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Europeanisation of Higher Education in the Area of Administrative Sciences in Romania

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**“Europeanization or curricular harmonization
in the area of administrative sciences in Romania
(follow-up of Bologna process).
Comparative analysis and empirical research”**

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I. ARGUMENT: IMPORTANCE AND ACTUAL STATE OF ACADEMIC PROGRAMMES IN THE EUROPEAN EDUCATIONAL AREA

The university, as organisational resource with great capacity of institutional and legal adjustment to building the knowledge society, aiming to achieve the objectives of Lisbon Strategy, has got the essential role in sustaining competitiveness of knowledge-based economy of the European Union.

Under the influence of the effects of Europeanization process by means of the European public policies, the educational policy is subject both to institutional and social effects of continuous change. The specificity of the Europeanization of higher education is provided by the dimensions of the formal national institutional and political changes of the European Union Member States and acceding countries and it is supported by activities that apply „Bologna Declaration” (1999) on creation of a “common European Higher Education Area” by 2010, aimed to promote citizens’ mobility and employability, to increase the competitiveness of European higher education (Matei, L. 2006). That mobility provides the possibility to gain experience, to develop linguistic skills and cultural maturity, requirements of the European labour force market¹ (Ministerial Summit, 2007, London).

The university, situated within its own European area- defined by two complementary dimensions: education for science and creating science, European Higher Education Area-EHEA, and within that of scientific research, European Research Area - ERA, is motivated by the action of the factors external to the academic environment, as well as by that of internal factors in defining and up-dating its own mission.

In this context, the universities mission’ is in continuous change, fact proved by the actions of transformation and the new approaches on shaping European higher education. Romanian higher education belongs to European higher education , being organised on three consecutive cycles of studies, based on principles of Bologna process, principle of subsidiarity on „proving scientifically the relations between the European and national framework” (Vlăsceanu, L. 2005). It means a new philosophy for higher education, a new conception for curricula and educational contents of the disciplines (Korka, M. 2005), related permanently to the European framework and taking into account the specificity of the national framework.

2005 could be considered year of reference for Romania, meaning: “key developments” that include implementing legislation to define structured third cycle study programmes; creating the necessary preconditions for developing a system of post-doctoral individual grants; extending the use of ECTS and diploma supplements; developing a quality assurance framework by establishing the Romanian Agency for Quality Assurance in Higher Education, which applied for ENQA membership; and a new methodological framework for external evaluation of quality assurance”².

In this paper we propose to identify some effects for Europeanization at the level of Romanian higher education, possible integration within an indicator for sizing its dimension and to design a model of educational and statistical analysis.

We shall achieve *the first objective* based on elaboration of some indicators, using valid, comparable and available data.

The elaboration of the set of indicators is grounded on the European experiences, the “criteria for accreditation”, the studies achieved by European Association for Public Administration Accreditation, the standards of European Association for Quality Assurance in Higher Education (ENQA) and the European recommendations (*Recommendation of the European Parliament and*

¹ Source: <http://www.dfes.gov.uk/bologna/>

² „Bologna Process. Stocktaking Report 2007”, report from a working group appointed by the Bologna Follow-up group to the Ministerial Conference in London, May 2007, p.73.

of the Council of 15 February 2006 on Further European Cooperation in quality assurance in higher education (2006/143/EC).

We shall analyse the curricular content of the programmes from the first cycle, in administrative sciences, and achieve the statistic analysis of the curricular compatibility degree at the level of some representative universities from Romanian area, using 6 variables, to each variables corresponding a number of items, whose quantitative expressions will be described in the paper.

The second objective consists in achieving the comparative analysis between the compatibility degree for curricula of Romanian universities and that of European universities, using the same set of indicators.

The criteria are extracted from European experiences concerning the evaluation and accreditation for the programmes in administrative sciences³.

An independent statistic variable is associated to each criterion.

II. A MODEL OF EDUCATIONAL AND STATISTICAL ANALYSIS

II.1. Premises of the model

a) The model of analysis is based on the reality provided by implementation of Bologna process in higher education from many European countries and thus creation of European Higher Education Area. Specifically, we refer to the objectives comprised in Bologna Declaration on 19 June 1999, focusing also on ensuring comparison of diplomas and thus curricular compatibility.

In this context, curricular compatibility becomes a fundamental component of Europeanization of higher education in the area of administrative sciences.

b) Adopting a system of higher education based on three cycles – undergraduate academic studies, master studies, doctoral studies – offers a unitary framework of analysis and the possibility to achieve some comparative studies. We also add the necessity to establish a credit system – as ECTS – in order to support the mobility of students, as well as comparative evaluations for the workload of each student, aimed to obtain a qualification in the area of administrative sciences.

c) In order to obtain relevant information and genuine conclusions concerning the development of education in the area of administrative sciences in various countries or groups of countries, it is necessary to achieve a model of analysis based on curricular analyses, profound evaluations and statistical analyses.

d) The curricular analysis has proposed the ideas comprised in the paper „Basic Principles of Public Administration” published by EAPAA (1998)⁴ as fundamental ideas. In this respect, we defined *six independent variables* with characteristics that will be evaluated by studying the content of curricula, volume of hours dedicated to each discipline as well as the transferable credits assigned.

e) The statistical methods are based on the analysis of variation and correlation and calculation of some relevant correlation coefficients concerning the evolution of the curricular content. The main characteristic used in the statistical analyses represents the mean of the

³ Report of the Committee on Public Administration of the Association of Universities in the Netherlands, Dutch version (VSNU), June 1998, comprising also “Basic Principles for Public Administration”, <http://www.eapaa.org/Archive/1999/Basics.html>

⁴ Source: <http://www.eapaa.org>

variables and by adjusting the values of some variables related to the mean, we define the aggregated indicators for the degree of compatibility.

II.2. Framework of analysis

II.2.1. Sampling

a) The current study turns into account information and outcomes from 20 European universities, achieving undergraduate academic studies of public administration, structured as follows:

- 5 universities from European Union Member States, with prestigious tradition in higher education- *sample I*;
- 11 universities from Romania, assigned on geographic criteria, tradition, curricular orientation, public or private universities - *sample II*;
- 4 universities in European Union Member States that have recently acceded or are during the accession process - *sample III*.

Sample I comprises 5 universities from France, Italy, Spain, Portugal and the main characteristics focus on the following:

- ❖ The undergraduate academic studies and specialisations in the researched area are developed as follows:
 - a. within the framework of the faculties of law, such as the cases from France, Universite Montpellier 1 (UM) – Faculty of Law or Universite Bretagne Occidentale (UBO) – Faculty of Law and Administration, from Spain, in Universidad de Leon (UL)- Faculty of Social and Legal Sciences;
 - b. within the framework of the faculties with economic profile, as those from Italy, Universita degli Studi di Ferrara (USF) – Faculty of Economics;
 - c. within the framework of Braganca Polytechnic Institute (BPI) in Portugal.
- ❖ There are universities with tradition, recognised in the area of law, i.e. France, Universite Montpellier 1 (UM), in the area of social and legal sciences, i.e. Spain, Universidad de Leon (UL), with specialisations in administrative sciences.
- ❖ 2 universities (Italy, Universita degli Studi di Ferrara (USF), Portugal, Braganca Polytechnic Institute (BPI)) have developed programmes of public administration, programmes complementary to their profile.

Sample II comprises 11 universities, ensuring a corresponding representativeness related to the topic under research. When saying this issue, we take into account a series of conditions and characteristics of the Romanian system of higher education in the area of administrative sciences, comprising 27 public universities and 21 private universities⁵. Therefore, the chosen sample covers 22.9 % of the above-mentioned universities, revealing the following characteristics:

- ✚ 9 are public universities and 2 are private universities.
- ✚ 3 universities (Academy of Economic Studies, Bucharest (ASE), „Babeş-Bolyai” University, Cluj-Napoca (UBB), „Lucian Blaga” University, Sibiu (ULBSb)) are recognised as universities with tradition in the area of social sciences, developing programmes of administrative sciences, based on acknowledged expertise in the

⁵ Source: <http://www.edu.ro/>

following areas: economic area (ASE), political sciences (UBB) or legal sciences (ULBSb).

- ✚ 4 universities (National School of Political Studies and Public Administration (SNSPA), "1 Decembrie 1918" University, Alba Iulia (UAI), "Gheorghe Cristea" Romanian University of Sciences and Arts, Bucharest (UGC), and "Spiru Haret" University (USH)) have been set up after 1990.
- ✚ 4 universities ("Ștefan cel Mare" University, Suceava (USMSv), University from Oradea (UO), "Petru Maior" University in Târgu Mureș (UPMTgM), "Ovidius" University, Constanța (UOCT)) have developed programmes of administrative sciences, complementary to other programmes, not necessarily in the area of social sciences.
- ✚ The universities cover the historical regions are they are representative for the university centers with tradition of Romania.

Sample III comprises universities in states that have become members of the European Union in 2004 (Lithuania – Kaunas University of Technology (KUT), Estonia – Tallin Technical University (TTU)) and 2 European states from South-East (Macedonia – South East European University (SEEU) and Turkey – European University of Lefke (EUL)), being characterised by the following aspects:

- These 4 universities have undergraduate academic programmes in public administration, that are developed in the following manner:
 - a. within the framework of the faculties of public administration (South East European University (SEEU) - Macedonia, European University of Lefke (EUL) -Turkey), or
 - b. within the framework of some faculties, being programmes complementary to the basic specialisation, not necessarily in the area of social or legal sciences (Kaunas University of Technology (KUT) -Lithuania, Tallin Technical University (TTU) - Estonia).
- The universities are representative in the national academic space: although set up in 2001 by the Government of Republic of Macedonia, South East European University (SEEU) is leader in Macedonia also concerning the application of Bologna process and support to creation of European Higher Education Area - EHEA⁶; European University of Lefke (EUL) –Turkey, set up in 1990 is promoting programmes with international dimensions (approximately 3000 students from 35 countries) at international standards⁷.

II.2.2. Methodology to elaborate the model

a) A *unitary analysis framework* has been defined, based on the realities in Romania, taking into account an undergraduate education organised on six semesters, each having 14 weeks of direct activity with the students. We considered a number of 24 hours of direct activity for each week and 180 represents the total number of credits (for the six semesters).

In reality, this framework is observed in few cases. In order to ensure coherence and stability for analysis, we had to introduce some sub unitary or supra unitary multipliers, so that the specific framework for each university has been reduced or extended to the limits of the

⁶ Source: <http://www.seeu.edu.mk/english/general>

⁷ Source: <http://www.lefke.edu.tr>

unitary framework, maintaining the initial proportion between the volumes assigned to various activities. Usually it is very simple to calculate these multipliers, as they are expressed by the ratio:

$$r_i = \frac{24}{w_i}, w_i - \text{number of hours per week in university } i; \quad (1)$$

by the ratio:

$$c_j = \frac{180}{t_j}, t_j - \text{number of transferable credits in university } j; \quad (2)$$

or by the ratio:

$$s_k = \frac{6}{u_k}, u_k - \text{number of semesters in university } k. \quad (3)$$

c) The independent statistic variables correspond to the knowledge areas, emphasised in EAPAA document (1998) and they are as follows:

X1: knowledge about society;

X2: knowledge about the political system;

X3: knowledge about public administration and governmental policies;

X4: knowledge about bureaucratic organisations and their management;

X5: knowledge about methods and techniques of governmental management;

X6: knowledge about methods and techniques of communication in public administration.

Based on the content of those knowledge areas, emphasised in the quoted source, for each independent variable, X_i , it will be defined a number n_i of items x_j , $i = \overline{1,6}$, $j = \overline{1, n_i}$, whose quantitative expressions will be described turning into account the analysis on the curricula of the undergraduate academic studies in administrative sciences in 20 universities under research.

For each item, x_j , the optimum level of knowledge will be determined on the basis of the mean (m_j) on the whole sample or representative parts, such as the mean level of knowledge in European universities with tradition. In the case that for an item, x_j , in the curriculum corresponding to a programme there is allocated a volume of time greater than the mean of the respective item, then the level will be sanctioned in the statistic calculation, thus diminishing it with the difference between the mean and the level that was achieved.

$$m_j - dX_i(j) = m_j - |m_j - X_i(j)| \stackrel{\text{not}}{=} X'_i(j), i = \overline{1,6}, j = \overline{1, n_i} \quad (4)$$

Finally, for each university, we shall obtain mean values corresponding to each independent variable, representing in fact the mean values of the corresponding items, adjusted according to the formula (4).

d) The statistic analyses of correlation will use both graphical illustrative representations and Pearson correlation coefficient, aimed to measure the intensity of connections between variables.

An aggregated indicator will define also the curricular compatibility degree:

$$I_{comp} = \frac{1}{6} \cdot \frac{1}{24} \sum_{i=1}^6 \sum_{j=1}^{n_i} X'_{i(j)} \quad (5)$$

that will be a sub unitary indicator, incorporating the adjustments from the database related to the optimum level of knowledge.

II.2.3. The data base

The data that will be further presented are undertaken from the curricula⁸ and they quantify, for each independent variable, the volume of direct weekly activities with students.

The description for the content of each variable follows in an adapted version the description achieved by Prof.dr. Rudolf Maes in the above-mentioned paper on „Basic Principles for Public Administration”.

X1: Knowledge about society. We take into account knowledge describing the interaction between public administration and the social system, interaction characterised also by tradition, culture and values (some of them in a changing process). Therefore, understanding these interactions assumes to acquire knowledge from the area of sociology, culture, history, philosophy, ethics, economics, law or political sciences. Complementary there is necessary to acquire knowledge about socio-philosophical theories and skills for socio-scientific research. Table 1 presents the results obtained.

Table 1. Statistical analysis for the variable: "Knowledge about society"

No.	CRITERION INSTITUTION		KNOWLEDGE ABOUT SOCIETY									
			1	2	3	4	5	6	7	8	9	10
	Sample I Mean (m)		7.14	1.30	1.75	0	0.48	13.42	31.96	3.84	0	7.18
1.	FRANCE – Universite Bretagne Occidentale 4.67	X	13.6	1.6	1.6	0	0	14.4	25.5	0	0	6.4
		m- dX	0.68	1.00	1.6	0	0	12.44	25.5	0	0	6.4
2.	FRANCE – Universite Montpellier 1 1.29	X	0	1.35	2.70	0	0	12.12	64.69	0	0	14.82
		m- dX	0	1.25	0.80	0	0	12.12	-0.77	0	0	-0.46

⁸ Sources: <http://www.univ-brest.fr>; <http://www.um1.fr>; <http://www.unife.it>; <http://www.unileon.es>; <http://www.edu.ro>; <http://www.nispa.sk>; <http://www.seeu.edu.mk>; <http://www.lefke.edu.tr>.

3.	ITALY – Università degli Studi di Ferrara 3.08	X	0	0	0	0	0	18.4	16.8	0	0	5.6
		m- dX	0	0	0	0	0	8.44	16.8	0	0	5.6
4.	PORTUGAL – Braganca Polytechnic Institute 3.59	X	1.44	0.96	0.96	0	0.48	13.93	13.44	3.84	0	1.92
		m-dX	1.44	0.96	0.96	0	0.48	12.91	13.44	3.84	0	1.92
5.	SPAIN – Universidad de Leon 3.91	X	6.37	0	0	0	0	8.25	39.37	0	0	0
		m- dX	6.37	0	0	0	0	8.25	24.55	0	0	0
Sample II ROMANIA Mean (m)			3.16	2.85	2.72	3.11	2.86	4.74	29.08	2.99	6.11	3.57
1.	Academy of Economic Studies, Bucharest, Faculty of Management 0.86	X	2.58	0	1.72	0	0	14.62	5.16	1.72	0	2.58
		m- dX	2.58	0	1.72	0	0	-5.14	5.16	1.72	0	2.58
2.	“Babeş-Bolyai” University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 2.79	X	2.91	0	1.94	3.88	2.91	3.88	12.61	3.88	0	7.76
		m- dX	2.91	0	1.94	2.34	2.81	3.88	12.61	2.10	0	-0.62
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 3.67	X	3.33	0	0	0	3.33	3.33	19.80	3.33	6.66	0
		m- dX	2.99	0	0	0	2.39	3.33	19.80	2.65	5.56	0
4.	“Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty 2.45	X	1.64	0	2.46	0	0	2.46	45.10	0	3.28	1.64
		m-dX	1.64	0	2.46	0	0	2.46	13.06	0	3.28	1.64
5.	“Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration 3.32	X	3.12	0	3.12	0	2.34	3.12	39.00	0	0	3.12
		m- dX	3.12	0	2.32	0	2.34	3.12	19.16	0	0	3.12
6.	University from Oradea. Faculty of Legal Sciences 3.62	X	2.88	0	2.88	0	0	2.88	36.00	0	5.76	0
		m- dX	2.88	0	2.56	0	0	2.88	22.16	0	5.76	0
7.	“1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences 2.96	X	2.82	0	0	0	0	4.70	36.66	0	0	6.58
		m- dX	2.82	0	0	0	0	4.70	21.50	0	0	0.56
8.	“Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 3.99	X	2.34	0	2.34	0	0	4.68	36.66	3.90	4.68	2.34
		m- dX	2.34	0	2.34	0	0	4.68	21.50	2.08	4.68	2.34
9.	“Ovidius” University. Constanța, Faculty of Law and Administrative Sciences 2.80	X	7.83	0	0	2.61	0	5.22	16.53	2.61	11.31	2.61
		m- dX	-1.51	0	0	2.61	0	4.26	16.53	2.61	0.91	2.61

10.	“Spiru Haret” University, Faculty of Law 2.48	X	2.48	0	2.48	0	0	2.48	48.26	2.48	4.95	0
		m- dX	2.48	0	2.48	0	0	2.48	9.90	2.48	4.95	0
11.	“Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration 4.25	X	2.85	2.85	2.85	2.85	0	4.75	24.70	0	0	1.90
		m- dX	2.85	2.85	2.59	2.85	0	4.73	24.70	0	0	1.90
Sample III Mean (m)			2.75	4.67	3.94	4.96	2.46	11.07	9.67	5.25	3.68	3.56
1.	LITHUANIA – Kaunas University of Technology 3.38	X	2.48	4.96	1.65	4.96	3.31	14.89	6.62	2.48	0	4.96
		m- dX	2.48	4.65	1.65	4.96	1.61	7.25	6.62	2.48	0	2.16
2.	ESTONIA – Tallin Technological University 4.07	X	2.25	3.15	1.35	4.95	3.15	15.3	9.45	6.3	4.05	3.6
		m- dX	2.25	3.15	1.35	4.95	1.77	6.84	9.45	4.2	3.31	3.52
3.	MACEDONIA- South East European University 1.79	X	3	8.4	0	0	1.2	4.2	13.8	1.2	0	2.4
		m- dX	2.5	0.94	0	0	1.2	4.2	5.54	1.2	0	2.4
4.	TURKEY – European University of Lefke 3.04	X	3.3	2.2	8.82	0	2.2	9.92	8.82	11.02	3.3	3.3
		m- dX	2.2	2.2	-0.94	0	2.2	9.92	8.82	-0.52	3.3	3.3

Legend:

1) sociologic knowledge; 2) cultural knowledge; 3) historical knowledge; 4) philosophic knowledge; 5) ethical knowledge; 6) economic knowledge; 7) legal knowledge; 8) political knowledge; 9) socio-philosophical theories; 10) socio-scientific research.

X2: Knowledge about the political system. It aims to acquire knowledge about organisations and specific processes depending on the development of the existing political systems. Special attention will be paid to the institutions from the public sector, their interaction and the governmental organisations, democratic processes, etc. In the context, also the European political institutions are taken into consideration. Table 2 presents the results.

Table 2. Statistical analysis for the variable: “Knowledge about the political system”

No.	CRITERION INSTITUTION		KNOWLEDGE ABOUT THE POLITICAL SYSTEM					
			1	2	3	4	5	6
	Sample I Mean (m)		4.06	2.4	2.28	3.04	0	7.38
1.	FRANCE – Universite Bretagne Occidentale 0.4	X	0	2.4	0	0	0	0
		m- dX	0	2.4	0	0	0	0
2.	FRANCE – Universite Montpellier I 0	X	0	0	0	0	0	0
		m- dX	0	0	0	0	0	0

3.	ITALY – Universita degli Studi di Ferrara 0.63	X	8	0	0.8	3.2	0	0
		m- dX	0.12	0	0.8	2.88	0	0
4.	PORTUGAL – Braganca Polytechnic Institute 1.52	X	1.92	0	1.92	2.88	0	2.4
		m- dX	1.92	0	1.92	2.88	0	2.4
5.	SPAIN – Universidad de Leon 0.84	X	2.25	0	4.12	0	0	12.37
		m- dX	2.25	0	0.44	0	0	2.39
Sample II ROMANIA Mean (m)			4.86	2.82	2.57	2.88	4.45	5.96
1.	Academy of Economic Studies, Bucharest, Faculty of Management 1.80	X	0	0	0	3.44	2.58	6.02
		m- dX	0	0	0	2.32	2.58	5.90
2.	“Babeş-Bolyai” University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 1.94	X	3.88	0	0	0	3.88	3.88
		m- dX	3.88	0	0	0	3.88	3.88
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 1.11	X	0	0	0	0	3.33	3.33
		m- dX	0	0	0	0	3.33	3.33
4.	“Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty 1.01	X	0	0	0	0	8.20	6.56
		m- dX	0	0	0	0	0.70	5.36
5.	“Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration 1.43	X	0	0	0	2.34	3.12	3.12
		m- dX	0	0	0	2.34	3.12	3.12
6.	University from Oradea. Faculty of Legal Sciences 1.21	X	0	0	2.88	0	7.20	8.64
		m- dX	0	0	2.26	0	1.70	3.28
7.	“1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences 1.72	X	3.76	2.82	0	0	0	3.76
		m- dX	3.76	2.82	0	0	0	3.76
8.	“Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 0.22	X	0	0	0	0	6.24	13.26
		m- dX	0	0	0	0	2.66	-1.34
9.	“Ovidius” University. Constanța, Faculty of Law and Administrative Sciences 1.41	X	0	0	0	0	2.61	6.09
		m- dX	0	0	0	0	2.61	5.83
10.	“Spiru Haret” University, Faculty of Law 1.62	X	6.93	0	1.98	0	0	4.95
		m- dX	2.79	0	1.98	0	0	4.95

11.	“Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration 1.33	X	0	0	2.85	2.85	2.85	0
		m- dX	0	0	2.29	2.85	2.85	0
	Sample III Mean (m)		3.3	2.66	4.66	5.78	0.86	5.95
1.	LITHUANIA – Kaunas University of Technology 1.92	X	0	1.65	1.65	6.62	0	3.31
		m- dX	0	1.65	1.65	4.94	0	3.31
2.	ESTONIA – Tallin Technical University 2.70	X	5.4	2.7	8.1	5.4	0.9	4.95
		m- dX	1.2	2.62	1.22	5.4	0.82	4.95
3.	MACEDONIA- South East European University 1.47	X	1.2	3	1.2	1.2	0.6	9.6
		m- dX	1.2	2.32	1.2	1.2	0.6	2.3
4.	TURKEY – European University of Lefke 1.53	X	3.3	3.3	7.71	9.92	1.1	0
		m- dX	3.3	2.02	1.61	1.64	0.62	0

Legend:

1) public institutions; 2) political systems; 3) social systems; 4) functioning of governmental organisations; 5) political institutions; 6) European institutions.

X3: Knowledge about public administration and governmental policies. This variable estimates the weight of the knowledge activities aimed at the analysis of the decision-making processes, legal and normative support for public administration and governmental policies, public policy-making and analysis of networks of public policies. Simultaneously, knowledge is necessary about the financial, budgetary and accounting mechanisms, fundamental for the public financial and economic transactions. Table 3 presents the results.

Table 3. Statistical analysis for the variable “Knowledge about public administration and governmental policies”

No.	CRITERION INSTITUTION		KNOWLEDGE ABOUT PUBLIC ADMINISTRATION AND GOVERNMENTAL POLICIES							
			1	2	3	4	5	6	7	8
	Sample I Mean (m)		5.76	4.00	8.03	5.71	13.14	6.31	0	3.22
1.	FRANCE – Universite Bretagne Occidentale 0.3	X	0	2.4	0	0	0	0	0	0
		m- dX	0	2.4	0	0	0	0	0	0
2.	FRANCE – Universite Montpellier 1 3.28	X	0	0	0	2.7	13.13	8.08	0	4.04
		m- dX	0	0	0	2.7	13.13	8.08	0	2.4
3.	ITALY – Universita degli Studi di Ferrara 2.46	X	9.6	5.6	5.6	11.2	6.4	3.2	0	0
		m- dX	1.92	2.4	5.6	0.22	6.4	3.2	0	0
4.	PORTUGAL – Braganca Polytechnic Institute 2.79	X	1.92	0	5.76	6.72	22.56	3.84	0	2.4
		m- dX	1.92	0	5.76	4.7	3.72	3.84	0	2.4

5.	SPAIN – Universidad de Leon 2.32	X	0	0	12.75	2.25	10.5	10.12	0	0
		m- dX	0	0	3.31	2.25	10.5	2.5	0	0
Sample II ROMANIA Mean (m)			2.85	6.02	5.73	3.95	5.90	6.16	3.33	11.50
1.	Academy of Economic Studies, Bucharest, Faculty of Management 2.63	X	0	11.18	0	3.44	6.02	3.44	0	15.48
		m- dX	0	0.86	0	3.44	5.78	3.44	0	7.52
2.	“Babeş-Bolyai” University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 2.56	X	0	11.64	0	3.88	5.82	0	0	12.61
		m- dX	0	0.40	0	3.88	5.82	0	0	10.39
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 3.55	X	3.33	3.33	0	3.33	6.66	11.10	3.33	13.32
		m- dX	2.37	3.33	0	3.33	5.14	1.22	3.33	9.68
4.	“Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty 3.18	X	0	5.74	0	1.64	4.10	7.38	0	9.02
		m- dX	0	5.74	0	1.64	4.10	4.94	0	9.02
5.	“Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration 2.74	X	2.34	7.02	0	0	10.92	2.34	0	11.70
		m- dX	2.34	5.02	0	0	0.88	2.34	0	11.30
6.	University from Oradea. Faculty of Legal Sciences 2.59	X	2.88	2.88	8.64	10.08	2.88	5.76	0	5.76
		m- dX	2.82	2.88	2.82	-2.18	2.88	5.76	0	5.76
7.	“1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences 2.12	X	0	2.82	2.82	2.82	4.70	0	0	3.76
		m- dX	0	2.82	2.82	2.82	4.70	0	0	3.76
8.	“Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 1.33	X	0	0	0	2.34	12.48	0	0	14.04
		m- dX	0	0	0	2.34	-0.68	0	0	8.96
9.	“Ovidius” University, Constanța, Faculty of Law and Administrative Sciences 1.80	X	0	2.61	0	5.22	2.61	0	0	16.53
		m- dX	0	2.61	0	2.68	2.61	0	0	6.47
10.	“Spiru Haret” University, Faculty of Law 2.37	X	0	3.46	0	0	0	6.93	0	12.87
		m- dX	0	3.46	0	0	0	5.39	0	10.13
11.	“Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration 2.46	X	0	9.50	0	2.85	2.85	0	0	11.40
		m- dX	0	2.54	0	2.85	2.85	0	0	11.40

	Sample III Mean (m)		2.54	1.34	4.12	4.66	5.24	3.17	1.94	3.51
1.	LITHUANIA – Kaunas University of Technology 1.68	X	0.82	1.93	7.44	5.79	8.55	1.93	0.82	4.13
		m- dX	0.82	0.75	0.8	3..53	1.93	1.93	0.82	2.89
2.	ESTONIA – Tallin Technical University 1.67	X	1.35	0.9	2.25	6.75	4.5	5.4	0	0.9
		m- dX	1.35	0.9	2.25	2..57	4.5	0.94	0	0.9
3.	MACEDONIA- South East European University 1.08	X	3.6	1.2	2.4	0.6	2.4	0	0.6	0
		m- dX	1.48	1.2	2.4	0.6	2.4	0	0.6	0
4.	TURKEY – European University of Lefke 2.13	X	4.41	0	4.41	5.51	5.51	2.20	4.41	5.51
		m- dX	0.67	0	4.41	3.81	4.97	2.20	-0.53	1.51

Legend:

1) analysis of the decision-making processes; 2) analysis of the networks of public policies; 3) theories and methods of administration; 4) public policy-making; 5) financial mechanisms; 6) economic mechanisms; 7) adjacent political and democratic mechanisms; 8) normative support for public administration.

X4: Knowledge about bureaucratic organisations and their management. The content of the necessary knowledge is based on the reality that the public sector comprises a series of organisations with political and professional components, each with its own characteristics and areas related to opportunity, bureaucracy, formal and informal organisations, rational or irrational behaviour. The civil service and civil servant are also present together with the issues related to coordination, integration, deontology etc.

Table 4 presents the results.

Table 4. Statistical analysis for the variable “Knowledge about bureaucratic organisations and their management”

No.	CRITERION INSTITUTION	KNOWLEDGE ABOUT BUREAUCRATIC ORGANISATIONS AND THEIR MANAGEMENT				
		1	2	3	4	
	Sample I Mean (m)	3.30	4.04	0	0	
1.	FRANCE – Universite Bretagne Occidentale 0.6	X	2.4	0	0	0
		m- dX	2.4	0	0	0
2.	FRANCE – Universite Montpellier 1 1.01	X	0	4.04	0	0
		m- dX	0	4.04	0	0
3.	ITALIA – Universita degli Studi di Ferrara 0.25	X	5.6	0	0	0
		m- dX	1.00	0	0	0
4.	PORTUGAL – Braganca Polytechnic Institute 0.48	X	1.92	0	0	0
		m- dX	1.92	0	0	0

5.	SPAIN – Universidad de Leon	X	0	0	0	0
		m- dX	0	0	0	0
Sample II ROMANIA Mean (m)			4.80	2.59	2.77	3.89
1.	Academy of Economic Studies, Bucharest, Faculty of Management 2.20	X	6.02	0	2.58	5.16
		m- dX	3.58	0	2.58	2.62
2.	“Babeş-Bolyai” University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 0.46	X	11.64	0	0	3.88
		m- dX	-2.04	0	0	3.88
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 1.66	X	4.44	0	3.33	0
		m- dX	4.44	0	2.21	0
4.	“Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty 2.15	X	3.28	0	1.64	4.10
		m- dX	3.28	0	1.64	3.68
5.	“Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration 2.21	X	5.46	2.34	0	2.34
		m- dX	4.14	2.34	0	2.34
6.	University from Oradea. Faculty of Legal Sciences 1.89	X	2.88	0	2.88	5.76
		m- dX	2.88	0	2.66	2.02
7.	“1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences 2.33	X	2.82	0	2.82	3.76
		m- dX	2.82	0	2.72	3.76
8.	“Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 1.37	X	0	0	2.34	3.12
		m- dX	0	0	2.34	3.12
9.	“Ovidius” University. Constanța, Faculty of Law and Administrative Sciences 1.53	X	6.09	0	0	2.61
		m- dX	3.51	0	0	2.61
10.	“Spiru Haret” University, Faculty of Law 1.24	X	2.48	0	0	2.48
		m- dX	2.48	0	0	2.48
11.	“Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration 2.25	X	2.85	2.85	3.80	5.70
		m- dX	2.85	2.33	1.74	2.08

	Sample III Mean (m)		3.40	1.8	1.2	2.00
1.	LITHUANIA – Kaunas University of Technology 0.46	X	4.96	0	0	0
		m- dX	1.84	0	0	0
2.	ESTONIA – Tallin Technical University 0.68	X	4.05	0	0	0
		m- dX	2.75	0	0	0
3.	MACEDONIA- South East European University 1.50	X	1.2	1.8	1.2	1.8
		m- dX	1.2	1.8	1.2	1.8
4.	TURKEY – European University of Lefke 0.45	X	0	0	0	2.20
		m- dX	0	0	0	1.8

Legend:

1) organisational theories; 2) civil service and civil servant; 3) deontology;
4) behavioural theories.

X5: Knowledge about methods and techniques of governmental management. This type of knowledge is related, first of all to methods and techniques by which each organisation and process of governmental interventions could be analysed and explained inside the political and social system. Obviously, there is an overlap with the content of the variables X1-X4. However, the content of these knowledge areas could be emphasised distinctly by daily technical aspects characterising the concrete activity of a public service, such as that of public administration. Table 5 presents the results.

Table 5. Statistical analysis for the variable “Knowledge about methods and techniques of governmental management”

No.	CRITERION INSTITUTION		KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF GOVERNMENTAL MANAGEMENT						
			1	2	3	4	5	6	7
	Sample I Mean (m)		5.53	13.42	4.33	5.65	1.9	6.41	7.61
1.	FRANCE – Universite Bretagne Occidentale 3.03	X	3.6	7.2	3.2	0	0	11.2	5.6
		m- dX	3.6	7.2	3.2	0	0	1.62	5.6
2.	FRANCE – Universite Montpellier 1 3.01	X	9.27	21.65	5.73	0	0	4.04	8.08
		m- dX	1.77	5.19	2.93	0	0	4.04	7.14
3.	ITALY – Universita degli Studi di Ferrara 3.52	X	4.8	8.8	6.4	4.0	0.8	4.0	0
		m- dX	4.8	8.8	2.26	4.0	0.8	4.0	0
4.	PORTUGAL – Braganca Polytechnic Institute 3.64	X	6.24	18.24	3.36	9.6	0	0	8.16
		m- dX	4.82	8.6	3.36	1.7	0	0	7.06
5.	SPAIN – Universidad de Leon 4.11	X	3.75	11.25	3.0	3.37	3.0	0	8.62
		m- dX	3.75	11.25	3.0	3.37	0.8	0	6.6

	Sample II ROMANIA Mean (m)		3.56	6.66	4.35	5.04	8.12	6.93	5.16
1.	Academy of Economic Studies, Bucharest, Faculty of Management 1.33	X	3.44	0	6.88	15.48	2.58	1.72	5.16
		m- dX	3.44	0	1.82	-5.40	2.58	1.72	5.16
2.	"Babeş-Bolyai" University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 2.72	X	3.88	1.94	3.88	3.88	3.88	11.64	0
		m- dX	3.24	1.94	3.88	3.88	3.88	2.22	0
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 2.77	X	3.33	9.99	0	3.33	6.66	11.10	0
		m- dX	3.33	3.33	0	3.33	6.66	2.76	0
4.	"Lucian Blaga" University, Sibiu, "Simion Bărnuțiu" Law Faculty 3.02	X	1.64	5.74	1.64	0	10.66	6.56	0
		m- dX	1.64	5.74	1.64	0	5.58	6.56	0
5.	"Ștefan cel Mare" University, Suceava, Faculty of Economic Sciences and Public Administration 3.10	X	3.12	6.24	0	2.34	10.92	4.68	0
		m- dX	3.12	6.24	0	2.34	5.32	4.68	0
6.	University from Oradea. Faculty of Legal Sciences 0.88	X	0	2.88	0	0	12.96	0	0
		m- dX	0	2.88	0	0	3.28	0	0
7.	"1 Decembrie 1918" University, Alba Iulia, Faculty of Law and Social Sciences 2.39	X	3.76	13.16	2.82	0	8.46	11.28	0
		m- dX	3.36	0.16	2.82	0	7.78	2.58	0
8.	"Petru Maior" University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 2.36	X	2.34	6.24	7.80	1.56	3.90	1.56	0
		m- dX	2.34	6.24	0.90	1.56	3.90	1.56	0
9.	"Ovidius" University, Constanța, Faculty of Law and Administrative Sciences 2.70	X	7.83	8.70	2.61	5.22	8.70	0	0
		m- dX	-0.71	4.62	2.61	4.86	7.54	0	0
10.	"Spiru Haret" University, Faculty of Law 2.89	X	3.46	6.93	3.46	3.46	3.46	0	0
		m- dX	3.46	6.39	3.46	3.46	3.46	0	0
11.	"Gheorghe Cristea" Romanian University of Sciences and Arts, Faculty of Public Administration 1.39	X	2.85	4.75	5.70	0	17.10	0	0
		m- dX	2.85	4.75	3.00	0	-0.86	0	0
	Sample III Mean (m)		4.51	2.27	1.21	3.82	5.13	7.06	4.32
1.	LITHUANIA – Kaunas University of Technology 2.07	X	4.96	4.96	1.65	4.96	0	3.31	3.31
		m- dX	4.86	-0.42	0.77	2.68	0	3.31	3.31

2.	ESTONIA – Tallin Technical University 1.39	X	6.3	1.35	0.9	0	0	13.5	4.5
		m- dX	2.72	1.35	0.9	0	0	0.62	4.14
3.	MACEDONIA - South East European University 1.86	X	2.4	0.6	1.2	5.4	8.4	9.6	8.4
		m- dX	2.4	0.6	1.20	2.24	1.86	4.52	0.24
4.	TURKEY – European University of Lefke 1.94	X	4.41	2.20	1.10	1.10	1.86	1.86	1.10
		m- dX	4.41	2.20	1.10	1.10	1.86	1.86	1.10

Legend:

1) human resource management; 2) financial management ; 3) organisational management; 4) strategic management; 5) civil, administrative procedures etc.; 6) practice; 7) research in public administration.

X6: Knowledge about methods and techniques of communication. The content of this knowledge area is based on the reality and necessity of relational harmonisation and communication between public administration and society, as well as inside it. In the context, the information sciences, foreign languages and information and communication management get special features. Table 6 presents the results.

Table 6. Statistical analysis for the variable “Knowledge about methods and techniques of communication”

No.	CRITERION INSTITUTION		KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF COMMUNICATION			
			1	2	3	4
	Sample I Mean (m)		4.69	7.86	3.09	11.09
1.	FRANCE – Universite Bretagne Occidentale 5.67	X	4.0	10.8	2.8	11.2
		m- dX	4.0	4.92	2.8	10.98
2.	FRANCE – Universite Montpellier 1 5.33	X	5.39	8.08	0	12.48
		m- dX	3.99	7.64	0	9.7
3.	ITALY – Universita degli Studi di Ferrara 4.00	X	0	5.6	0.8	9.6
		m- dX	0	5.6	0.8	9.6
4.	PORTUGAL – Braganca Polytechnic Institute 1.68	X	0	4.32	2.4	0
		m- dX	0	4.32	2.4	0
5.	SPAIN – Universidad de Leon 1.66	X	0	10.5	6.37	0
		m- dX	0	5.22	1.43	0
	Sample II ROMANIA Mean (m)		3.28	2.99	2.76	7.56
1.	Academy of Economic Studies, Bucharest, Faculty of Management 2.46	X	2.58	0	5.16	6.88
		m- dX	2.58	0	0.36	6.88

2.	"Babeş-Bolyai" University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences 2.75	X	4.85	1.94	0	7.76
		m- dX	1.71	1.94	0	7.36
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration 1.75	X	3.33	6.66	0	4.44
		m- dX	3.23	-0.68	0	4.44
4.	"Lucian Blaga" University, Sibiu, "Simion Bărnuțiu" Law Faculty 2.32	X	1.64	3.28	0	4.92
		m- dX	1.64	2.70	0	4.92
5.	"Ștefan cel Mare" University, Suceava, Faculty of Economic Sciences and Public Administration 2.34	X	0	1.56	1.56	6.24
		m- dX	0	1.56	1.56	6.24
6.	University from Oradea. Faculty of Legal Sciences 2.16	X	0	2.88	0	5.76
		m- dX	0	2.88	0	5.76
7.	"1 Decembrie 1918" University, Alba Iulia, Faculty of Law and Social Sciences 3.73	X	2.82	2.82	3.76	7.52
		m- dX	2.82	2.82	1.76	7.52
8.	"Petru Maior" University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences 2.34	X	2.34	1.56	2.34	3.12
		m- dX	2.34	1.56	2.34	3.12
9.	"Ovidius" University. Constanța, Faculty of Law and Administrative Sciences 2.38	X	5.22	1.74	0.87	9.57
		m- dX	1.34	1.74	0.87	5.55
10.	"Spiru Haret" University, Faculty of Law 2.46	X	3.46	4.45	0	9.90
		m- dX	3.10	1.53	0	5.22
11.	"Gheorghe Cristea" Romanian University of Sciences and Arts, Faculty of Public Administration 0.17	X	0	0	2.85	17.10
		m- dX	0	0	2.67	-1.98
Sample III Mean (m)			2.65	5.14	2.80	14.01
1.	LITHUANIA – Kaunas University of Technology 3.46	X	0	4.96	3.31	6.62
		m- dX	0	4.96	2.29	6.62
2.	ESTONIA – Tallin Technical University 1.88	X	4.05	3.6	2.7	0
		m- dX	1.25	3.6	2.7	0
3.	MACEDONIA- South East European University 1.77	X	0.6	5.4	2.4	28.8
		m- dX	0.6	4.88	2.4	-0.78
4.	TURKEY – European University of Lefke 3.07	X	3.3	6.61	0	6.61
		m- dX	2.00	3.67	0	6.61

Legend:

1) communication; 2) IT; 3) information management; 4) foreign languages.

II.2.4. Interpreting the results

Obviously, the results we have obtained are susceptible for a more refined analysis. We turned into account only the available information. In our opinion the **proposed model of analysis** is important, offering a possibility of analysis, using European criteria and standards.

The brief analysis of the data base on the three samples reveals different units of measurement for the quantity and level of knowledge from a knowledge area or one of its sections.

Analysing *Variable X1 „Knowledge about society”*, we remark fundamental differences concerning the volume of activities designated to philosophical knowledge or concerning socio-philosophical theories, which have zero value for the universities from the first sample and implicitly the mean records the same value, respectively zero. Turning into account the typology of the programmes and the specificity of the faculty organising courses in public administration, faculty of legal or social sciences, concerning the study of the legal disciplines, we remark that the mean is exceeded with 31.96, thus Université Montpellier 1, Faculty of Law is recording the value of 64.69, Universidad de Leon is recording 39.37, or in contrast, Braganca Polytechnic Institute (Portugal) is situated under the mean, i.e. 13.44.

As it is well known, in Romanian higher education in the area of administrative sciences, one of the most important aspects refers to curriculum, specifically to its compatibility for all programmes of undergraduate academic studies, aiming a national qualification for the graduates of this field.

The fundamental differences occur concerning the volume of activities designated to legal knowledge, varying from 5.16 (ASE) to 48.26 (USH). The universities that record values above the mean of 29.08 are those that are organising study programmes in the area of administrative sciences, attached to the specialisations of legal sciences.

Similar conclusions could be extracted from the analysis on the volume of knowledge in the economic area, which also varies from 2.48 (USH) to 14.62 (ASE). Also in this particular case, it is confirmed an anticipated conclusion concerning the organisation of these programmes within the framework of some faculties of economic sciences. For the undergraduate academic studies in administrative sciences, organised attached to the specialisations of political sciences, a more detailed analysis should be achieved, cumulating more results from different knowledge areas.

The third sample sustains the above-presented aspects, providing examples for allocation of a large number of courses in order to study the legal disciplines in the faculty of public administration, situated above the mean of 9.67, recording the value of 13.8 in South East European University, Macedonia, or 6.62, under the mean, in Kaunas University of Technology, Lithuania.

Variable X2 „Knowledge about the political system” together with *Variable X3 „Knowledge about public administration and governmental policies”*, offer an image for compatibility of study programmes in the area of administrative sciences, independent from the specialisations profile for the universities under study: social sciences and humanities, economic sciences, technical sciences, etc. Consequently:

1. The item 5 (political institutions) for *Variable X2 „ Knowledge about the political system”* and item 7 (adjacent political and democratic mechanisms) for *Variable X3 „Knowledge about public administration and governmental policies”*, for *sample I* have recorded zero value for the mean, and for *sample III*, a value slight over zero (0.86); this fact is demonstrating the concern of the faculty organising the specialisation of public administration to allocate a larger volume of hours to knowledge close to the faculty profile than the volume of hours concerning the study of political sciences or socio-philosophical theories. As a corollary in interpreting *Variable X1 „Knowledge about*

- society*”, especially for items: 1 (sociologic knowledge), 4 (philosophic knowledge), 5 (ethical knowledge), 8 (political knowledge) and 9 (socio-philosophical theories), it is confirmed the situation present at some items of *Variable X2*.
2. The universities belonging to sample II, where the analysed variable are recording 4.45 as value of the means for item 5 of *Variable X2*, and 3.33 for item 7 of *Variable X3*, are situated above the mean of item 5 of *Variable X2*, in faculties of law, namely 8.20 (ULBSb) and 7.20 (UOr), and under the mean in the other universities.
 3. We find a similar situation with the one in universities from samples I and III in sample concerning Romania, for item 7 of *Variable X3*, where a single university records a positive value, 3.33 (SNSPA), as this university, due to its profile allocates a larger volume of time to the study of disciplines comprised in this variable.

We find the topics of public sector management, dimension of its bureaucracy, public organisations and the large range of psychological, behavioural components, methods and techniques of public management in the volume of hours allocated on a different scale, the main allocation factor being the university profile. In this context, *Variable X4* „*Knowledge about bureaucratic organisations and their management*” and *Variable X5* „*Knowledge about methods and techniques of governmental management*” emphasise the following aspects:

1. We remark preoccupation for study of organisational theories in some universities represented in sample I, allocating a volume of hours to their study above the mean of 3.3 with 5.6, (USF) Italy or under the mean with 2.4 (UBO) France and 1.92 (BPI) Portugal. Taking into account the fact that these items are correlated with the items of *Variable X5*, it has not been easy to separate the disciplines of study, using only the curricula. Therefore, comparing with items of *Variable X5*, we remark a balance of the volume of hours allocated to the study of the disciplines corresponding to the analysed items, fact that has led to recovering the major gap between items 2, 3 and 4 of *Variable X4* and those 7 items of *Variable 5*. For example, (UBO) and (UM) from France, (USF) Italy, (UL) Spain and (BPI) Portugal record zero value for items 2,3 and 4 of *Variable X4*, while the same universities record positive values, sometimes exceeding the mean of the item corresponding to *Variable X5*. In this context, in (UM) from France, item 2 (civil service and civil servant) of *Variable 4* records zero value, while item 1 concerning human resources of *Variable 5*, records the value of 9.27, situated above the mean of 5.53.
2. Concerning the analysis and comparison of the mean values for the items of *Variables X4* and *X5*, the Romanian universities are not different related to the situation of the first sample; we find some studied disciplines in the category of a single criterion and not distinctly in each variable, i.e. the disciplines studying civil service and civil servant, deontology, human resource management.
3. We find in sample III, a similar situation to that of some universities belonging to sample I, concerning the volume of hours allocated to the study of civil service and civil servant, deontology or behavioural theories, that as in the previous Romanian case are studied in the disciplines of human resource management or organisational management.

It is worth to mention that the complementary aspect of items representing the structure of *Variable X6* proves to be important in designing undergraduate academic programmes in administrative sciences, as shown by the values of the means for each item and those obtained by universities. In this context, the undergraduate academic programmes respond to the challenge of Europeanization by institutionalising courses in foreign languages (English language), information technology and information management.

II.2.5. Pearson correlation coefficient

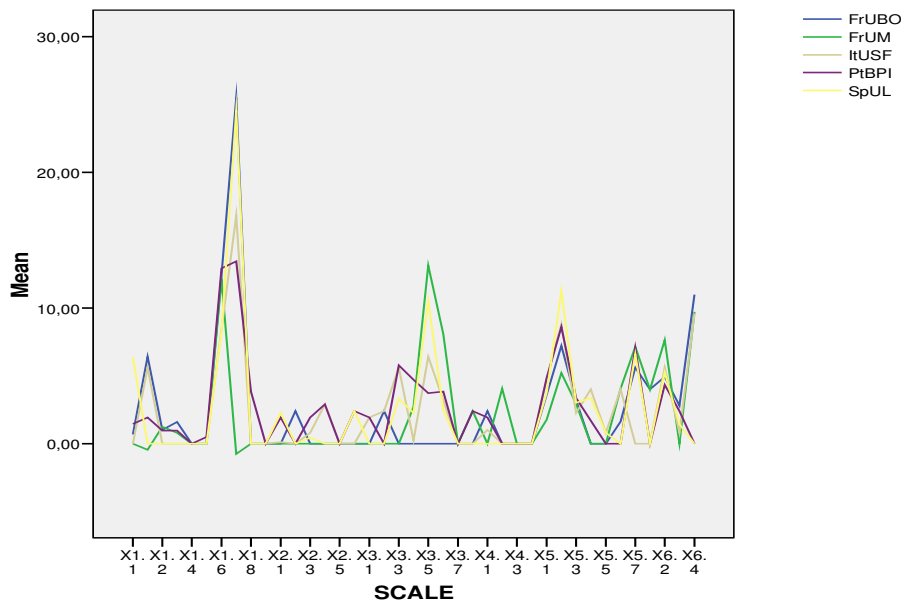
We obtain a more eloquent image, on compatibility of academic programmes in the area of administrative sciences, using a table of correlation, by inserting **Pearson correlation coefficient**, aimed to measure the intensity of connections between variables. We mention that the value of Pearson correlation coefficient⁹ is comprised between -1 and 1, the two extreme values emphasising perfect linear (functional) connections between two variables, „positive” for value 1 and „negative” for value -1. Value 0 signifies the lack of a connection.

In tables 7, 8 and 9, the above coefficients are determined, taking into consideration the universities from the three analysed samples as dependent variables.

Table 7: Pearson Correlations Sample I

	FrUBO	FrUM	ItUSF	PtBPI	SpUL
FrUBO	1	,259	,832(**)	,701(**)	,755(**)
FrUM	,259	1	,392(*)	,372(*)	,292
ItUSF	,832(**)	,392(*)	1	,698(**)	,766(**)
PtBPI	,701(**)	,372(*)	,698(**)	1	,821(**)
SpUL	,755(**)	,292	,766(**)	,821(**)	1

- ** Correlation is significant at the 0.01 level (2-tailed).
- Correlation is significant at the 0.05 level (2-tailed).



Graphic 1: Representation of variations concerning the six criteria at the level of sample I

⁹ Jaba, E., (1998), „Statistica”, Economică Publishing Houes, Bucharest, pp.343.

Analysing the data in table 7, we emphasise the following conclusions:

- there is a powerful functional connection between the programmes provided by UBO – France, USF – Italy and UL – Spain, where the Pearson coefficient records values of (0.832) or (0.755);
- on the same level of values it is situated the functional connection between USF – Italy and UL – Spain with a value of (0.766);
- we find a proximity of values, under the threshold of (0.800) for Pearson coefficient, in most of the universities under study, i.e. between BPI – Portugal and UL – Spain, where the coefficient records (0.701), respectively (0.821), or between UL – Spain (0.755) and USF – Italy (0.766) and BPI – Portugal (0.821).
- we remark a series of positive correlations, very weak represented between the programmes offered by UM – France (Pearson coefficient of 0.259) and UL – Spain (Pearson coefficient of 0.292), fact demonstrating a weak volumetric correlation between the hours allocated to the disciplines related to administrative sciences between the two universities.

Table 8: Pearson Correlation Sample II

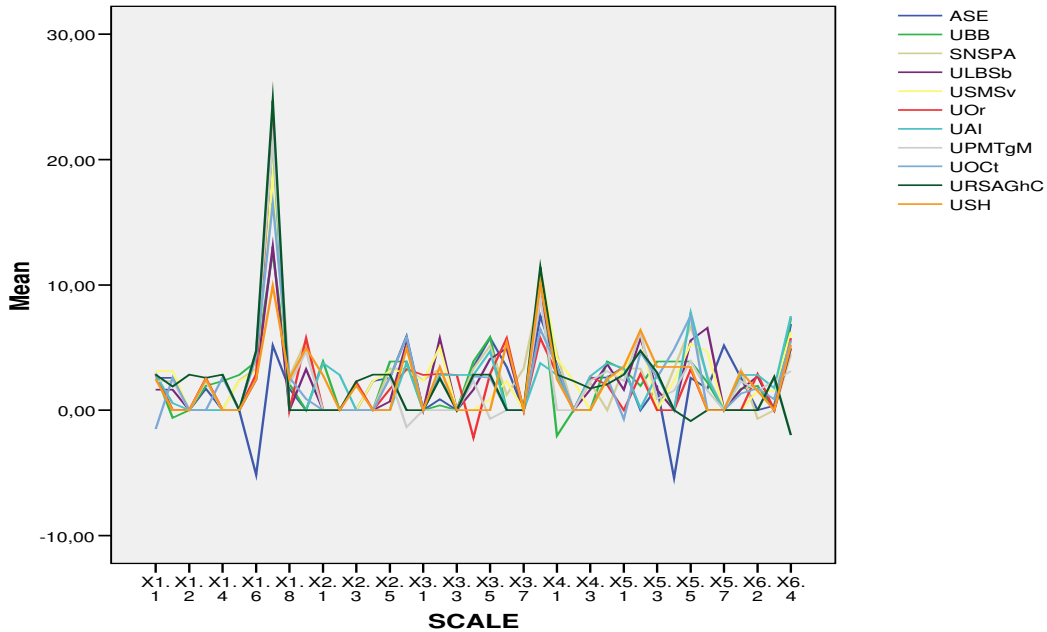
	ASE	UBB	SNSPA	ULBSb	USMSv	UOr	UAI	UPMTgM	UOCt	URSAGhC	USH
ASE	1	,410(**)	,375(*)	,504(**)	,379(*)	,329(*)	,369(*)	,226	,286	,253	,343(*)
UBB	,410(**)	1	,728(**)	,662(**)	,707(**)	,595(**)	,725(**)	,702(**)	,743(**)	,637(**)	,653(**)
SNSPA	,375(*)	,728(**)	1	,785(**)	,841(**)	,823(**)	,792(**)	,845(**)	,820(**)	,763(**)	,690(**)
ULBSb	,504(**)	,662(**)	,785(**)	1	,853(**)	,775(**)	,720(**)	,723(**)	,753(**)	,639(**)	,778(**)
USMSv	,379(*)	,707(**)	,841(**)	,853(**)	1	,814(**)	,755(**)	,845(**)	,808(**)	,806(**)	,725(**)
UOr	,329(*)	,595(**)	,823(**)	,775(**)	,814(**)	1	,803(**)	,824(**)	,745(**)	,762(**)	,697(**)
UAI	,369(*)	,725(**)	,792(**)	,720(**)	,755(**)	,803(**)	1	,772(**)	,799(**)	,701(**)	,542(**)
UPMTgM	,226	,702(**)	,845(**)	,723(**)	,845(**)	,824(**)	,772(**)	1	,787(**)	,867(**)	,689(**)
UOCt	,286	,743(**)	,820(**)	,753(**)	,808(**)	,745(**)	,799(**)	,787(**)	1	,701(**)	,681(**)
URSAGhC	,253	,637(**)	,763(**)	,639(**)	,806(**)	,762(**)	,701(**)	,867(**)	,701(**)	1	,564(**)
USH	,343(*)	,653(**)	,690(**)	,778(**)	,725(**)	,697(**)	,542(**)	,689(**)	,681(**)	,564(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 8 emphasises the values of Pearson coefficient for 11 universities that have been analysed in sample II Romania, and their interpretation reveals the following issues:

- ✚ there are some series of very powerful positive correlations, such as those between USMSv and SNSPA (0.841), ULBSb (0.853), UOr (0.814), UPMTgM (0.845) etc
- ✚ we remark a weak functional connection between ASE and the other universities, fact demonstrating a weak curricular compatibility, the economic characteristic being dominant in the study programmes.
- ✚ curricular compatibility is demonstrated also by the value of Pearson correlation coefficient and it is obvious between SNSPA and USMSv (0.841), UOr (0.823), UPMTgM(0.845).
- ✚ alignment to the undergraduate academic studies of the universities with tradition from Romania has got intensities above the mean for UBB. At the same time, SNSPA has correlations of intensities above the mean with the majority of the other universities.



Graphic 2: Representation of variations concerning the six criteria at the level of sample II

In Table 9, Pearson correlation coefficient is determined, taking into consideration the 4 universities analysed in *sample III* as dependent variables. The conclusions are revealing the following issues:

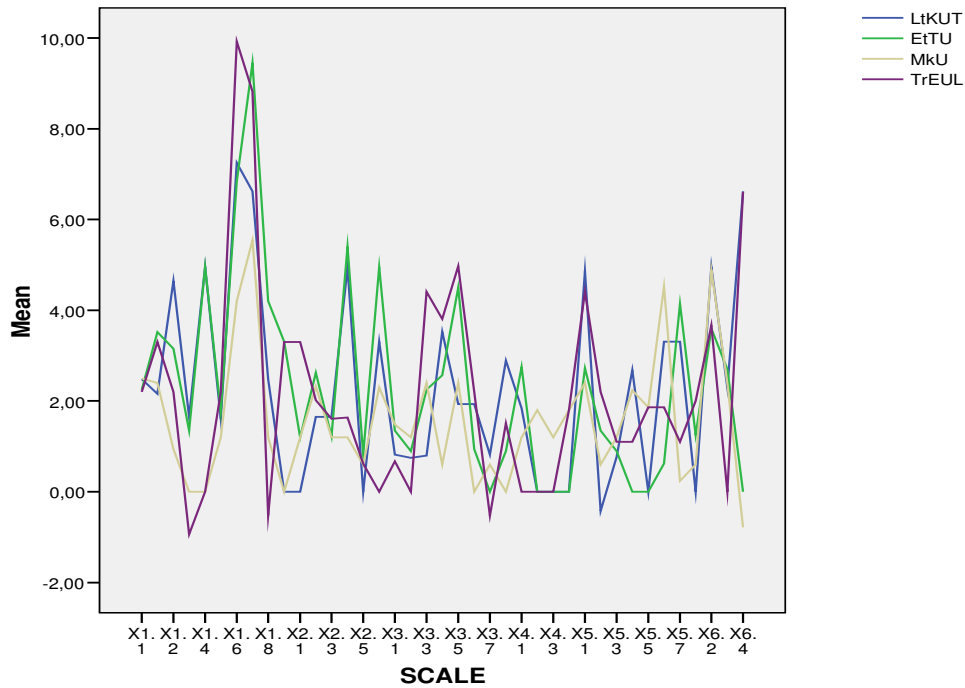
- ✚ There is a positive functional connection between the programmes provided by universities from Lithuania and Estonia, where Pearson coefficient records a value of 0.642.
- ✚ Positive correlations are also recorded between universities from Macedonia and Turkey, with values under the mean.

Table 9: Pearson Correlations Sample III

	LtKUT	EtTU	MkU	TrEUL
LtKUT	1	,642(**)	,349(*)	,565(**)
EtTU	,642(**)	1	,453(**)	,494(**)
MkU	,349(*)	,453(**)	1	,456(**)
TrEUL	,565(**)	,494(**)	,456(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).



Graphic 3: Representation of variations concerning the six criteria at the level of sample III

II.2.6. Degree of curricular compatibility

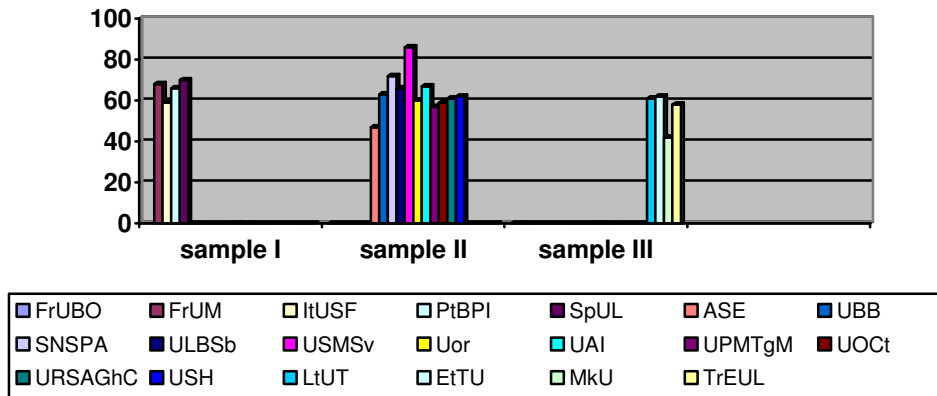
The aggregated indicator (I_{comp}) calculated with formula (5), measures the degree of curricular compatibility (Table 10) and it provides the image for compatibility of undergraduate academic education from various European countries, aiming a national qualification defined on European standards for the graduates of the administrative sciences.

Table 10. Evolution of the degree of curricular compatibility through the aggregated indicator I_{comp}

No.	Sample/University	I_{comp}
	<i>Sample I</i>	
1.	FRANCE – Universite Bretagne Occidentale	0.68
2.	FRANCE – Universite Montpellier 1	0.59
3.	ITALY – Universita degli Studi di Ferrara	0.66

4.	PORTUGAL – Braganca Polytechnic Institute	0.70
5.	SPAIN – Universidad de Leon	0.68
	<i>Sample II ROMANIA</i>	
1.	Academy of Economic Studies, Bucharest, Faculty of Management	0.47
2.	“Babeş-Bolyai” University, Cluj-Napoca, Faculty of Political, Administrative and Communication Sciences	0.63
3.	National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration	0.72
4.	“Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty	0.66
5.	“Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration	0.86
6.	University from Oradea, Faculty of Legal Sciences	0.60
7.	“1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences	0.67
8.	“Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences	0.57
9.	“Ovidius” University Constanța, Faculty of Law and Administrative Sciences	0.59
10.	“Spiru Haret” University, Faculty of Law	0.61
11.	“Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration	0.62
	<i>Sample III</i>	
1.	LITHUANIA – Kaunas University of Technology	0.61
2.	ESTONIA – Tallin Technical University	0.62
3.	MACEDONIA- South East European University	0.42
4.	TURKEY – European University of Lefke	0.58

Analysing the data we remark the dimension for curricular compatibility between the programmes of European universities in the first sample, the aggregated indicator having similar values, not exceeding the maximum threshold of 70% and the minimum threshold of 59%; these values reveal the image of curricular compatibility in the countries of sample II (nine universities are responding to the value requirements and two universities are situated under the minimum limit recoded in sample I, that it is considered as reference in our study); for the third sample we remark a proximity to the minimum value of the indicator.



Graphic 4: Evolution of the degree of curricular compatibility through the aggregated indicator I_{comp}

III. CONCLUSIONS

As revealed by numerous studies, the correlated processes of Europeanization and transition provide significant opportunities for developing education in the area of public administration in Europe and offer a possibility for emancipation for this area, Europeanization being in continuous movement, “and the normative power of the European realities will certainly make the higher education in Europe to be more European in this century” (Rudder, 2000).

The study presented in the paper represents the continuation of a research started by the author in 2006 that has not been concluded. The partial results of the above-presented research the paper “Europeanization of the Higher Education in the area of Administrative Sciences in Romania”¹⁰, completed by those in the paper published by NISPAce¹¹ this year, provide the image for the behaviour of Romanian universities on promoting Europeanization of higher education in the area of administrative sciences in Romania by the undergraduate academic programmes.

The focus on the topic of Europeanization of higher education in the area of administrative sciences in Romania is grounded on the necessity to make compatible the content of basic and continuous education with that of prestigious institutions from European Union countries, with the content and methods of education specific for European higher education in the area of administrative sciences, so that the programmes would become more attractive, in order to include the modern dimensions of the academic programmes such as: exchanges, mobility and academic collaboration, mutual acceptance of diplomas, exams and credits for courses, comparable, clear as significance and content.

The above situation is justified, for Romania, on one hand by the relative recent (2005) option of Romanian authorities to pass to implementing the measures deriving from Bologna Declaration, and on the other hand by the lack of methodological and systematic practice for researching the compatibility of academic programmes concerning their content and forms of organisation.

¹⁰ Paper presented at **EGPA Annual Conference**, “Public managers under pressure: between politics, professionalism and civil society”, Milan, Sept. 2006, *Study Group IX: Administration and Teaching*

¹¹ „Lessons and Recommendations for Improvement: Central and Eastern European Public Administration and Public Policy”, NISPAce, 2007, Bratislava, Slovakia, p. 87-131.

We present the results of the research that reveals important conclusions about the current direction for the education in public administration in Romania and some states from Europe in the context of integration into the European Union. Under the terms of Europeanization, the increased challenges of the politico-administrative interaction between national administrations and EU institutions illustrate the fact that it is essential for the graduates of public administration to acquire knowledge about the European context of policy making, administrative organisation and culture of other Member States and associated countries of EU. As second element, the transition process in the Central and Eastern European countries could offer impetus to the area of administrative sciences in searching its own identity and approaches within a European context.

In this context, we would like to reveal the following issues:

1. We feel the need to extend the research, both as theme and topics approached, in order to formulate conclusions and appreciations with a higher degree of generality.

The educational programmes for the undergraduate academic studies are provided by other tens of universities in Romania and much more in Europe. The approach and design from the perspective of content has got distinct histories and directions, emphasising three major directions at the level of the three academic samples:

- *normative, traditional approach*, from the legal perspective, based on administrative law and other branches of law (**FRANCE**: Universite Montpellier 1, Faculty of Law; Universite Bretagne Occidentale, Faculty of Law and Administration; **ROMANIA**: “Lucian Blaga” University, Sibiu, “Simion Bărnuțiu” Law Faculty; University from Oradea. Faculty of Legal Sciences; “1 Decembrie 1918” University, Alba Iulia, Faculty of Law and Social Sciences; “Ovidius” University. Constanța, Faculty of Law and Administrative Sciences; “Spiru Haret” University, Faculty of Law);
- *economic, managerial approach*, based on a curriculum inspired from the area of economic sciences and management (**ITALY**: Universita degli Studi di Ferrara, Faculta di Economia; **PORTUGAL**: Braganca Polytechnic Institute, Management and Public Administration; **ROMANIA**: Academy of Economic Studies, Bucharest, Faculty of Management; “Ștefan cel Mare” University, Suceava, Faculty of Economic Sciences and Public Administration; “Petru Maior” University in Târgu Mureș, Faculty of Economic, Legal and Administrative Sciences; **LITHUANIA**: Kaunas University of Technology; **ESTONIA**: Tallin Technical University);
- *organisational approach*, based on political sciences and organisational theories (**SPAIN**: Universidad de Leon, Facultad de Ciencias Sociales y Juridicas; **ROMANIA**: “Babeș-Bolyai” University, Faculty of Political, Administrative and Communication Sciences; National School of Political Studies and Public Administration, Bucharest, Faculty of Public Administration; “Gheorghe Cristea” Romanian University of Sciences and Arts, Faculty of Public Administration; **TURKEY**: European University of Lefke).

2. It is necessary to develop comparative studies with more universities and institutions from EU countries, to undertake and formulate some relevant standards and criteria in order to describe and evaluate precisely the forms, content and effects of Europeanization of higher education in administrative sciences.

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