

# METHOD OF SYSTEMATIZING THE EUROPEAN UNION STATES IN CATEGORIES ACCORDING TO THEIR ADMINISTRATIVE CAPACITY

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**Abstract:** *During times of severe budget reductions and limitations, it becomes necessary to conduct an evaluation of the ability of the States to carry out the administrative process and to provide useful solutions developed through common policies at European level, necessary for costs abatement, towards maintaining the productivity and the innovative potential of organizations and in order to secure employment. Evaluation at the European Union level is essential to the identification of the weak elements for each state and in order to effectively provide a broad palette of services focused towards the citizens.*

*The idea of developing an evaluation system was instituted after the establishment of a common framework of quantitative assessment, Common Assessment Framework (CAF). CAF is a tool used to help public sector organizations in Europe in the use of quality management techniques intended to improve performance. This tool wants to be a global tool for comparative analysis of administrative performance. As described on the official website of the program, the model is based on the premise that excellent results of organizational performance, of the citizens/customers and of the society are achieved through leadership and planning strategy, people, partnerships, resources and processes.*

*At the end of the research, the analysis of the main components will confirm the results, shown by European Union States progress in sustainable development of public sector.*

**Keywords:** administrative capacity, decentralization, public services development, sector public progress

**JEL Classification:** H4, F3, D73

## INTRODUCTION

We have prefaced the accomplishment of this model, with the main purposes of the CAF, namely the introduction of public administrations to the principles of total quality management and facilitating self-assessment of public organizations, in order to arrive at a diagnosis and propose improvement actions. Therefore, the idea of assessment of the countries administrative capacity is based on evaluating, grouping and comparing them according to ten indicators. CAF is a tool used to help public sector organizations in Europe in the use of quality management techniques in order to improve performance.

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Due to a necessity for the administrative development, on account of its impact on the institutions activity, on the evolution of public services, out of need to improve perceptiveness to the needs of citizens and thereby raising the confidence of citizens in the public administration, the article considered adequate a classification of the 27 States of the European Union in administrative capacity defining classes. This method arranges, at state level, the defining elements of administrative capacity in terms of decentralization and public services, in three classes: Administrative Capacity Above Average (ACAA), Average Administrative Capacity (AAC) and Administrative Capacity Below Average (ACBA).

The procedure sets up for debate states categorised based on administrative capacity and highlights the common features of the States that possess the same score. Identification of differences and categories distribution is used to obtain a classification and to monitor and develop segments with low scores.

## **1. RESEARCH METHODOLOGY USED FOR THE DETERMINATION OF THE ADMINISTRATIVE CAPACITY**

In order to obtain scientific results, we used qualitative and quantitative research through monitoring and gathering facts, analyzing empirical material, in order to obtain the results matching the indicators used in the method. The process of research and interpretation of qualitative analysis consists in the ability to comprise and understand the indicators defining the data.

After studying the literature concepts about the administrative capacity, we have chosen to make the assay from the perspective of human resource development, public services, education and health, social protection, ability to abort European funds, the capacity of local authorities to provide online services to citizens.

Using the data from 2010, the author selected ten indicators for this method, as follows: GDP per capita, population density, unemployment rate, state employees/1000 inhabitants, change in GDP compared with the previous year (%), inflation rate (average annual change %), education expenditures GDP%, expenditure allocated to health GDP%, expenditure allocated for social protection GDP% and public expenditure indicator GDP% .

## 2. IMPLEMENTATION OF THE STATISTICAL ANALYSIS METHOD (KNOWN AS PRINCIPAL COMPONENT ANALYSIS)

In order to classify the countries of the European Union (EU27) according to their administrative capacity, we opted for a miscellaneous statistical analysis method known as principal component analysis. To begin the analysis, we resorted to the standardization of the results. This procedure leads to getting new variables of zero average and one variance. The Communalities table contains high variance values (over 0.5) after extraction of factors which shows that the variables are correlated and strongly colligated with the factorial axes.

**Table 1 - The statistical variance of the variables**

Communalities		
	Initial	Extraction
GDP per capita	1.000	.525
Population density	1.000	.620
Unemployment rate	1.000	.776
State employees/1000 inhabitants	1.000	.614
Change in GDP compared with the previous year (%)	1.000	.390
Inflation rate (average annual change %)	1.000	.606
Education expenditures GDP%	1.000	.661
Expenditure allocated to health GDP%	1.000	.515
Expenditure allocated for social protection GDP%	1.000	.830
Public expenditure indicator GDP%	1.000	.759

Extraction Method: Principal Component Analysis

Source: own processing

SPSS offers the possibility of sorting the values by size and hiding values lower than 0,3, in such a way that the table below shows the values in descending order and, where values are lower than 0,3, blank spaces appear.

**Table 2 - The variables coordinate on the first 3 extracted factorial axes**

	Component Matrix <sup>a</sup>		
	1	2	3
Expenditure allocated for social protection GDP%	.837		
Expenditure allocated to health GDP%	.789		
Public expenditure indicator GDP%	.770	-.403	
GDP per capita	.667		
Education expenditures GDP%	.653		
Change in GDP compared with the previous year (%)	.405		
Population density		.749	.374
Unemployment rate	-.539	-.647	
State employees/1000 inhabitants			.691
Inflation rate (average annual change %)		.355	-.662

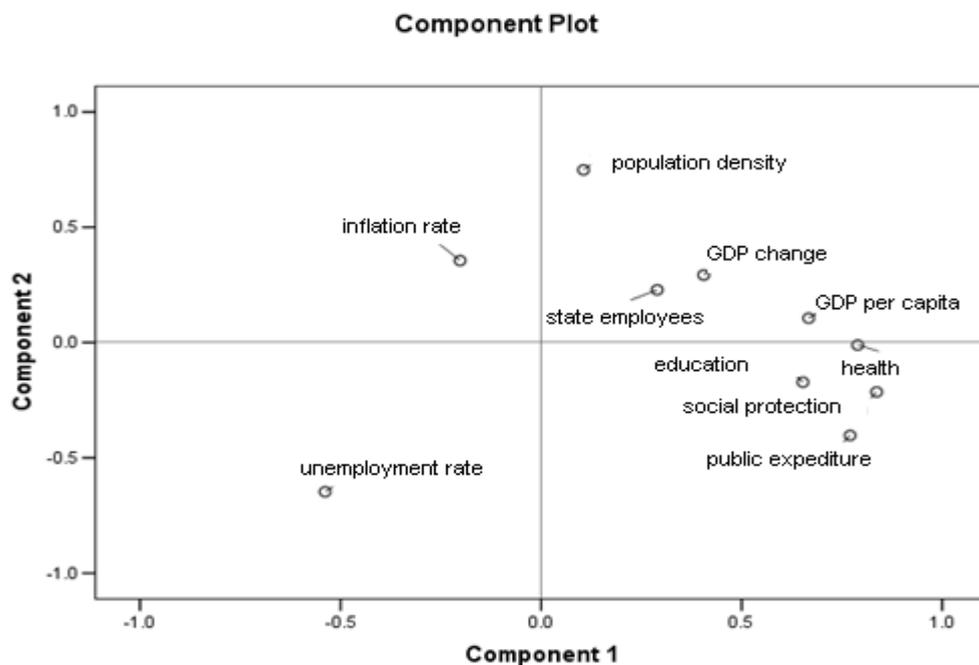
Extraction Method: Principal Component Analysis  
a. 3 components extracted

Source: own processing

Five of the ten statistical variables which correlate strongly with the first factorial values exceeding 0,65 (expenditure allocated to social security - GDP%, expenditure allocated to health-protection- GDP%, the amount of public expenditure - GDP%, gross domestic product per capita and expenditure allocated to protection of education - GDP%). Variables that correlate with the second factorial axe are population density and rate of unemployment and variables that correlate with the third factorial axe are: employees in the public system per 1000 inhabitants and inflation rate expressed as an average annual change.

First factorial axis refers to the administrative capacity and the second factorial axis refers to the density of the population while the third factorial axis refers to the budget system development.

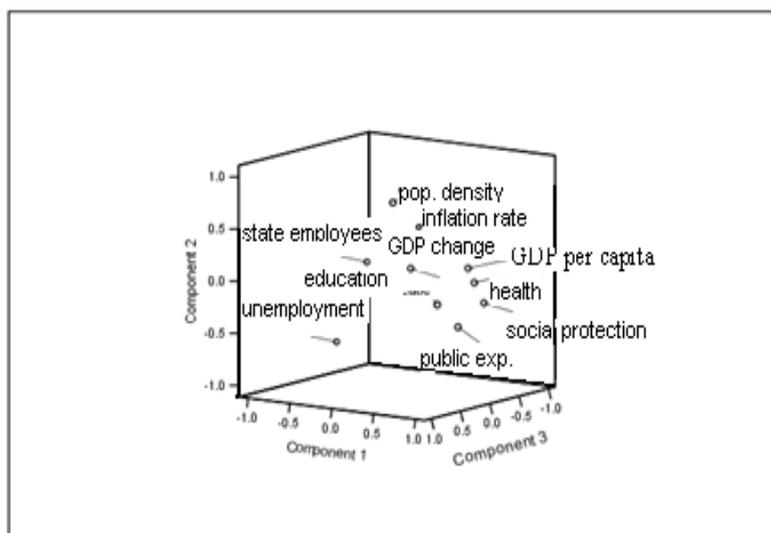
**Figure 1 - Graphical representation of variables in the first two factorial axes system**



Source: own processing

The graphic above allows positioning of the variables in the factorial axis system, based on the direction and intensity of the links between the ten statistical variables. Considering the second axe as a partition between the variables, a direct and negative link becomes distinguishable between variables in quadrant II and quadrant III.

**Figure 2 - Graphical representation of variables into the first three factorial axes system**



Source: own processing

Since it is difficult to interpret the position of the graphic variables in the first three factorial axe system, we assay the values of variables coordinates in the third factorial axis (the extracted variables coordinate on the first three extracted factorial axis (Component Matrix output). Analyzing the values from this table shows that variables public employees per 1000 inhabitants and inflation rate - average annual change explain most differences between the statistical units for the third factorial axis Component column 3.

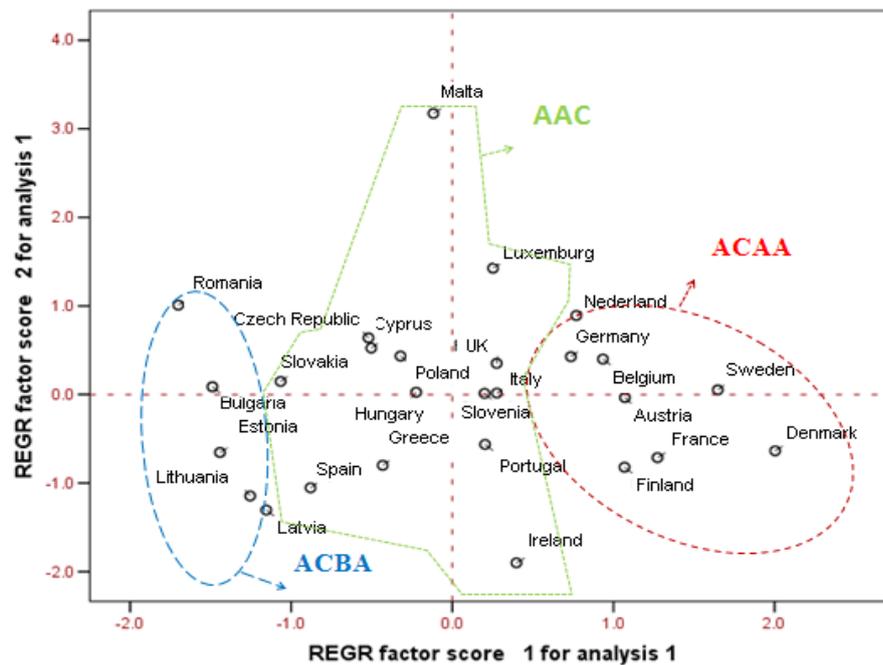
According to the table variables, contributions to the 3extracted factorial axis inertia (Component Score Coefficient Matrix) the variables that contribute to the first factorial axis are: GDP per capita, expenditure allocated to health protection -% GDP, amounts allocated to the education protection - % GDP, the quantum of public expenditure -% of GDP.

The variables that contribute to the formation of the second factorial axis are population density and unemployment rate and the variables that contribute to the formation of the third factorial axis are public system employees reported per 1000 inhabitants and inflation rate as an annual average.

The following will render the graphic positioning of the countries on the two factorial axes resulting from the application of miscellaneous statistical analysis method principal component analysis. The first factorial axis refers to administrative capacity, the second factorial axis refers to congestion of population and the third factorial axis refers to the development of the budgetary system. The first two groups of countries are highlighted by the first factorial axis. Dependent on

the first factorial axis, must be noted, on the right side, the following countries: Austria, Belgium, Denmark, Finland, France, Netherlands and Sweden which can be assigned to the countries with above average administrative capacity group, while the left side shows Bulgaria, Estonia, Latvia, Lithuania, Romania which may be placed in the countries with below average administrative capacity group. EU 27 countries for which values are represented close to the first factorial axis origin, can be assigned to the countries with average administrative capacity group and include: the Czech Republic, Cyprus, Greece, Italy, Ireland, etc.

**Figure 3 - Classification of EU 27 countries in categories of administrative capacity**



Source: own processing

According to the second factorial axis positioning, we can identify a peak position for Malta, with very high values for the population density and an average value for the unemployment rate and, at the other end, Ireland, where population density is very low, but the unemployment rate is high. The third factorial highlights the EU27 countries with elevated values for the number of public system employees per 1000 inhabitants as well as Ireland, Latvia, Netherlands, Slovakia, countries with a low inflation rate expressed as an annual average. To assess the characteristics of the countries, classified in the three classes based on the administrative capacity, we will take into consideration the characteristics used by Adam, Elhiraika, Bahl and Martinez-Vasquez, Daniel Traisman, to determine the financial decentralization: the structure of the state, the levels of

governance, the establishment of local taxes and levies (fiscal autonomy), the indebtedness the balance of in-house revenues from local budgets, transfers from the State budget to local budgets. We will correlate these features with the amount of public expenditure (% of GDP), expenditure on health (% of GDP), on education (% of GDP), on social protection (% of GDP), with population density and GDP per capita.

### ***Below average administrative capacity***

Hence we begin the analysis with the countries assigned to the below average administrative capacity category: Bulgaria, Estonia, Latvia, Lithuania, Romania and Slovakia. Concerning the state structure, the six states are uniform and organized, except for Romania and Slovakia, on the three levels of Government (Romania is divided into regions free from legally controlled statute even if, according to the nomenclature of statistical territorial units, is situated at NUTS2, with the developmental area according to the number of individuals and to the surface as a territorial unit. Latvia has an area of 64.500 km<sup>2</sup>, a total of 26 districts, being a member state of the European Union since 2004. It also has classification advantages due to a smaller surface and fewer people. By comparison Romania has an area of 237.500 km<sup>2</sup>.

The gross domestic product shows that these six states have the lowest GDP in the European Union. It varies from 4,800 euro per capita for Bulgaria to 12.100 EUR per capita for Slovakia. Romania, in 2009, had a 5800 EUR GDP per capita. Also, the percentages of GDP allocated to the financing of public expenditure are low. The lowest percentage allocated to health (5.1% of GDP), in 2009, belonged to Romania, at the opposite pole was Slovakia with 7.3% of GDP. A minimum percentage has been granted to education by Romania surpassed by 0.4% by the following: Bulgaria, Slovakia, Estonia, Latvia and Lithuania fluctuating between 3.5% and 3.9%. For social protection, Slovakia has granted a small percentage of 12.2% of GDP, compared to the other countries included in the same category that have allocated for social protection 13.6% and 16.7% of GDP. Romania has assigned a rate of 14.2%.

### ***Average administrative capacity***

The thirteen countries placed in the average administrative capacity category, as shown in Figure 4.4, are the EU27 countries with values represented very close to the first factorial axis origin: the Czech Republic, Cyprus, Greece, Ireland, Italy, Luxembourg, Malta, Poland, Portugal, United Kingdom, Slovenia, Spain and Hungary. In terms of state structure, the thirteen states are consistent and most are structured on three levels of government, except for Slovenia, Malta and Luxembourg, organized on two levels of government. Slovenia has an area of 20.300 km<sup>2</sup>. At a

decentralized level, municipalities have proven competent, concerning primary health care, mandatory education, water and local public transport. The exception of this category is Malta; since the state is small, it is reasonable for human resources available to be low and the expenditures on public services as well. This contributes to determining the GDP per capita, situated well above the GDP of countries in the below average administrative capacity category. Also, in percentage terms, the allocated amounts for public services are higher.

#### *Above average administrative capacity*

According to the graph results from the SPSS analysis, Figure 3, and depending on the first factorial axis, these countries are distinguishable on the right side: Austria, Belgium, Denmark, Finland, France, the Netherlands and Sweden, that can be classified in the above average administrative capacity group. In terms of state structure, five out of eight states are uniform and three are federal: Austria, Germany and Belgium (a significant element for this analysis). According to research, state structure influences the degree of decentralization and the public services. Their advanced stage of decentralization has positive effects on the administrative capacity, managing to outrun the average administrative capacity limit.

The GDP value is higher than that of the States belonging to the below average and average administrative capacity category. The share of public expenditure of GDP is different from these eight Member States. Thus, the relegation of these countries, at the end of 2009, was influenced by the level of development of each one, but also by the proportions of the public sector. In 2009, the highest GDP/capita is 42.500 euro recorded in Denmark as well as the largest percentage allocated for education, which reaches the value of 8.3% of GDP.

## **CONCLUSIONS**

The financial crisis hit the global economy in September 2008. The crisis led to new economic cooperation agreements between the EU by the Treaty of Lisbon. Along with the investment in new technologies and public sector, improvement of the quality of life for all EU citizens, employment, together regard the end of the crisis, economic growth and long-term stability as well as a leveling in terms of economy and services in the European area. It is also targeted the abatement of the economic and social disparities. The analysis of the Union states common traits helps us evaluate and enclose them in classes according to their administrative

capacity. This exercise is necessary to observe, on the whole, the details that bring to attention the differences between states.

In our perspective, referencing the ten types of indicators with indicators used in determining patterns of financial decentralization leads to a full analysis of the states included in the three classes and confirms that the analysis is carried out without mistake.

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