Compatibility of the Content of Bachelor Programs in Public Administration with the Needs of Good Governance - A Comparison: EU-US

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Introduction

Facing the challenges of globalization and global financial crisis, the higher education system should sustain the dynamics of society, its prosperity, sustainable economic and social development. In order to attain this goal, investments in education at all levels should be achieved, thus participating to reforming the public service, the education service, as well as to public administration reform and state modernization, in the context of promoting and applying the principles of good governance[1]. Strengthening the size of public accountability for the education service imposes the development of a new definition, transcending work in governmental bureaucracy and contributing to community governance, improvement of welfare, promotion of justice and social equity in public roles, civil service positions or positions in the private sector.

The university, as organizational resource with great capacity of institutional and legal adjustment has got the essential role in sustaining competitiveness of economy, modernization of higher education, development of new competences for new jobs, promotion of knowledge on good governance – effective, transparent and responsive governance.

For the time being, on world level, 190 separate systems of education are operating in over 12,000 institutions of higher education and many institutions and vocational schools, in primary/secondary, adult, and specialized schools. They are developing in different environments of culture, history, tradition, being unique and at the same time subject to national and international laws and rules. In other words: "unity in educational diversity".

I. General framework for developing higher education

We assist at two processes that could be sized at the level of higher education: internationalization or globalization and Europeanization, processes with scale effects and impact on higher education, „Transnational education" (Guri-Rosenblit, 2007). We emphasise some positive effects of the above processes: widening of learning opportunities at various higher education levels - bachelor, master, doctorate (Appendix 1, using the International Standard Classification of Education (ISCED –Appendix 2) System, originally developed by the United Nations Educational, Scientific, and Cultural Organization (UNESCO)); promoting new programs of interdisciplinary and transdisciplinary studies; promoting the innovative factor in delivery methods for education and the institutional continental partnership etc.

Bologna Process represents a significant reform of higher education in Europe.

The development of a harmonised architecture for European higher education (Sorbonne Declaration, signed by the Ministers of Education from France, Italy, United Kingdom and Germany in May 1998 in Paris) represents the argument presented in the content of Bologna Declaration, signed one year later, proposing „to create a European space for

[1] We take into account aspects concerning the political regime, public management of economic and social resources and government's capacity to draft, formulate and implement policies.

higher education in order to enhance the employability and mobility of citizens and to increase in the international competitiveness of European higher education".
Promoting student mobility from one state to other, developing joint study programs, creating the Credit Transfer System which facilitates mutual recognition of grades, recognition of diplomas and qualifications based on international quality standards etc. represent some changes introduced through Bologna process[2].
Each stage of applying Bologna process represents a progress, supporting total mobility from one continent to other of the public good and service, identified in education, by 2010 (Commission of the European Communities 2003; UNESCO 2003).

Modernization of universities' agenda is conceived on three directions of reform:

1. *Curricular reform*: the three cycle system (bachelor/master/doctorate), competence based learning, flexible learning paths, recognition, mobility.
2. *Governance reform*: university autonomy, strategic partnerships, including with enterprise, quality assurance.
3. *Funding reform*: diversified sources of university income better linked to performance, promoting equity, access and efficiency, including the possible role of tuition fees, grants and loans.

I.1. European education after signing Bologna Declaration
For the EU, the Bologna Process is part of a broader effort in the drive for a Europe of knowledge which includes:

- Lifelong learning and development,
- The Lisbon Agenda for growth and Jobs and Social Inclusion,
- The Copenhagen process for enhanced European co-operation in vocational education and training, and
- Initiatives under the European Research Area.

Within the framework of Bologna process, we identify the European Higher Education Area (EHEA), aimed to create by 2010, the *international dimension of cooperation* between states, organizations and institutions of higher education in Europe and beyond Europe, recognizing its specific actions - information, promotion, recognition and political dialogue on higher education and integration.
The European university, situated in its own space – defined by two complementary dimensions: to educate for science and to create science - European Higher Education Area (EHEA) and European Research Area (ERA) is motivated both by the action of external factors to the academic environment and internal factors in defining and up-dating its own mission.

The general trend of higher education institutions towards development of strategies includes explicitly defining goals and objectives. It is worth to mention the following:

- increasing economic responsibility and autonomy;
- improvement of efficiency and effectiveness;

[2] The so called „Bologna process" is in fact the result of a series of Ministerial Conferences, Paris (1998), Bologna (1999), Prague (2001), Berlin (2003), Bergen (2005), London (2007), Leuven (2009). Every second year, Ministers responsible for higher education in the 49 Bologna countries meet to measure progress and set priorities for action.

- international competitiveness;
- quality competition/improvement;
- customer orientation;
- closer cooperation and more funding from the private sector;
- implementation of the Bologna agreement;
- qualitative goals and objectives in regards to teaching and selected basic and applied research areas;
- freedom of academic instruction and research;
- development of doctoral studies.

Higher education in most European states is subject to a complex process of adaptation to the requirements of Bologna process, which is emphasizing three priorities: introduction of the three cycle system (bachelor/master/doctorate), quality assurance and recognition of qualifications and periods of study, on one hand and to reforming the curricular content, such as the one promoting knowledge about good governance, teaching methods and techniques.

I.2. Compatibility of programs – a necessity and a reality

Rethinking the European higher education in order to embrace high degree of **compatibility,** to be competitive and very attractive for the students in Europe and other continents, performance-oriented and comparable with the best systems in the world, such as United States system, has got different implications on national higher education systems, i.e. some states reformed the national education system introducing three cycles (bachelor/master/doctorate), rethinking the structure and length of study programs, implementing them in a flexible manner, taking into account the specificity of the labour market, fields of study or disciplines (Matei, 2008; Guri-Rosenblit and Sebkova, 2004). Other states, especially those where the education was not organised on three cycles, faced resistance to change; thus Bergen Conference in 2005, concluded that the progresses have been faster and "the Bologna Process has triggered off enormous activities for higher education reforms, and substantial efforts are undertaken for structural reforms in terms of a convergent model".

Higher **compatibility** of various programs in different European academic systems has been achieved by means of significant reforms (Report "Higher Education in Europe 2009: Development in the Bologna Process"[3]). The main instruments are the European Credit Transfer and Accumulation System (ECTS), Diploma Supplement and national qualifications framework.

For some states, such as Romania, this process signifies a core restructuring of the content in view to make it compatible to the content from prestigious European universities.

Referring to education in public administration, the developments reveal specific character, benefiting of European or American evaluation and accreditation, mechanisms in view to describe the above degree of **compatibility**. In this respect, at European level it is worth to mention the mechanisms provided by the European Association for Public Administration Accreditation (EAPAA), the standards of European Association for

[3] Commission MEMO/09/172 on Rapid, 22 April 2009, http://ec.europa.eu/education/higher-education/

Quality Assurance in Higher Education (ENQA) and the European recommendations[4] and at American level, the standards promoted by the National Association of School of Public Affairs and Administration (NASPAA) and Commission on Peer Review and Accreditation (COPRA), of Council for Higher Education Accreditation (CHEA), with complex evaluation criteria and standards in view of accreditation. The promotion of accreditation is achieved for graduate and postgraduate education, thus ensuring transferability of credits through studying programs in „public administration" specialization.
Based on the general context for developing the European programs of public administration, one may speak about Europeanization of their content, revealing exactly the degree of absorption of the European values, specific for the area of public administration in national higher education institutions.

I.3. Credit System
The European Credit Transfer and Accumulation System (ECTS) is, according to the European Commission (2005:1), a student-centered system based on the student workload required to achieve the objectives of a program, objectives preferably specified in terms of the learning outcomes and competences to be acquired. A detailed checklist for the content of an Information Package /Course Catalogue is presented, which illustrates the effort of making a transparent and compatible system (Karseth, 2005). In most European states, the implementation of ECTS system is reflected at the level of the two cycles through:

- The 180 ECTS (bachelor program) + 120 ECTS (master program) (3+2 academic years) cycle structure is the most commonly adopted model.

a. Regarding the *Bachelor programs*, two main structural models have been adopted[5]:

- In 19 countries, Bachelor programs have been commonly designed on the basis of 180 ECTS credits (3 years) as in Andorra, Austria, Belgium, Croatia, Denmark, Estonia, Finland, France, Iceland, Italy, Liechtenstein, Luxembourg, Montenegro, Norway, Poland, Slovakia, Sweden and Switzerland.
- In 11 countries the most commonly designed Bachelor programs last 240 ECTS credits (4 years) as in Armenia, Bulgaria, Cyprus, Georgia, Greece, Lithuania, Moldova, Russia, Spain, Turkey and the United Kingdom (Scotland).

In the remaining countries, no single model emerges as a reference, and institutional practice tends to draw upon both the two preceding models.

b. *Master programs*[6] model is used in the large majority of Bologna signatory countries.

- In 29 countries/regions analysed, this model is the most commonly used reference to design programs, even though some master programs may be developed with fewer credits (90 ECTS master programs can be found in several countries). Bulgaria, Serbia and the United Kingdom (Scotland) are exceptions to the general trend as the master programs usually last 60 credits (1 year).

[4] Recommendation of the European Parliament and of the Council of 15 February 2006 on Further European Cooperation in quality assurance in higher education (2006/143/EC).
[5] Higher Education in Europe 2009:Developments in the Bologna Process, EACEA P9 Eurydice, p.18
[6]Higher Education in Europe 2009:Developments in the Bologna Process, EACEA P9 Eurydice, p.19

- In the remaining countries (Albania, Belgium, Bosnia and Herzegovina, Cyprus, Germany, Greece, Ireland, Malta, Moldova, Montenegro, the Netherlands, Portugal, Romania, Slovenia, Spain and the United Kingdom (England, Wales and Northern Ireland)), the student workload at master level may vary from 60 to 120 credits, although in the Flemish Community of Belgium master programs have been developed in veterinary science and medicine that extend to 180 and 240 credits respectively.
- In the Czech Republic, some Master programs also require 180 credits (3 years).

Thus, at European level, we discuss about three models for developing the cycles (3+2) representing levels of bachelor and master (European Commission, 2009)[7]

1. The 180 + 120 credit (3+2 academic years) model dominates in 17 countries: Andorra, Croatia, Denmark, Estonia, Finland, France, Holy See, Hungary, Iceland, Italy, Liechtenstein, Luxembourg, Montenegro, Norway, Poland, Romania, Slovakia and Switzerland.
2. The 240 + 60 credit (4+1 academic years) model predominates in Bulgaria, and a 240 + 90 credit model is the norm in the United Kingdom (Scotland).

These two models can be seen as an evolution away from the 4 or 5-year long programs traditionally implemented in the continental countries before the Bologna reforms.

3. The 240 + 120 credit (4+2 academic years) model is commonly used in five countries: Armenia, Georgia, Lithuania, Russia and Turkey.

In the remaining countries and regions – approximately half of the countries of the Bologna process –no unique major model seems to dominate. In the Flemish Community of Belgium, for example, all first cycle programs are 180 ECTS, but the second cycle credit load may vary. Thus, program structures depend largely upon the institutions and study fields concerned.

- ❖ There are fields of study, such as medicine, architecture, engineering which are not adapted to the new study structures of the first cycle of 3 years, so we discuss about a partial convergence of the first two cycles.
- ❖ The pathway of transferability is designed by:

i. Driving force: international mobility, employability, competitiveness and universal participation (social legitimacy)
ii. Structure: modules and credits
iii. Content: multi-disciplinary knowledge and market relevance
iv. *Pedagogy***:** student-based teaching and provider- consumer relations
v. Aims: competence driven aims (learning outcome) and generic/transferable skills.

The American credit transfer system[8] is conceived as follows:
(a) a standard full-time student load is 15 credit hours per semester (or quarter hours per quarter) or 30 credit hours (45 quarter hours) per year; and
(b) credit hours serve as a summation of both the formal learning done in class or other organized settings plus independent study or research and class or seminar preparation (homework).

[7] Higher Education in Europe 2009:Developments in the Bologna Process, EACEA P9 Eurydice, p.20-21
[8] http://www.ed.gov/international/usnei/edlite-index.html

This system does not exactly correspond to other credit systems in other countries and regions.
Students entering the U.S. higher education system with credits from other systems have these credits converted to U.S. credit hours using formulas for the transfer of credit, established by each higher education institution. The principles that govern these formulas include:

1. The assumption that the basic academic content and student academic load is similar across universities and higher education systems, even if the local policy on the award of credits differs from place to place; and

2. Dividing the number of credits to be transferred from a home campus or system into the number of credits that would be awarded in the receiving campus or system for the same work.

This formulation can be for students from systems where the credit system awards more than 30 credits in an academic year, seeing a reduction in the number of credits when translated into the U.S. credit hours system, and vice versa for students from systems where the standard academic credit load is less than 30 credits per year.

As remarked in the two higher education systems, we find the applicability of the principle: „unity in diversity", creating the common basis through the Credit Transfer System, individualized in European and American systems, revealing a wide and diverse autonomy and flexibility in organisation.

In most states, ECTS effective application was based on adopting laws and applying the regulations adopted. The experience of one decade demonstrates a diverse and complex spectrum of practices promoted by various institutions, in different cultures, responding differently to actual challenges, willing compatibility for programs, for the content of disciplines, reported to a framework of reference, which is applied to most programs.

4. Romanian legislative framework

The Romanian higher education proves openness and flexibility concerning Bologna process and its integration within the European Higher Education Area.
The Bologna Process, initiated and supported both by the Common Declaration of the European Ministers responsible for education in Europe, agreed at Bologna on 19 June 1999, at which Romania is a signatory part, and by national normative deeds *(Law no. 288 from 24 June 2004* on the organization of the bachelor studies and *Law no. 287 from 24 June 2004* on the academic consortia), is characterised by six main directions and diplomas recognition:

a) Facilitating the compatibility and recognition of diplomas;
b) Introducing a system based on two successive cycles;
c) Implementing a credit transfer system;
d) Facilitating the mobility for students, teachers and researchers;
e) Promoting the European cooperation in the area of quality;
f) Promoting the European dimension in higher education.

Conventions adopted in the European Credit Transfer System and Romanian system

1. Convention of allocation: the year of study, with length varying between 36 - 40 weeks has 60 credits allocated, 30 credits/semester, if they are equal. The credits are allocated on disciplines and activities that are independently evaluated. The credits are allocated as whole values, eventually with fractions of 0.5.

2. Convention of standard student: the standard student studies 40 hour/week; 1500 – 1600 is the annual workload (36 – 40 weeks). In the national system it is recommended an annual workload of 1500 hours and the allocation of a credit for 25 hours of study.

3. Convention of awarding: the credits allocated to a discipline are awarded integrally to the student together with the result of evaluation, if the graduation condition is met.

4. Convention of publicity: all the elements describing the curricula and disciplines, namely the preliminary requirements, contents, objectives, credit allocation, methods of training and evaluation are public (modern, accessible and via internet).

5. Convention of transferability: all the credits obtained in accredited institutions and programs are recognized and potentially transferable in other institutions and programs, if their contents and finality are relevant for the current program. If the parties concluded an agreement/contract of study after ECTS model, it has legal power.

5. Comparative situations in development

Scott (2009, p. 7-9) emphasizes the following issues, analysing the development of the higher education system in US and Europe, in view of the number of higher education institutions and students:

- In the United States the total *number of institutions* increased from 4009 in 1996 to 4314 in 2006. Although there was a small increase in the number of public four-year institutions (including universities), the core institutions in the American higher education system, from 614 to 643, the bulk of the growth was in private institutions (and, in particular, private for-profit institutions).
  An analysis of the expansion in the *number of students* tells a similar story. The total number of student enrolments increased from 14.8 million in 1999-2000 to 17.5 million seven years later (2005-2006). This was a faster growth rate than in the 1990s, broadly equivalent to the growth rates experienced in the 1980s and 1970s but slower than during the expansionary 1960s, the decade when American higher education took off as a mass system.
  There has also been significant growth in the number of awards at all levels – Associate degrees (from 564,000 to 713,000); Bachelor's degrees (1.24 million to 1.49 million); Master's degrees (457,000 to 594,000); and Doctoral degrees (44,000 to 56,000).
- In Europe *a very similar pattern of growth* can be observed, remarking a fast growth in some countries, such as Sweden or Poland, Central and Eastern European states, where an increase of the number of private institutions is recorded in comparison with other states revealing a slow pace of growth, such as U.K., France, Germany, Italy, Spain (OECD 2008, European Commission 2008a).

Country	Evolution of total number of students in tertiary education (1998-2006)
UK	from 1.94 million to 2.34 million
Sweden	from 280,000 to 423,000 million
Poland	from 1.19 million to 2.15 million
France	from 2.03 million to 2.2 million
Germany	from 2.1 million to 2.29 million
Italy	from 1.87 million to 2.03 million
Spain	from 1.75 million to 1.79 million

In terms of the total number of graduates (Bachelor's, Master's and doctoral awards) a similar pattern can be observed. Once again one of the most rapid growth rates was in the United Kingdom – from 374,000 in 1998 to 514,000 nine years later. The Czech Republic produced the most impressive increase in Central and Eastern Europe – up from 22,000 to more than 60,000. Even in France (356,000 to 435,000), Germany (213,000 to 311,000) and Italy (164,000 to 380,000) there was substantial growth in the number of graduates, reflecting perhaps the lower wastage rates which were one of the (implicit) objectives of the move to a Bachelor's / Master's pattern as a result of the Bologna process (OECD 2008, European Commission 2008a).

The concern for increasing quality of higher education, qualification and bringing up to date the professions on labour market is reflected in the growth of the number of institutions and students simultaneously with developing the size of continental or Transatlantic recognition of qualifications. In this respect, we consider that the curricular internationalization is more advanced at the master level than at bachelor level, in the field of business administration related to the other specializations of public administration.

The accreditation standards maintain and up-date the quality of public administration programs[9]. We remark two aspects:

1. concerning the procedural characteristics - structures, approaches, instruments and methods (field, body and level of accreditation, methods of evaluation, evaluation staff, main objectives, content, site visit),
2. curricular content of specialization.

Both the European and American systems concerning mechanisms and instruments of evaluation and accreditation ensure a common basis through the standards used:

- domain – public administration;
- mission
- faculty;
- curriculum;

[9] See: „Basic Principles for Public Administration", http://www.eapaa.org/, NASPAA, www.naspaa.org/accreditation/, www.ncate.org/, www.cahme.org/

- program jurisdiction;
- student admission;
- services for students;
- support services and facilities.

As asserted, the diversity of the programs in the domain of public administration consists in cultural, national, traditional aspects of the promoters and providers of these programs, as institutions belonging to a national system, and the content of programs, emphasized by the systems of curricular evaluation and accreditation through:

- multidisciplinary approach, which apparently does not sustain a curricular convergence,
- innovative dimension of the content of the program, teaching methods and student evaluation methods,
- the curricular content comprises the local aspects on public administration,
- developing the relation education - research - practice according to local reality,
- improving the system of relating the theoretical aspects to the practices of public administration, by accomplishing empirical researches,
- methods and forms for evaluating the student knowledge, skills through practical activities, internships and placements.

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.

Associating the above considerations to the necessity of extending the concept of good governance, we obtain relevant conclusions concerning the contribution of higher education to substantiating, operationalising and enlarging the process of good governance in states belonging to the international area.

b) Adopting a system of higher education based on three cycles – Bachelor 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)[10], NASPAA standards and principles of good governance as fundamental ideas. In this respect, we defined *six independent variables* with characteristics that will be evaluated by studying the content of curricula, workload 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 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

The current study turns into account information and outcomes from 24 universities, achieving bachelor studies of public administration, governance, public affairs or public management, 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*.
- 4 American universities, organising programs – *sample IV*.

The study uses the analyses and outcomes published by authors concerning Europeanization and curricular compatibility of the programs in administrative sciences in Romania[11] or Europe[12].

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

- ❖ The bachelor studies and specializations 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;

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[10] Source: http://www.eapaa.org

[11] Matei, L. 2007*, Europeanisation of Higher Education in the Area of Administrative Sciences in Romania*, in Lesson and Recommendations for Improvement: Central and Eastern European Public Administration and Public Policy*,* ed. Juraj Nemec, NISPAcee Press, Bratislava,

[12] Matei, L. 2008, *Europeanization or Curricular Harmonization in the Area of Administrative Sciences in Romania (follow-up of Bologna Process). Comparative Analysis and Empirical Research,* in Transylvanian Review of Administrative Sciences, nr.22E / February / 2008

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.

Sample II comprises 11 universities in Romania, 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 higher education system in the area of administrative sciences, comprising over 27 public universities and 21 private universities[13]. 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 (ULB)) are recognised as universities with tradition in the area of social sciences, developing programs of administrative sciences, based on acknowledged expertise in the following areas: economic area (ASE), political sciences (UBB) or legal sciences (ULB).
- 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 ("Ştefan cel Mare" University, Suceava (USM), University from Oradea (UO), "Petru Maior" University in Târgu Mureş (UPM), "Ovidius" University, Constanța (UOC)) have developed programs of administrative sciences, complementary to other programs, 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 bachelor programs 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 programs complementary to the basic specialization, not necessarily in the area of social or legal sciences (Kaunas University of Technology (KUT) -Lithuania, Tallin Technical University (TTU) - Estonia).

[13] Source: http://www.edu.ro/

- 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 - EHEA[14]; European University of Lefke (EUL) –Turkey, set up in 1990 is promoting programs with international dimensions (approximately 3000 students from 35 countries) at international standards[15].

Sample IV comprises the universities from US, organising Bachelor programs in Government (Harvard University (HU)), Public Affairs (Indiana University (IU)), Public Administration (Union Institute and University (UIU)) and Public Policies and Administration (Northeastern University (NEU)).
The four selected universities provide a convincing image about the area of the public administration studies. The representativeness of the sample can be questionable, but the lack of complete information on the content of the educational process has determined us to select them. The information is public and is undertaken via the websites of the above institutions.

II.2.2. Methodology to elaborate the model

a) A *unitary analysis framework* has been defined, based on the realities in most European states, 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 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:

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

(25 hours of learning activities correspond to standard credit c_j)

or by the ratio:

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

[14] Source: http://www.seeu.edu.mk/english/general
[15] Source: http://www.lefke.edu.tr

For the American universities, we used exclusively the credits awarded (15 for each semester); using (2), respectively (3), we achieved compatibility with the proposed framework of analysis.

b) The dependent 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 the public sector.

Based on the content of those knowledge areas, emphasised in the quoted source, for each independent variable, Xi, it will be defined a number n_i of independent variables 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 Bachelor studies in administrative sciences in 24 universities under research.

For each variable x_j, the optimum level of knowledge will be determined on the basis of the mean (m_i) on the whole sample or representative parts, such as the mean level of knowledge in European or American universities with tradition. In the case that for a variable, x_j, in the curriculum corresponding to a program there is allocated an workload greater than the mean of the respective item, then the level will be diminished in the statistic calculation with the difference between the mean and the level that was achieved.

$$m_j - dXi(j) = m_j - |m_j - Xi(j)| \quad \overset{not}{=} \quad X'_i(j),\ i = \overline{1,6},\quad j = \overline{1,n_i} \tag{4}$$

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

c) 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:

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

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 curricula[16] and they quantify, for each independent variable, the volume of direct or indirect activities, expressed in credits.

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".

II.2.3.1 Analysis of dependent statistic variables[17]

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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT SOCIETY									
	1	2	3	4	5	6	7	8	9	10
Sample I *	7.14	1.30	1.75	0	0.48	13.42	31.96	3.84	0	7.18
Sample II *	3.16	2.85	2.72	3.11	2.86	4.74	29.08	2.99	6.11	3.57
Sample III *	2.75	4.67	3.94	4.96	2.46	11.07	9.67	5.25	3.68	3.56
Sample IV **	2.26	2.76	2.00	1.12	1.40	4.02	2.94	4.40	2.60	3.82

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.
* Source: Matei (2008), pp. 98, 99
** see Appendix 3

The means for each university are as follows:
UBO – 4.67; UM – 1.29; USF – 3.08; BPI – 3.59; UL – 3.91
ASE – 0.86; UBB – 2.79; SNSPA – 3.67; ULB – 2.45; USM – 3.32; UO – 3.62
UAB – 2.96; UPM – 3.99; UOC – 2.80; USH – 2.48; UGC – 4.25
KUT – 3.38; TTU – 4.07; SEEU – 1.79; EUL – 3.04
HU – 0.78 ; NEU -1.06 ; IU – 0.62 ; UIU – 1.58

[16] 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.

[17] For the samples I-III, the databases are presented in Matei, L., (2008), „Europeanization or Curricular Harmonization in the Area of Administrative Sciences in Romania (Follow-up of Bologna Process). Comparative Analysis and Empirical Research", Transylvanian Review of Administrative Sciences, no. 22E, pp. 92-124

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 this 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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT THE POLITICAL SYSTEM					
	1	2	3	4	5	6
Sample I *	4.06	2.40	2.28	3.04	0	7.38
Sample II *	4.86	2.82	2.57	2.88	4.45	5.96
Sample III *	3.30	2.66	4.66	5.78	0.86	5.95
Sample IV **	3.14	1.86	1.46	4.62	2.52	1.92

Legend: 1) public institutions; 2) political systems; 3) social systems; 4) functioning of governmental organisations; 5) political institutions; 6) European institutions.
* Source: Matei (2008), pp. 101-102
** see Appendix 4

The means for each university are as follows:
UBO – 0.40; UM – 0; USF – 0.63; BPI – 1.52; UL – 0.84
ASE – 1.80; UBB – 1.94; SNSPA – 1.11; ULB – 1.01; USM – 1.43; UO – 1.21
UAB – 1.72; UPM – 0.22; UOC – 1.41; USH – 1.62; UGC – 1.33
KUT – 1.92; TTU – 2.70; SEEU – 1.47; EUL – 1.53
HU – 1.06 ; NEU -0.42 ; IU – 1.34 ; UIU – 1.58

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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT PUBLIC ADMINISTRATION AND GOVERNMENTAL POLICIES							
	1	2	3	4	5	6	7	8
Sample I *	5.76	4.00	8.03	5.71	13.14	6.31	0	3.22
Sample II *	2.85	6.02	5.73	3.95	5.90	6.16	3.33	11.50
Sample III *	2.54	1.34	4.12	4.66	5.24	3.17	1.94	3.51
Sample IV **	3.64	1.84	3.04	4.80	3.40	2.90	5.72	2.44

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.
* Source: Matei (2008), pp. 103-105
** see Appendix 5

The means for each university are as follows:
UBO – 0.30; UM – 3.28; USF – 2.46; BPI – 2.79; UL – 2.32
ASE – 2.63; UBB – 2.56; SNSPA – 3.55; ULB – 3.18; USM – 2.74; UO – 2.59
UAB – 2.12; UPM – 1.33; UOC – 1.80; USH – 2.37; UGC – 2.46
KUT – 1.68; TTU – 1.67; SEEU – 1.08; EUL – 2.13
HU – 1.80 ; NEU -1.90; IU – 2.50; UIU – 2.28

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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT BUREAUCRATIC ORGANISATIONS AND THEIR MANAGEMENT			
	1	2	3	4
Sample I *	3.30	4.04	0	0
Sample II *	4.80	2.59	2.77	3.89
Sample III *	3.40	1.80	1.20	2.00
Sample IV **	3.90	0.58	1.06	2.04

Legend: 1) organisational theories; 2) civil service and civil servant; 3) deontology;
4) behavioural theories.
* Source: Matei (2008), pp. 106-108
** see Appendix 6

The means for each university are as follows:
UBO – 0.60; UM – 1.01; USF – 0.25; BPI – 0.48; UL – 0
ASE –2.20; UBB – 0.46; SNSPA – 1.66; ULB – 2.15; USM – 2.21;
UO – 1.89; UAB – 2.33; UPM – 1.37; UOC – 1.53; USH – 1.24; UGC – 2.25
KUT – 0.46; TTU – 0.68; SEEU – 1.50; EUL – 0.45
HU – 1.02 ; NEU -1.10; IU – 0.54; UIU – 0.50

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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF GOVERNMENTAL MANAGEMENT						
	1	2	3	4	5	6	7
Sample I *	5.53	13.42	4.33	5.65	1.90	6.41	7.61
Sample II *	3.56	6.66	4.35	5.04	8.12	6.93	5.16
Sample III *	4.51	2.27	1.21	3.82	5.13	7.06	4.32
Sample IV **	2.99	2.24	3.68	2.46	3.22	5.44	2.74

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.
* Source: Matei (2008), pp. 109-111
** see Appendix 7

The means for each university are as follows:
UBO –3.03; UM – 3.01; USF – 3.52; BPI – 3.64; UL – 4.11
ASE –1.33; UBB – 2.72; SNSPA – 2.77; ULB – 3.02; USM – 3.10;
UO – 0.88; UAB – 2.39; UPM – 2.36; UOC – 2.70; USH – 2.89; UGC – 1.39
KUT – 2.07; TTU – 1.39; SEEU – 1.86; EUL – 1.94
HU – 2.30; NEU -2.48; IU – 0.28; UIU – 1.90

X6: Knowledge about methods and techniques of communication. The content of this knowledge area is based on the reality and necessity of relational harmonization and communication between public administration and society, as well as inside it. In this 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"

CRITERION / MEAN (m)	KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF COMMUNICATION			
	1	2	3	4
Sample I *	4.69	7.86	3.09	11.09
Sample II *	3.28	2.99	2.76	7.56
Sample III *	2.65	5.14	2.80	14.01
Sample IV **	2.24	0.90	1.78	0

Legend: 1) communication; 2) IT; 3) information management; 4) foreign languages.
* Source: Matei (2008), pp. 111-113
** see Appendix 8

The means for each university are as follows:
UBO –5.67; UM – 5.33; USF – 4.00; BPI – 1.68; UL – 1.66
ASE –2.46; UBB – 2.75; SNSPA – 1.75; ULB – 2.32; USM – 2.34; UO – 2.16;
UAB – 3.73; UPM – 2.34; UOC – 2.38; USH – 2.46; UGC – 0.17
KUT – 3.46; TTU –1.88; SEEU – 1.77; EUL – 3.07
HU – 1.20; NEU -0.74; IU – 0.26; UIU – 1.24

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 and American 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 *Criterion 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 programs 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 Universite 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 programs of bachelor 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 programs in the area of administrative sciences, attached to the specializations 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 programs within the framework of some faculties of economic sciences. For the bachelor studies in administrative sciences, organised attached to the specializations 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.
In the American universities, *„Knowledge about society*" is distributed relatively unitary for the 10 independent variables, mentioning that the volume of legal knowledge has a less weight related to the European universities.
Criterion X2 „Knowledge about the political system" together with *Criterion X3 „Knowledge about public administration and governmental policies"*, offer an image for compatibility of study programs in the area of administrative sciences, independent from the specializations profile for the universities under study: social sciences and humanities, economic sciences, technical sciences, etc. Consequently:

1. The variable 5 (political institutions) for Criterion X2 „ *Knowledge about the political system*" and variable 7 (adjacent political and democratic mechanisms) for Criterion 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 specialization of public administration to allocate a larger workload to knowledge close to the faculty profile than the workload concerning the study of political sciences or socio-philosophical theories. As a corollary in interpreting criterion X1 „*Knowledge about society*", especially for variables: 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 variables of criterion X2.
2. The universities belonging to sample II, where the analysed criteria are recording 4.45 as value of the means for variable 5 of Criterion X2, and 3.33 for variable 7 of Criterion X3, are situated above the mean of variable 5 of Criterion X2, in faculties of law, namely 8.20 (ULB) and 7.20 (UO), 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 variable 7 of Criterion X3, where a single university records a positive value, 3.33 (SNSPA), as this university, due to its profile allocates a larger workload to the study of disciplines comprised in this variable.

4. The universities in sample 4 pay a higher and more diversified attention than the European universities to the knowledge concerning the political system, insisting on comparative political systems, political relations or international security (NEU) or the connections between politics, public policies, cultural and religious matters etc. (HU).

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 workload allocated on a different scale, the main allocation factor being the university profile. In this context, *Criterion X4 „Knowledge about bureaucratic organisations and their management"* and *Criterion 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 workload 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 variables are correlated with the variables of Criterion X5, it has not been easy to separate the disciplines of study, using only the curricula. Therefore, comparing with variables of Criterion X5, we remark a balance of the workload allocated to the study of the disciplines corresponding to the analysed variables, fact that has led to recovering the major gap between variables 2, 3 and 4 of Criterion X4 and those 7 variables of Criterion 5. For example, (UBO) and (UM) from France, (USF) Italy, (UL) Spain and (BPI) Portugal record zero value for variables 2,3 and 4 of Criterion X4, while the same universities record positive values, sometimes exceeding the mean of the variable corresponding to Criterion X5. In this context, in (UM) from France, variable 2 (civil service and civil servant) of Criterion 4 records zero value, while variable 1 concerning human resources of Criterion 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 variables of criteria 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 workload 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.
4. Concerning the American universities, UIU has the highest weight of the knowledge about bureaucratic organizations. This fact is justified by the content of the program oriented mainly towards public administration.

It is worth to mention that the complementary aspect of variables representing the structure of Criterion X6 proves to be important in designing bachelor programs in administrative sciences, as shown by the values of the means for each criterion and those obtained by universities.

II.2.5. Pearson correlation coefficient

We obtain a more eloquent image, on compatibility of academic programs 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 coefficient[18] 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*

	UBO	UM	USF	BPI	UL
UBO	1	0.567	0.808	0.367	0.502
UM		1	0.794	0.187	0.257
USF			1	0.678	0.749
BPI				1	0.980
UL					1

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

- there is a powerful functional connection between the programs provided by UBO – France, USF – Italy and UL – Spain, where the Pearson coefficient records values of (0.808) or (0.749);
- on the same level of values it is situated the functional connection between BPI – Portugal and UL – Spain with a value of (0.980) , for which the level of significance is 0.001;
- we remark a series of positive correlations, weak represented between the programs offered by UM – France, BPI - Portugal (Pearson coefficient of 0.187) and UL – Spain (Pearson coefficient of 0.257), fact demonstrating a weak volumetric correlation between the hours allocated to the disciplines related to administrative sciences between the two universities.

[18] Jaba, E., (1998), „Statistica", Economică Publishing House, Bucharest, pp.343.

Table 8: **Pearson Correlation** *Sample II*

	ASE	UBB	SNSPA	ULB	USM	UO	UAB	UPM	UOC	USH	UGC
ASE	1	-0.287	-0.313	0.067	-0.463	-0.140	0.011	-0.591	-0.597	-0.305	-0.538
UBB		1	0.539	0.394	0.506	0.238	0.388	0.492	0.707	0.909	-0.014
SNSPA			1	0.782	0.885	0.628	0.115	0.649	0.588	0.638	0.683
ULB				1	0.824	0.256	0.255	0.483	0.538	0.668	0.207
USM					1	0.486	0.372	0.851	0.834	0.731	0.536
UO						1	0.418	0.630	0.315	0.134	0.708
UAB							1	0.675	0.631	0.427	-0.172
UPM								1	0.905	0.611	0.493
UOC									1	0.848	0.211
USH										1	-0.009
UGC											1

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 USM and SNSPA (0.885), ULB (0.824), UPM (0.851) or UOC (0.834).
- we remark an inverse functional connection between ASE and the other universities, fact demonstrating a weak curricular compatibility, the economic characteristic being dominant in ASE study programs, as well as the lack of a correlation between USH and UGC (-0.009).
- alignment to the bachelor 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.

Table 9: **Pearson Correlations** *Sample III*

	KUT	TTU	SEEU	EUL
KUT	1	0.698	0.534	0.961
TTU		1	0.252	0.639
SEEU			1	0.358
EUL				1

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 programs provided by universities from Lithuania and Estonia, where Pearson coefficient records a value of 0.698.
- Positive correlations are also recorded between universities from Macedonia and Turkey, with values under the mean.
- The size of the data series does not provide the possibility to consider a powerful correlation between KUT and EUL due to the low index of significance (0.002).

Table 10: **Pearson Correlations** *Sample IV*

	HU	NEU	IU	UIU
HU	1	0.880	0.152	0.591
NEU		1	0.103	0.514
IU			1	0.584
UIU				1

Powerful correlations result between HU and NEU (0.880) but with a low index of significance (0.021), mean correlations result between HU, NEU and UIU and weak correlations result between HU, NEU and IU. The justification results from the topic of the programs analysed: "Government" (HU) and "Public Policies and Administration" (NEU), "Public and non-profit management" (IU) and "Public Administration" (UIU).

II.2.6. Correlations between samples

Using dependent variables of the second rank, describing the means on each sample (samples I – IV), Table 11 presents the correlations.

	SAMPLE I	SAMPLE II	SAMPLE III	SAMPLE IV
SAMPLE I	1	0.773	0.573	0.067
SAMPLE II		1	0.420	0.054
SAMPLE III			1	0.019
SAMPLE IV				1

We remark that the statistical evolution of sample IV is not correlated with the other evolutions. Having a high degree of significance (0.688, 0.746, 0.907), the results are reliable. The other correlations have mean intensities, with a low level of significance. The explanations can take into consideration both the design of samples and the diversity of programs analysed. We build a new variable, representing the mean of the variables of samples I – III, so the correlation of variable of sample IV is weak (0.060).

II.2.7.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 bachelor programs in various countries, aiming a national qualification defined on European and American 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}
	Sample 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
	Sample II **ROMANIA**	
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 Bărnuţiu" Law Faculty	0.66
5.	"Ştefan 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 Mureş, Faculty of Economic, Legal and Administrative Sciences	0.57
9.	"Ovidius" University Constanţa, 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
	Sample III	
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
	Sample IV **US**	
1.	Harvard University	0.43
2.	Northeastern University	0.45
3.	Indiana University	0.31
4.	Union Institute and University	0.49

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Appendix 1
Types of higher education institutions and their programs of study at the university level (ISCED 6, 7)

Type of institution	Fields of study (if specific to degree)	Degree or qualification	Entry Requirements	Typical duration (in years)	Typical entry age	Cumulative number of the degree
AUSTRALIA						
Universities	all	Bachelor's	Higher school certificate, university entrance examination, school- leaving certificate	3 to 7**	19	first
Universities	all	Master's, Post-graduate diplomas, or Doctor's degree	Bachelor's degree	1 to 4	23	second, third
CANADA						
Universities	all	Bachelor's and first-professional degrees	Secondary school diploma (12- 13 years depending on province)	3 to 4	18	first
Universities	all	Master's, first-professional degree, or Doctor's degree	Bachelor's	1 to 4***	22	second, third
FRANCE						
Universites	all	Diplome d'etudes (DEUG, DUEST, DEUP), Licence, Maitrise	Baccalaureat or equivalent	2 to 5	18	first
Universites	all	Diplome d'etudes universitaires generales (DUEG)	Baccalaureat or equivalent	2	18	first
Universites	all	Maitrise, Doctorat	Diplome	1 to 7	22	second, third
Universites - Sante	health sciences	License	DEUG or DUT	1	18	first
Universites - Sante	health sciences	Maitrise	License	1	20	second
Ecoles Specialisees	Architecture, engineering, pharmacy, political studies	Diplome ecoles superieures specialisees (DESS) (Award often serves as a professional qualification.)	Baccalaureat or equivalent; maitrise	5	18	first, second
Grandes Ecoles		Diplome (of school of particular subject) (Award often serves as a professional qualification.)	Baccalaureat or equivalent, entrance examination after 1 to 3 years of postbaccalaureat preparatory classes	3	20	first

GERMANY						
Universitaten	all	Diplom (university) & similar degrees (Magister, Staatsprufung, Kunstlerischer Abschluss, Kirchlicher Abschluss); Lehramtsprufung (Teacher qualification, degree for teachers)	Hockschulreife (completion of academic secondary school), and passage of Abitur, secondary school leaving examination, and individual university entrance examinations	6	19	first
Universitaten	graduate-level studies	Doctorprufeungen	Diplom (university) & similar degrees	2	28	second
Fachochschulen	vocational and professional courses	Diplom (Fachhochschulen)	Hockschulreife (completion of academic secondary school), and passage of Abitur, secondary school leaving examination	4	19	first
ITALY						
Universita ed istituti universitari (universities)	all general, technical, and professional courses, including medicine	Diploma di Laurea	Maturita	4 to 6	19	first
Universita ed istituti universitari (universities)	graduate-level courses	Diploma di Laurea; Dottorato di ricerca	Laurea; Maturita	4 to 6	25	second
Universita ed istituti universitari (universities)	corsi di diploma universitario (short university courses)	Diploma universatario (Laurea breve)	Maturita	2 to 3	19	first
Scuole dirette a fini speciali	vocational and professional courses	Diploma di specialista	Maturita	2 to 3	19	first
JAPAN						
Daigaku (universities)	all, including medicine, veterinary medicine, and dentistry	Gakushi (Bachelor)	Upper secondary completion, standardized national examination, and university entrance examination	4 to 6	18	first
Daigaku (universities)	all, including medicine, veterinary medicine, and dentistry	Shushi (Master); Hakushi (Doctor)	Gakushi (Bachelor); Shushi (Master)	2 to 5	27	second, third

ROMANIA						
Universities	all	Bachelor's degree	Baccalaureate	3 to 5	18	first
Universities	all	Master's degree	Bachelor's degree	2	22	second
Universities	all	Doctor's degree	Bachelor's degree and Master's degree	3	25	third
RUSSIA						
Universities	general (humanities, and natural sciences) as well as professional courses	Bachelor's degree	11 years of secondary school or 12 years of secondary-professional education	4	17 or 20	first
Universities	graduate-level general courses as well as professional courses	Master's degree; Kanditat nauk; Doktor nauk	Bachelor's degree; Intematura	1 to 6	22 or 25	second, third
Polytechnics	General (humanities, and natural sciences) as well as professional courses and medical specialties	Specialist's certificate; Intematura	11 years of secondary school or 12 years of secondary-professional education	4	17 or 20	first
SPAIN						
Facultades Universitarias (university)	all	Licenciado, Primer ciclo de Lecenciatura, Ingenieria y architectura (Orientacion academia)	Bachillerato and Curso de Orientacion Universitaria (high school diploma and 1 year university preparatory courses)	5 to 6	25	first
Facultades Universitarias (university)	graduate-level programs	Doctor, ingeniero, arquitecto, post grado y master	Primer ciclo de Lecenciatura, Ingenieria y architectura (Orientacion academia. Propor-ciana una certificacion que liene un recon-cimiento profesional	2	30 or 31	second

			equivalente al diplomado, en los concursos del admon publica.)			
Escuelas Universitarias (university college)	all; architecture, engineering	Diplomado (Orientacion profesional); Arquitectos technico, ingenieros technico (Orientacion profesional)	Bachillerato or Formacion Profesional	3	25	first
Escuelas Superiores, Escuelas Tecnicas Superiores	ingeneria, arquitectura, medicina, other professional fields	Primer Ciclo de Arquitectura; Primer Ciclo de Ingeneria; Primer Ciclo de Medicina	Bachillerato and Curso de Orientacion Universitaria (high school diploma and 1 year university preparatory courses)	5 or 6	25	first
Escuelas Superiores; Escuelas Tecnicas Superiores	graduate-level programs in technical and professional fields	Licenciado e Ingeniero, Arquitecto, Medicina, Farmacia, Quimica, Biologia, Psicologia	Primer Ciclo de Arquitectura; Primer Ciclo de Ingeneria; Primer Ciclo de Medicina	2	30 or 31	second
Escuelas Superiores; Escuelas Tecnicas Superiores	graduate-level programs in technical and professional fields	Especialidades Sanitarias	Lienciado Medicina, Farmacia, Quimica, Biologia, Psicologia	3 or 4	32 or 33	third
SWEDEN						
Grundlaggande Hogskoleutbilding (universities)	all	Hogskoleexamen (diploma); Kandidatexamen (bachelor's degree); Magisterexamen (master's degree); Yrkesexamen (professional degrees)	13 years, secondary-school leaving certificate or be 25 years of age and have 4 years of professional experience and a good reading knowledge of English	1 to 5.5		first, second
Forskarutbilding	graduate and professional schools	Licenciatexamen; Doktorsexamen	Degree of at least 3 years duration	2 to 4		second
SWITZERLAND						
Universites	all	Lizentiat Universitat/Staatsexamen (medezin)/Diplom Hochschule// License Universite/Diplome federal (medcine)	13 years, maturite. entrance examination	4 to 7	20	first
Universites	etudes postgrades (graduate programs)	Doktorat// Doctorat	License Universite, Diplome Haute Ecole,	3 a 4	31	second

			Diplome federal (medecine)			
Hautes Ecoles	professional programs	Diplom Fachschulen//Diplome Haute ecole specialisee	13 years of education, maturite profes-sionnelle ou maturite + stage professionnel	1 a 5	20	first
UNITED KINGDOM	**ENGLAND & WALES**					
Universities	all	Bachelor's degree	13 years, general certificate of education	3	18	first
Universities	all, graduate programs	Master's, first-professional degree, or doctor's degree	Bachelor's degree	1 to 3	21	second, third
Polytechnics	all, particularly those more vocationally oriented	Bachelor's degree or professional qualifications in various fields	13 years, general certificate of education	3 to 4	18	first
Colleges of Higher Education	all (traditionally teachers' colleges)	Bachelor's degree or professional qualifications in various fields	13 years, general certificate of education	2 to 4	18	first
UNITED KINGDOM	**SCOTLAND**					
Universities	all	Bachelor's degree				first
Universities	all, graduate programs	Master's, first-professional degree, or doctor's degree	Bachelor's degree			second, third
Colleges of Higher Education	all (traditionally teachers' colleges)	Bachelor's degree				first
UNITED STATES						
Universities	all	Bachelor of arts (B.A.) or Bachelor of science (B.S.) degree*	12 years, high school diploma or equivalent, standardized examination	4	18	first
Universities	all	Master's, first-professional degree, or doctor's degree	Bachelor's degree	1 to 4	22	second, third
4-year colleges	all	Bachelor of arts (B.A.) or Bachelor of science (B.S.) degree*	12 years, high school diploma or equivalent	4	18	first

* Two components: general education (humanities, social sciences, applied or natural sciences and fine arts) and an area of specialization or major.

** Duration varies by field and institution

***If a master's degree is not required, then duration of program is longer

Source: Richard P. Phelps, Greta L. Dietrich, Gabriele Phillips, and Kevin A. McCormack (2003), *Higher Education: An International Perspective,* p. 14, 15.

Appendix 2.
The International Standard Classification of Education (ISCED) System for levels 3 (upper secondary education) and above*

Level	Description
3	***Upper secondary education*** begins at about age 14 or 15, and lasts about 3 years. For the United States, the third level starts with grade 10 and ends with grade 12.
5	***Non-university higher education*** is provided at community colleges, vocational-technical colleges, and other degree-granting institutes whose programs typically take 2 years or more, but less than 4 years, to complete.
6	***University higher education*** is provided in undergraduate programs at 4-year colleges and universities in the United States, and, generally, at universities in other countries. Completion of education at the third level (upper secondary education) is usually required as a minimum condition of admission and admission is, in many cases, competitive.
7	***Graduate and professional higher education*** is provided in graduate and professional schools that generally require a university diploma as a minimum condition for admission.
4	No ISCED level 4 exists.

Source: Richard P. Phelps, Greta L. Dietrich, Gabriele Phillips, and Kevin A. McCormack, 2003, p.8.

Appendix 3

No.	CRITERION / Institution		KNOWLEDGE ABOUT SOCIETY									
			1	2	3	4	5	6	7	8	9	10
0	Sample IV Mean (m)		2.26	2.76	2.00	1.12	1.40	4.02	2.94	4.40	2.60	3.82
	HU	X	1.20	0.44	1.20	1.42	1.72	9.52	2.04	7.86	4.66	6.66
1	m = 0.78	m-dX	1.20	0.44	1.20	0.82	1.08	-1.48	2.04	0.94	0.54	1.04
	NEU	X	1.54	5.14	4.12	1.28	2.06	1.04	4.90	7.98	3.08	5.14
2	m = 1.06	m-dX	1.20	0.38	-0.12	0.96	0.74	1.04	0.98	0.82	2.16	2.50
	IU	X	1.86	1.86	0	0	0	3.74	3.74	0	0	0
3	m = 0.62	m-dX	1.86	1.86	0	0	0	0.28	2.14	0	0	0
	UIU	X	4.46	3.56	2.68	3.78	1.78	1.78	0.88	1.78	2.68	3.56
4	m = 1.58	m-dX	0.06	1.96	1.32	0.46	1.02	2.24	0.88	1.78	2.52	3.56

Appendix 4

No.	CRITERION / Institution		KNOWLEDGE ABOUT THE POLITICAL SYSTEM					
			1	2	3	4	5	6
0	Sample IV Mean (m)		3.14	1.86	1.46	4.62	2.52	1.92
	HU	X	1.42	1.64	3.02	2.34	0.56	0.44
1	m = 1.06	m-dX	1.42	1.64	-0.10	2.34	0.56	0.44
	NEU	X	1.04	3.08	1.04	5.14	5.92	7.20
2	m = 0.42	m-dX	1.04	0.64	1.04	4.10	-0.88	-3.36
	IU	X	5.62	1.86	0	5.62	1.86	0
3	m = 1.34	m-dX	0.66	1.86	0	3.62	1.86	0
	UIU	X	4.46	0.88	1.78	5.36	1.78	0
4	m = 1.58	m-dX	1.82	0.88	1.14	3.88	1.78	0

Appendix 5

No.	CRITERION / Institution		KNOWLEDGE ABOUT PUBLIC ADMINISTRATIONAND GOVERNMENTAL POLICIES							
			1	2	3	4	5	6	7	8
0	Sample IV Mean (m)		3.64	1.84	3.04	4.80	3.40	2.90	5.72	2.44
	HU	X	0.84	1.10	1.64	9.00	4.24	4.12	5.18	4.12
1	m = 1.80	m-dX	0.84	1.10	1.64	0.60	2.56	1.68	5.18	0.76
	NEU	X	4.64	2.58	1.54	1.04	1.04	1.04	6.70	2.08
2	m = 1.90	m-dX	4.64	1.10	1.54	1.04	1.04	1.04	4.74	2.08
	IU	X	3.74	1.86	1.86	5.62	5.62	3.74	5.62	0
3	m = 2.50	m-dX	3.54	1.82	1.86	3.98	1.18	2.06	5.62	0
	UIU	X	5.36	1.78	7.14	3.56	2.68	2.68	5.36	3.56
4	m = 2.28	m-dX	1.92	1.78	-1.06	3.56	2.68	2.68	5.36	1.32

Appendix 6

No.	CRITERION / Institution		KNOWLEDGE ABOUT BUREAUCRATIC ORGANISATIONS AND THEIR MANAGEMENT			
			1	2	3	4
0	Sample IV Mean (m)		3.90	0.58	1.06	2.04
	HU	X	1.42	0.54	0.66	1.44
1	m = 1.02	m-dX	1.42	0.54	0.66	1.44
	NEU	X	3.08	0	0	1.28
2	m = 1.10	m-dX	3.08	0	0	1.28
	IU	X	7.52	0	0	1.86
3	m = 0.54	m-dX	0.28	0	0	1.86
	UIU	X	3.56	1.78	3.56	3.56
4	m = 0.50	m-dX	3.56	-0.62	-1.46	0.52

Appendix 7

No..	CRITERION / Institution		KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF GOVERNMENTAL MANAGEMENT						
			1	2	3	4	5	6	7
0	Sample IV Mean (m)		5.98	2.24	3.68	2.46	3.22	5.44	3.44
	HU	X	4.34	2.56	2.08	2.08	2.58	3.10	3.44
1	m = 2.30	m-dX	4.34	1.94	2.08	2.08	2.58	3.10	2.06
	NEU	X	2.06	0	3.00	1.64	3.08	5.16	3.08
2	m = 2.48	m-dX	2.06	0	3.00	1.64	3.08	5.16	2.40
	IU	X	11.28	3.74	6.64	4.64	1.86	1.86	0
3	m = 0.88	m-dX	0.70	0.74	0.72	0.28	1.86	1.86	0
	UIU	X	6.24	2.68	3.00	1.46	5.36	11.60	4.46
4	m = 1.90	m-dX	5.70	1.80	3.00	1.46	1.08	-0.74	1.02

Appendix 8

No.	CRITERION / Institution		KNOWLEDGE ABOUT METHODS AND TECHNIQUES OF COMMUNICATION			
			1	2	3	4
0	Sample IV Mean (m)		2.46	1.00	2.72	0
	HU	X	2.42	1.02	1.38	0
1	m = 1.20	m-dX	2.42	0.98	1.38	0
	NEU	X	1.02	2.06	2.06	0
2	m = 0.74	m-dX	1.02	-0.12	2.06	0
	IU	X	3.74	0	5.62	0
3	m = 0.26	m-dX	1.18	0	-0.20	0
	UIU	X	2,64	0.90	1.78	0
4	m = 1.24	m-dX	2.24	0.90	1.78	0