	46
45	47	48	46	45	45
44	43	43	44	44	44
34	32	32	33	33	36
34	31	29	31	33	33
32	27	29	29	31	28

Table 3 The Countries, Sorted in Descend Manner, According to the Values of the Table 1 for the Years 2000-2008

2000	2001	2002	2003	2004	2005	2006	2007	2008
Swed.	Swed.	Swed.	Swed.	Swed.	Swed.	Swed.	Swed.	Swed.
Italy	Italy	Finl.	Fran.	Fran.	Nethe.	Germ.	Germ.	Germ.
Finl.	Fran.	Fran.	Finl.	Finl.	Finl.	Nethe.	Fran.	Nethe.
Nethe.	Finl.	Italy	Italy	Italy	Fran.	Italy	Nethe.	Fran.
Fran.	Neth.	Germ.	Nethe.	Nethe.	Italy	Fran.	Finl.	Finl.

Germ.	Germ.	Belg.	Germ.	Germ.	Germ.	Finl.	Italy	Italy
Belg.	Belg.	Neth.	Belg.	Belg.	Belg.	Belg.	Belg.	Belg.
Spain	Spain	Spain	Spain	Spain	Spain	Spain	Spain	Port.
Port.	Port.	Port.	Port.	Port.	Port.	Port.	Port.	Spain
Gre.	Gre.	Gre.	Gre.	Gre.	Gre.	Gre.	Gre.	Gre.

Table 4 The Countries, Sorted in Descend Manner, According to the Values of the Table 2 for the Years 2009-2014

2009	2010	2011	2012	2013	2014
Swed.	Swed.	Swed.	Swed.	Swed.	Swed.
Fran.	Fran.	Fran.	Fran.	Fran.	Germ.
Germ.	Germ.	Germ.	Germ.	Germ.	Fran.
Nethe.	Finl.	Finl.	Finl.	Neth.	Nethe.
Italy	Italy	Italy	Neth.	Finl.	Italy
Finl.	Neth.	Neth	Italy	Italy	Finl.
Belg.	Belg.	Belg.	Belg.	Belg.	Belg.
Gre.	Spain	Spain	Spain	Port.	Spain
Spain	Port.	Gre.	Gre.	Spain	Port.L
Port.	Gre.	Port.	Port.	Gre.	Gre.

As mentioned in section 2, the countries of the considered group are rated with the scale 0-100, where "0" corresponds to the highest level of interest groups influence and "100" corresponds to the lowest level of interest groups influence.

The score range for all countries for the years 2000-2014 ranges from 24 to 70.

Fixed in the last place is Greece, except the years 2009, 2011 and 2012 that Portugal fell to the last place. On the other side, Sweden has the higher score that it means the lowest level of impact of the interest groups.

As it is observed, Portugal, Italy, Greece, Spain, (P.I.G.S.) share the last five positions at the classification for the years 2000-2014. These countries were in the core of the European financial crisis and Greece remains under the Memorandum of Understanding (MoU). The high external debt due to government loans and the high annual deficit, are some of the typical results of interest groups.

The extremely "active" interest groups, create a significant impact on the economy of each country, so a serious reason for the financial crisis for these four countries is the influence of the interest groups on their economy.

References

Anja Rohwer (2009). "Measuring corruption: A comparison between the transparency international's corruption perceptions index and the World bank's worldwide governance indicators", CESifo DICE Report 3/2009, pp. 42-52.

Corruption Perceptions Index (2012): Short Methodology Note, Transparency international global coalition against corruption.

Atsalakis S. George (2016).

Chan St. (1987). "Growth with equity: A test of Olson's theory for the Asian Pacific-Rim countries", *Journal of Peace Research*, Vol. 24, pp. 135-149.

Coates D. and Wilson B. (2007). "Interest group activity and long-run stock market performance", *Public Choice*, Vol. 133, No. 3, pp. 343-358.

Coates D. and Heckelman J. C. (2003a). "Absolute and relative effects of interest groups on the economy", in: Heckelman J. C., Coates D. (Eds.), *Essays in Honor of Mancur Olson*, Berlin: Collective Choice, Springer, pp. 129-142.

Coates D. and Heckelman J. C. (2003b). "Interest groups and investment: A further test of the Olson hypothesis", *Public Choice*, Vol. 117, pp. 333-340.

Coates D., Heckelman J. C. and Wilson B. (2007). "Special-interest groups and volatility", *Economics Bulletin*, Vol. 15, No. 18, pp. 1-13.

Coates D., Heckelman J. C. and Wilson B. (2007a). "Special interest groups and growth", *Collective Choice*, Vol. 147, accessed March 1st, 2010, available online at: https://ssrn.com/abstract=1002480.

Coates D., Heckelman J. C. and Wilson B. (2007b). "Determinants of interest group formation", *Public Choice*, Vol. 133, pp. 377-391.

Coates D., Heckelman J. C. and Wilson B. (2010). "The political economy of investment: Sclerotic effects from interest groups", *European Journal of Political Economy*, Vol. 26, pp. 208-221.

Cole, I., (2014). Short- and Long-Term Growth Effects of Special Interest Groups in the U.S. States: A Dynamic Panel Error-Correction Approach. Department of Business and Economics California University of Pensylvania, Working Paper Series No. 02/2014.

Cole I. and Chawdhry Ar. (2002). "Rent seeking and economic growth: Evidence from a panel of U.S. States", *Cato Journal*, Vol. 22, No. 2, pp. 211-228

Corruption Perceptions Index 2012: Short Methodology Note, Transparency international global coalition against corruption.

Crain W. M. and Lee K. J. (1999). "Economic growth regressions for the American states: A sensitivity analysis", *Economic Inquiry*, Vol. 37, pp. 242-257.

Gray V. and Lowery D. (1988). "Interest groups politics and economic growth in the U.S. States", *American Political Science Review*, Vol. 82, No. 1, pp. 109-131.

Gustafsson Agne (1986). "Rise and decline of nations: Sweden", *Scandinavian Political Studies*, Vol. 9, No. 1, pp. 35-50.

Heckelman J. C. (2000). "Consistent estimates of the impact of special interest groups on growth", *Public Choice*, Vol. 104, No. 3-4, pp. 319-327.

Heckelman J. C. and Wilson B. (2013). "Institutions, lobbying, and economic performance", *Economics & Politics*, Vol. 23, pp. 360-386.

Horgos D. and Zimmermann K. W. (2009). "Interest groups and economic performance: Some new evidence", *Public Choice*, Vol. 138, No. 3, pp. 301-315.

Kennelly Br. and Murrell P. (1991). "Industry characteristics and interest group formation: An empirical study", *Public Choice*, Vol. 70, pp. 21-40.

Knack S. (2003). "Groups, growth and trust: Cross-country evidence on the Olson and Putnam hypotheses", *Public Choice*, Vol. 117, pp. 341-355.

Lane J. E. and Ersson S. (1986). "Political institutions, public policy and economic growth", *Scandinavian Political Studies*, Vol. 9, pp. 19-34.

McCallum J. and Blais A. (1987). "Government, special interest groups, and economic growth", *Public Choice*, Vol. 54, No. 1, pp. 3-18.

Mueller C. D. and Murrell P. (1986). "Interest groups and the size of government", *Public Choice*, Vol. 48, pp. 125-145.

Murrell P. (1984). "An examination of the factors affecting the formation of interest groups in OECD countries", *Public Choice*, Vol. 43, pp. 151-171.

Nardinelli Cl., Wallace M. and Warner J. (1987). "Explaining differences in state growth: Catching up versus Olson", *Public Choice*, Vol. 52, pp. 201-213

Olson M. (1965). *The Logic of Collective Action*, Cambridge, MA: Harvard University Press.

Olson M. (1982). *The Rise and Decline of Nations*, New Haven, CT: Yale University Press.

Quiggin J. (1992). "Testing the implications of the Olson hypothesis", *Economica*, Vol. 59, pp. 261-277.

Tang Ed. and Hedley Al. (1998). "Distributional coalitions, state strength, and economic growth: Toward a comprehensive theory of economic development", *Public Choice*, Vol. 96, pp. 295-323.

UNDP (2008). "A users' guide to measuring corruption", available online at: http://www.undp.org/content/undp/en/home/librarypage/democratic-governance/anti-corruption/a-users-guide-to-measuring-corruption.html.

Vedder R. and Galloway L. (1986). "Rent seeking, distributional coalitions, taxes, relative prices and growth", *Public Choice*, Vol. 51, pp. 93-100.

Wallis J. J. and Oates W. E. (1988). "Does economic sclerosis set in with age? An empirical study of the Olson hypothesis", *Kyklos*, Vol. 41, pp. 397-417.

Weede Er. (1986). "Sectoral reallocation, distributional coalitions and the welfare state as determinants of economic growth rates in industrialized democracies", *European Journal of Political Research*, Vol. 14, pp. 501-519.