

The External Evaluation Report of a Doctoral Study Domain *Cybernetics and Statistics* at University of Craiova

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I. Introduction

In order to conduct the Periodic External Evaluation of Doctoral Study Domain *Cybernetics and Statistics*, as a part of the Periodic Evaluation of Doctoral Studies at University of Craiova, an Expert Panel, comprised of a Coordinator of the Expert Panel, who is also an expert evaluator (member of academic staff listed in the National Register of Evaluators and has the status of doctoral advisor in the same doctoral study domain), an international expert (member of ARACIS International Evaluators' Register, operating outside Romania) and one doctoral student (member of the National Register of Student Evaluators), were appointed by ARACIS. The Periodic External Evaluation of Doctoral Study Domain *Cybernetics and Statistics* was conducted in the period of 5th - 9th of July, 2021, with additional time (till 16th of July, 2021) being granted for additional evaluation activities such as additional meetings, requests for additional documents, individual evaluation activities, drafting the External Evaluation Report, etc. Due to the ongoing COVID-19 pandemic, External Evaluation process was conducted in a hybrid mode, as a combination of on-site visit (Coordinator of the Expert Panel) and on-line meetings via Zoom (all members of Expert Panel) at the level of IOSUD and at the level of fundamental domain of science - Social Sciences. Among others, the members and representative of Doctoral School of Economic Sciences and of Doctoral Study Domain *Cybernetics and Statistics* also participated.

Doctoral School of Economic Sciences (SDSE) is one of the 10 doctoral schools at the University of Craiova (IOSUD), while Doctoral Study Domain *Cybernetics and Statistics* (DD) is one of the 5 doctoral study domains at SDSE and one of the 23 doctoral study domains at IOSUD. Starting from academic year 2005-2006, SDSE, within its 5 doctoral fields, currently brings together 19 PhD supervisors, 49 research supervisors and 95 students. DD, as a part of SDSE, currently has 3 PhD supervisors and 7 PhD students. Doctoral programmes are organized with the support of teachers from 4 departments of the Faculty of Economics and Business Administration (FEAA). The doctoral field of *Cybernetics and Statistics* was accredited in 2015 and coordinated by the department of Statistics and Economic Informatics of FEAA, ranked in a class of excellence (a classified domain A).



II. Methods used

External evaluation process, conducted in a hybrid mode, involved the application of the following methods and tools by the members of Expert Panel:

- The analysis of the DD's internal evaluation report (Periodic Self-Evaluation Report - SER) and its Annexes, and analysis of additional documents in electronic form, requested by the Expert Panel;
- The analysis of documents, data and information available on the IOSUD's/SDSE's website, in electronic form;
- The analysis of documents made available by the IOSUD, SDSE and DD, or being requested by Expert Panel members, all in physical form, during the on-site evaluation visit;
- Visiting the buildings included in the IOSUD's, SDESE's and DD's property, (classrooms, SDSE's research centre, DD's laboratory, the SDSE's library, available equipment, etc.);
- on-line meetings (via Zoom) with DD' contact person/person who drafted SER, PhD supervisors and academic staff, director of SDSE's research centre and with the leader of DD's research laboratory, PhD students, PhD graduates, employers of the PhD graduates;
- on-line meeting with Doctoral School Council (CSD members);
- on-line meetings with IOSUD's representatives and Council for Academic Doctoral Studies (CSUD), members of the IOSUD's Ethics Committee and members of IOSUD's Quality Assurance Department;
- on-line preparatory, organizational and technical meetings of all Expert Panels, and their members, included in Periodic External Evaluation of Doctoral Study Domains of IOSUD.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

DD, as a part of IOSUD and SDSE, shares their administrative, structural and legislative arrangements, which effect positively and in some aspects negatively DD's organization and functioning. In this sense, DD is constrained with IOSUD's and SDSE's financial frameworks and deficiencies in operating procedures and processes, such as financial constraints in general, financial support of DD's PhD students in their professional training and restrictions in training programme's subjects specificity and availability. Nevertheless, DD functions as a small and highly dedicated team of internationally recognized and proven scientists and experts in their respective field, from which their PhD students can greatly benefit.

Criterion A.1. The administrative, managerial institutional structures and the financial resources

IOSUD has developed and implemented majority of necessary procedures, regulations and methodologies in order to organize and effectively manage its doctoral studies. Where applicable, IOSUD relies on the support of IT tools in order to manage its most important processes more effectively, such as keeping track of students' status and ensuring the academic integrity and ethical principles in scientific research efforts on its doctoral studies. On the other hand, when it comes to managing obtained financial resources and especially attracting additional ones, IOSUD, and its constituents, have lot of space for improvements. In this sense, transparent and publicly announced system of reimbursement of PhD students' professional training expenses, at the level of IOSUD, is a necessity. At the level of DD, greater



efforts in attracting additional funding through grants addressing themes relevant to domain, and including PHD students into obtained grants and projects will be significant step in the right direction.

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

IOSUD has developed specific legislation on the organization of its doctoral studies and has implemented this legislation through effective functioning mechanisms. Regulations of the Doctoral School of Economics (SDSE) include mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011.

Performance Indicator A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:

- a) *the internal regulations of the Doctoral School;*
- b) *the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;*
- c) *the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);*
- d) *the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;*
- e) *functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;*
- f) *the contract for doctoral studies;*
- g) *internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.*

IOSUD has institutional regulations and methodologies related to organization and functioning of doctoral study programmes of its constituents (The institutional regulations for the organization and functioning of the doctoral university study programs of the Institution Organizing the Doctoral University Studies - University of Craiova (IOSUD), [Annex 1.1.1.1.](#)). SDSE, of which DD is a part, has its own regulations of doctoral school organization and functioning (Regulations of SDSE, http://feaa.ucv.ro/one/images/docs/scoala_doctorala/Regulament_SDSE_02_02_2019_1.pdf), harmonized with IOSUD's institutional regulations and adopted by Council for Doctoral Studies (CSUD). In accordance with the Regulations of SDSE, from the population of SDSE's PhD supervisors the Director of Doctoral School is elected by its members on a 5-year mandate, and validated by IOSUD's CSUD. Apart from Director, up to 50% of 5 members of Doctoral School Council (CSD) are PhD supervisors (2 PhD supervisors), 20% are doctoral students (1 doctoral student), while the remaining member is influential personality (scientific, industrial, socio-economic, professional) from outside SDSE ([on-line meeting with CSD](#)). Doctoral students' representative is being elected by doctoral students through formal elections. Formulated methodology is in practice as there are evidences/records presented on elections of Director of SDSE and students' representatives into Doctoral School Council ([Annex 1.1.1.7.](#)). CSD holds meetings regularly ([Annex 1.1.1.6.](#)). There are Regulations of IOSUD for organizing and carrying out the process of obtaining the habilitation certificate as the only mechanism for the recognition of the quality of PhD supervisor (https://www.ucv.ro/pdf/invatamant/management/metodologii/2019/Metodologie_IOSUD_UC_V_atestat_de_abilitare.pdf), Methodology for the recognition by IOSUD of the quality of doctoral supervisor obtained in higher education institutions accredited abroad (<https://www.ucv.ro/pdf/invatamant/>



[management/metodologii/2019/Metodologie de recunoastere a calitatii de conducator de doctorat obt in institutii de inv superior acreditate in strainatate.pdf](#)) and Methodology for the recognition of foreign PhD degrees (http://www.ucv.ro/pdf/invatamant/management/metodologii/2018/met_doctorat.pdf). Management structures of SDSE are defined by The institutional regulations for the organization and functioning of the doctoral university study programs of the Institution Organizing the Doctoral University Studies - University of Craiova (IOSUD-UCV) - Chapter II, and by the Regulation of doctoral schools of economic sciences (SDSE) - Chapter III. Doctoral contract in universal form exist and is posted on official website ([Annex 2.2.3.](#)). The proposed curriculum at the level of DD, containing the subjects of the training programme based on advanced university studies, is developed by the CSD in consultation with the PhD supervisors, after which it is approved by the CSUD and the UCV Senate ([on-line meeting with PhD supervisors/academic staff](#)).

Recommendations:

The indicator is fulfilled

Performance Indicator A.1.1.2. The doctoral school's Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.

The aspects specified in Art. 17 (5) of Government Decision no. 681/2011 are translated into the Regulations of the Doctoral School of Economics (SDSE) in articles: 8., 17., 18., 29-31., 11, 15., 36., 47., 38 ([http://feaa.ucv.ro/one/images/docs/scoala_doctorala/Regulament SDSE 02 02 2019 1.pdf](http://feaa.ucv.ro/one/images/docs/scoala_doctorala/Regulament_SDSE_02_02_2019_1.pdf)).

Recommendations:

The indicator is fulfilled

Standard A.1.2. The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.

*The IOSUD has ensured, through necessary procurement and/or development, the adequate IT resources in order to keep track of its PhD students and their studying progress, as well as to assure that the principles of ethics and academic integrity in writing doctoral theses are being followed.

Performance Indicator A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.

The Student Records Information System is computer system used to keep track of PhD students, their student status and academic background ([on-site visit](#)). Changes in the system, related to PhD students' status, is being made by Faculty's secretariat (until 2019) and Office for Doctoral Studies (starting from 2020). Doctoral Studies Office verifies all data related to PhD students in the Student register and publishes required reports. Access to system is regulated by passwords, and besides Doctoral Studies Office, PhD students can also, using individualized password, access Student Records Information System to view information accessible for them ([SER, p. 29](#)).

Recommendations:

The indicator is fulfilled



Performance Indicator A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.

At the level of IOSUD there is an access to Sistemantiplagiat.ro software recognized by CNATDCU, to verify similarity index for all doctoral theses within the SDSE. The software calculates 2 different similarity indexes, for which there are rules of thumb ($\leq 50\%$ and $\leq 5\%$) for doctoral thesis text. The similarity report obtained is analysed and discussed by the PhD supervisor and PhD student ([SER, p. 29-31](#); [on-line meeting with PhD supervisors/academic staff](#)). DD has used software for 5 out of 6 doctoral theses defended (excluding 2015's 1 doctoral thesis defence - software was not in use), with results satisfying formulated rules of thumb ([Annex B.3.2.1.](#); [Annexes B.3.2.1.1.-B.3.2.1.5.](#)). Additionally, FEAA has also bought Plagiarism Detector software in 2016, thereby putting even more focus on this aspect of its doctoral studies functioning and excellence ([SER, p. 46](#); [on-line meeting with PhD supervisors/academic staff](#)).

Recommendations:

The indicator is fulfilled

Standard A.1.3. The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

IOSUD, apart from random and individual cases of financial support, does not have developed nor implemented planned and systematic approach to the reimbursement of their PhD students' professional training expenses. At the DD's level, revenues obtained through research or institutional development/human resources grants as well as revenues obtained from PhD students' additional funding sources, besides government funding, are present, but not in a required or desirable amount.

Performance Indicator A.1.3.1. Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.

Although PhD supervisors have experience and credentials in participation in the research projects and obtaining grants ([Annex 1.3.1.](#)), there are no research or institutional development/human resources grant in implementation at DD at the time of SER file. In the last five years, one PhD supervisor was a team member and consultant in two POCU projects (human resources) during 2018-2020 ([Annex 1.3.1.](#), [Annex 1.3.1.1.](#)). Nevertheless, for two projects emphasized in SER file, it is not clear how topics, addressed by these projects, are relevant for the respective doctoral domain and how PhD students were engaged in these projects.

Recommendations:

The indicator is partially fulfilled



*Performance Indicator *A.1.3.2. The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.*

There were no PhD students benefiting from at least six-month funding other than the government funding (scholarships, financial support via research or institutional/human resource grants) in the last 5 years at DD ([SER, p. 32](#)). At the time of external evaluation, there is only one PhD student (14%) who has mentioned funding for the period of 2020-2023 ([Annex A.1.3.2](#)).

Recommendations:

The indicator is partially fulfilled.

*Performance Indicator *A.1.3.3.¹ At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

According to the SER file, referenced annexes and on-line meetings, there are no evidence of IOSUD's reimbursement of professional training expenses of PhD students, related to conference attendance, summer courses, internship abroad, publication of research papers, etc., especially not in a planned and systematic way, with procedures, pre-allocated amounts per students, related analysis, etc. In the [Annex A.1.3.3.1](#), DD's revenues obtained from PhD students are presented, while in the [Annex A.1.3.3.2](#), overall material costs, costs related to conference fees and costs related to doctoral commissions, at the level of entire SDSE, are presented. In this sense, at the level of DD the only financial support for PhD students' professional training expenses is the partial exception from the conference participation fee on the FEAA's conference *Competitiveness and Stability in the Knowledge-based Economy*, which takes place every year ([additional clarifications of DD's contact person/person who drafted SER](#)). In the last 5 years, DD's PhD students have attended this conference every year except 2020, for obvious reasons of COVID-19 pandemic, and have presented in total 11 scientific papers ([B.1.3.2](#)).

Recommendations:

The indicator is partially fulfilled.

Criterion A.2. Research infrastructure

Having in mind the nature of DD's doctoral programme training and research activities, within IOSUD there is a relatively modern research infrastructure dedicated to teachers', PhD supervisors' and PhD students' activities related to DD. On the other hand, due to the rapid developments and improvements of the available research tools in the field of DD, all future investments, in order to modernize existing research infrastructure at DD, are more than welcome.

¹ The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.



Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.

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Performance Indicator A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.

DD uses facilities of FEAA for realization of its activities. In this sense, DD has adequate equipment - dedicated classrooms, video projection system, Internet connection, PC equipment and specialized software MATLAB R2009a and MINITAB 15, EViews Standard Edition 8 ([Annex A.2.1.1.](#); [Annexes A.2.1.1.1.-A.2.1.1.5](#); [Annex A.2.1.1.8.](#)). Library contains 10087 book titles and 279 periodicals in the field of economy, while there is also an access within IOSUD and via mobile platform Anelis Plus to relevant international databases for multidisciplinary and specialized scientific research - eBooks, books, full-text journals ([SER, p. 33](#)). Evidences of purchases in the last 5 years within IOSUD, in order to improve the venues and the material equipment available to the DD, have been presented ([Annexes A.2.1.1.6.-A.2.1.1.7.](#)).

Recommendations:

The indicator is fulfilled

Criterion A.3. Quality of Human Resources

DD possesses small, but highly qualified and scientifically productive academic team. DD's PhD supervisors are its strongest link and the cornerstone of DD's effective functioning and achievement of its main purpose – development of new highly skilled researchers (PhD graduates) and high scientific productivity.

Standard A.3.1. At the level of each domain there are sufficient qualified staff to ensure the conduct of doctoral study program.

Although small in numbers (minimum required number of PhD supervisors, only 7 members of academic staff at DD in total), academic background of PhD supervisors, as well as the records of PhD students' publications and of their PhD study duration, are all evidences of qualified academic staff at DD.

Performance Indicator A.3.1.1. Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.

Total of 3 PhD supervisors (full-time teachers), all meeting the CNATDCU minimum standards (20.188; 15.313; 26.438), are currently active at DD ([Annexes A.3.1.1.1.-A.3.1.1.4.](#); [Annex A.3.1.2.6.](#)).

Recommendations:

The indicator is fulfilled



*Performance Indicator *A.3.1.2. At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

From 3 PhD supervisors, 2 are tenured teachers at IOSUD (66,67%), employed for an indefinite period, while 1 PhD supervisor is a tenured teacher at the University of Pitesti ([Annexes A.3.1.2.1.-A.3.1.2.3.](#); [Annex A.3.1.2.6.](#)).

Recommendations:

The indicator is fulfilled

Performance Indicator A.3.1.3. The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.

In the last 5 years (2015-2020), all subjects in the training programme were taught by teachers who have the status of PhD supervisors and proven expertise of subjects they teach ([Annexes A.3.1.1.2.-A.3.1.1.4.](#); [Annexes A.3.1.3.1.-A.3.1.3.5.](#); [Annex 3.1.3.7.](#)). PhD supervisors at DD, who have conducted majority of teaching activities at DD's doctoral programme in the last 5 years, are its most valuable resource and its greatest strength.

Recommendations:

The indicator is fulfilled

*Performance Indicator *A.3.1.4. The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs² does not exceed 20%.*

At DD, in every academic year in 2015-2020 period, each of 3 PhD supervisors had coordinated maximum of 4 students at the same time ([Annexes 3.1.4.1.-A.3.1.4.6.](#)).

Recommendations:

The indicator is fulfilled.

Standard A.3.2. The Doctoral advisors within the domain are carrying out a scientific activity visible at international level.

DD's PhD supervisors are very productive and internationally visible in DD's respective field. Their scientific activity is constantly on a high level and continues to be for the last 5 years, as evidences in their publications, impacts of their publications and memberships achieved.

² 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



Performance Indicator A.3.2.1. At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad.

Each of the supervisors at the DD has at least 5 publications in the Web of Science (WoS). Together they have 29 publications indexed in WoS (each PhD supervisor having 9 or 10 publications), relevant for corresponding field and internationally significant ([Annex 3.2.1.1.](#); [Annexes A.3.1.1.2.-A.3.1.1.4.](#)). In addition, all 3 PhD supervisors have acquired international visibility in last 5 years, mainly through memberships in scientific committees of international journals and conferences, and memberships in boards of international professional organizations ([Annex 3.2.1.2.](#); [Annex A.3.1.3.2.](#); [Annexes A.3.1.3.5-A.3.1.3.6.](#)).

Recommendations:

The indicator is fulfilled.

*Performance Indicator *A.3.2.2. At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.*

All 3 PhD supervisors are scientifically active in the last 5 years, obtaining more than minimally required 25% of CNATDCU minimum standards (15.62; 8.54; 20.73), required and mandatory to obtain the habilitation certificate ([Annexes A.3.2.2.1.-A.3.2.2.3.](#)).

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

DD has favourable situation in terms of PhD candidate's interest for its doctoral programme and has capacity to attract larger number of PhD candidates. Admission is being conducted in accordance with developed and appropriate methodology, leading to the selection of no drop-outs among their PhD students. The content of the doctoral programme, apart from deficiencies related to learning outcomes, is well suited for developing PhD students into skilled researchers in the field of Cybernetics and Statistics. Intensive and individualized approach to PhD students, resulting from dedicated work of high quality PhD supervisors and research supervisors, is the main strength of DD's doctoral study programme. In this sense, PhD students are producing presentations at scientific conferences and scientific papers in journals in significant numbers, but do need to improve the quality level of their scientific output when comparing quantity and quality of publications.



Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

Favourable number of PhD candidates overall and those from outside of IOSUD, compared to budgeted places, leads to conclusion that DD has the capacity to attract larger number of PhD candidates. Admission contest at DD is being conducted in accordance with developed methodology, taking into account PhD candidates' academic, research and professional performance, and has resulted in selection of PhD students among which there were no drop-outs so far.

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.

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*Performance Indicator *B.1.1.1. The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

According to both ratios (master's degrees graduates outside IOSUD/budgeted places and number of candidates/budgeted places), DD has favourable situation (0.4 and 1.8) and capacity to attract a larger number of candidates than the number of currently available places ([Annex A.3.1.4.6](#); [Annexes B.1.1.1.1.-B.1.1.1.2](#)).

Recommendations:

The indicator is fulfilled.

Standard B.1.2. Candidates admitted to doctoral studies demonstrate academic, research and professional performance.

IOSUD, and SDSE as a part of it, have developed detailed methodology for admission to doctoral study programs, posted on official websites and put in practice. Following mentioned methodology, DD ensures that their PhD students are rigorously selected based on their academic, research and professional performance, consequently evidenced in the fact that there are no expelled PhD students at DD so far.

*Performance Indicator *B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

IOSUD and SDSE have detailed procedure for admission to doctoral study programmes, posted on official websites (https://www.ucv.ro/pdf/invatamant/educatie/programe_doctorat/admitere/informatii/2020/Regulament_organiz_si_desf_concurs_de_admitere_2020_2021_v1.pdf; http://feaa.ucv.ro/one/index.php?option=com_content&view=article&id=2370&Itemid=553&lang=en; http://feaa.ucv.ro/one/index.php?option=com_content&view=article&id=3024:admiterea-la-scoala-doctorala-de-stiinte-economice-2021&catid=156:studenti-doctorat&lang=en). Within SDSE, on DD, the doctoral admission examination



consists of PhD candidate's presentation of a project of doctoral research (goals, methods, research direction, potential main contributions) in one of the directions/topics proposed (and posted on website) by the PhD supervisors ([SER, p. 14, 37-38](#); [on-line meeting with PhD students](#); [on-line meeting with DD's contact person](#); http://feaa.ucv.ro/one/images/docs/20172018/admitere/doctorat/2021/Centr_SD_Stiinte_Economice_propunere_teme_doctorale_an_universitar_2021-2022.PDF), followed by discussion with commission. PhD candidate's minimum average grade of 8 at M.A. study programme is a prerequisite condition for admission, while PhD candidate's previous publishing activity is an additional criteria being used for evaluation. Admission examination and evaluation is being conducted by admission commission and minimum admission average grade is 7. Admission to doctoral study is made in descending order of the general admission average grades.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission³ does not exceed 30%.

At DD, according to presented documents, there are no expelled students, regardless of the year after the admission ([SER, p. 38](#); [Annex B.1.2.1.](#)).

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

The content of DD's doctoral programme, containing 3 subjects related to PhD research skills, ethics and academic integrity, delivery of 3 mandatory research reports and required publishing activities performed (conferences, articles), is for the most part appropriate for PhD students' development in terms of research competencies and ethical behaviour in science. During the doctoral programme study, PhD students are given an opportunity to benefit from intensive and individualized guidance (very favourable ratios at DD related to PhD students vs. research supervisors or vs. PhD supervisor) in their doctoral theses development through frequent meetings with PhD supervisors and advisory committee. On the other hand, the problem of generality of subjects available to PhD students on doctoral programme has been identified, while syllabuses of subjects being held show deficiencies in terms of learning outcomes definition.

Standard B.2.1. The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

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Performance Indicator B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.

Training programme based on advanced university studies for DD consists of 3 subjects relevant to students' scientific research skills, out of which 1 subject is mandatory/core, while the other 2 are

³ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.



optional ([Annex A.3.1.3.1.](#)) PhD student in consultation with PhD supervisor, with regards to the doctoral thesis topic, chooses optional subjects at DD training programme ([on-line meeting with academic staff](#)). In this sense the subject *Epistemology and quantitative methods in Economics* ([Annex B.2.1.1.1.](#)) was core subject on DD's training programme of advanced university studies in period 2015-2018 and optional subject lectured in period 2019-2020. *Statistical-econometric modelling of economic processes* ([Annex B.2.1.1.3.](#)) was optional subject lectured in year 2020. The subject *Ethics, social responsibility and academic integrity* ([Annex B.2.1.1.2.](#)) was core subject in period 2019-2020. Other subjects, which occur in training programme based on advanced academic studies, were directly related to PhD students' doctoral thesis topics. The issue of inappropriate (small) number of subjects available to PhD students as well as subjects' generality, resulting from the SDSE's criteria of minimum of 5 PhD students enrolled in order for subject to be held, which forces PhD supervisors to compensate/fill PhD students' knowledge holes with more one-to-one meetings, informal lectures, etc., has been raised by academic staff in an on-line meeting.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.

At DD, *Ethics, social responsibility and academic integrity*, a subject dedicated to scientific research's ethics and intellectual property, is currently in training programme based on advanced university studies (starting from year 2018-2019) ([Annex A.3.1.3.1.](#); [Annex B.2.1.1.2.](#)).

Recommendations:

The indicator is fulfilled

Performance Indicator B.2.1.3. The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁴.

IOSUD (its Quality Assurance Department) has developed Procedure for elaboration of the curricula and the discipline sheets, aimed to syllabus development ([Annex B.2.1.2.](#)). Subject's syllabuses are reviewed based on the existing internal mechanism at the FEAA level and on the feedback received from quality assurance efforts ([Annex A.1.1.1.6.](#)) The syllabuses of the DD's 3 main subjects ([Annex B.2.1.1.1.](#); [Annex B.2.1.1.2.](#); [Annex B.2.1.1.3.](#)) are very general when it comes to the learning outcomes, with scarce information on responsibilities, knowledge, skills and autonomy that students will acquire after completing the subject. In this sense, each of 2 subjects have defined 2 specific skills/professional competencies acquired, while the third subject has defined 5 specific skills/professional competencies acquired. In one subject's syllabus there is a misalignment between the title of the subject and specific skills/professional competencies acquired ([Annex B.2.1.1.2.](#)). Additionally, during the on-line meetings with PhD students and PhD graduates, the meaning and importance of learning outcomes, ECTS and

⁴ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.



related students' workload has not been recognized and understood by mentioned students and graduates ([on-line meeting with PhD students](#); [on-line meeting with PhD graduates](#)), while in an on-line meeting with CSD members the issue and problem of (non)existence of learning outcomes for doctoral programmes was acknowledged by the members ([on-line meeting with CSD](#)).

Recommendations:

The indicator is partially fulfilled

*Performance Indicator *B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*

At DD, for each PhD student there is a specific advisory committee put in place. According to the presented evidences, each formed advisory committee holds 4-6 meetings with PhD student in each academic year of the PhD students' study ([Annex B.2.1.4.](#); [Annex B.2.1.4.1.](#); [Annex B.2.1.4.3.](#)). Apart from very good and fruitful collaboration on meetings, advisory committee conducts e-mail conversation with PhD student if necessary ([on-line meeting with PhD graduates](#)). The composition of the advisory committees is somewhat universal, where some compositions of research supervisors/teachers are repeated more frequently, especially in the period 2015-2018. Overall, 7 research supervisors/teachers are included in advisory committees, a number just reached in year 2019. This is expected due to the relatively small number of research supervisors/teachers at the department that supports DD's functioning.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.

During the entire period of 2015-2020, the ratio between the number of PhD students and the number of research supervisors/teachers providing supervision was 9:7, which is well below the minimum of required 3:1 ([Annex B.2.1.4.](#)). Currently at DD there are 7 PhD students and 7 research supervisors/teachers, providing some type of doctoral guidance (directly as PhD supervisors or through advisory committees).

Recommendations:

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

DD's PhD students, during their PhD study, capitalize on their research results and produce scientific output in significant numbers. Apart from specific and representative papers published by PhD students, the quality of their overall scientific output during PhD study can and needs to be on the higher level, i.e. principle quality before quantity. In terms of doctoral theses evaluations, DD ensures objectivity and rigor in the evaluations by engaging diverse set of reviewers from outside IOSUD.

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

DD's PhD students, following their research, are very productive in terms of presentations at scientific conferences and scientific publications, with the overall number of presented and/or published



papers ranging from 6 to 17 per PhD student who obtained a doctor's title. The quality of PhD students' scientific output (presentations, publications) does not follow its large quantity, which is manifested in number of presentations being held at the same scientific conference and also in cases where 5, 6 or more papers are being published by the same PhD student in the same domestic journal.

Performance Indicator B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.

Overall 11 representative scientific papers ([Annex B.3.1.1.7.](#)), authored by DD's 6 PhD students awarded PhD title in last five years ([Annex B.3.1.1.](#)), were made available to evaluation team. For each PHD student/graduate at least one representative paper was made available to evaluation team ([Annexes B.3.1.1.1.-B.3.1.1.6.](#)). Majority of papers are co-authored by PhD students and PhD supervisors and were published in relevant scientific journals indexed in Web of Science and Scopus. All 11 papers were analysed by international expert evaluator and 7 of them were rated greater than the threshold value of 3. Nevertheless, some of the papers made available to evaluation team were published in predatory journals (3), and this is a PhD students' publishing practice which needs to be eliminated.

Recommendations:

The indicator is fulfilled.

*Performance Indicator *B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.*

In last 5 years, 6 PhD students, who completed DD's doctoral programme, have delivered 19 presentations on international events, meaning that ratio for this performance indicator is well above minimum of required 1 ([Annex B.3.1.2.](#)). High level of quality, international relevance and prestige for some of the international events at which PhD students, who completed their doctoral studies, have delivered their presentations, is somewhat questionable. Namely, from 19 presentations 10 were delivered at the same international conference being organized by IOSUD/SDSE and held at IOSUD, and overall 15 presentations were delivered at international conferences being held in Romania, some of which having almost exclusively domestic Scientific committee.

Recommendations:

The indicator is fulfilled

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.



*Performance Indicator *B.3.2.1. The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

6 PhD thesis defended in the last 5 years at DD, all coordinated by the same PhD supervisor, were assigned to overall 8 reviewers from outside IOSUD. In 5-year period, 1 reviewer was member of defence committee 3 times (no multiple memberships in 1 year), and 2 reviewers were members of defence committee 2 times, of which one was member of defence committee twice in 1 year. None of the reviewers engaged were members of defence committee more than twice in 1 year ([Annex B.3.2.1.](#)).

Recommendations:

The indicator is fulfilled.

*Performance Indicator *B.3.2.2. The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analysed.*

Not applicable (only 6 PhD thesis defended in last 5 years).

Recommendations:

Not applicable

Domain C. QUALITY MANAGEMENT

Internal quality assurance system is in place at the level of IOSUD and delegated to the level of DD. Although majority of formulated formal procedures, policies and activities take place at the level of IOSUD and DD, corrective and improvement actions and measures, based on analyses conducted, do not take place in desirable amount. Additionally, at the levels of IOSUD and/or SDSE, there is no formulated and implemented internationalization strategy, nor systematic and planned efforts, aimed to enhance the internationalization of doctoral studies. DD, through IOSUD's and FEAA's official website, provides its PhD candidates, PhD students and other interested parties with all the necessary information regarding its doctoral programme activities.

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

There is an internal quality assurance system in place at the level of IOSUD and delegated also to the level of DD. By applying the majority of desirable or required formal procedures, policies and activities, DD invests formalized efforts, predominantly on periodic basis, in assuring defined level of quality. Significant actions and measures, developed and implemented on the basis of quality assurance system's conducted monitoring and analyses, and aimed at continuous improvements of the academic and administrative processes, are lacking in current internal quality assurance system's functioning at the level of IOSUD and consequently at the level of DD also.

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

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Performance Indicator C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:

- (a) the scientific work of Doctoral advisors;*
- (b) the infrastructure and logistics necessary to carry out the research activity;*
- (c) the procedures and subsequent rules based on which doctoral studies are organized;*
- d) the scientific activity of doctoral students;*
- e) the training program based on advanced academic studies of doctoral students;*
- f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.*

The monitoring and evaluation of activity of doctoral school is being done annually through internal evaluation reports. Report is being approved by CSD and then submitted to Doctoral Studies Office (till 15.2. after academic year), signed with records from the meeting on which report was approved ([SER, p. 42-43](#)). CSUD receives report, analyses it, makes conclusions and proposed actions, all of which are then discussed on meeting on which, besides CSUD, all Directors of CSDs and Director of Quality Management Department participate. Indicators being monitored within internal evaluation report are ([SER, p. 42-43](#); [additional documentation made available by DD's contact person](#)): a) number of PhD supervisor's publications and points accumulated for obtaining qualification in specific year; number of PhD students who have completed their studies within 3 years from enrolment from total number of coordinated PhD students and from total number of students who have publicly defended their thesis; b) analysis of the funds of doctoral school that were used to improve infrastructure and logistics necessary for carrying out research activity in specific year - acquisitions of material resources; c) analysis of students' achievements within study training programme, reasons why research programme was not completed within 3 years, analysis of on-line questionnaire being conducted among PhD students; d) PhD students' scientific activity (study contract, research programme, progress report, publication of papers and conferences' attendance); e) analysis of exams being passed; f) monitoring and analysis of fees allocated for PhD students' attendance on IOSUD's/SDSE's annual conference. Listed activities and analyses demonstrate the presence of various elements of evaluation process and quality assurance at DD, following IOSUD's guidelines and procedures.

Recommendations:

The indicator is fulfilled.

*Performance Indicator *C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.*

On-line questionnaire ([Annex C.1.1.2.2.](#)), as an evaluation mechanism for identifying the needs and general level of satisfactions of PhD students with the quality of doctoral studies programme, is being conducted at the level of IOSUD/DD, in which PhD students, after accessing with unique access code, can express their needs and satisfaction with training and research programme ([SER, p. 43](#); [on-line meeting with Quality Assurance Department](#); [on-line meeting with PhD students](#)). Methodology for conducting on-line questionnaire exist at the level of IOSUD in formal form ([Annex C.1.1.2.1.](#)). Following



the analysis of survey's results ([Annexes C.1.1.2.3.-C.1.1.2.4.](#)), necessary measure are to be taken. According to the analysis of the results of conducted survey ([Annex C.1.1.2.](#); [additional documentation made available by DD's contact person](#)), no significant deficiencies were identified/reported in DD's doctoral activity, so no action plan was drafted and no concrete measures were taken. From the statistical interpretations of survey's data at the level of IOSUD, presented to evaluation team ([Annexes C.1.1.2.3.-C.1.1.2.4.](#)), for one academic year 94,2% of all answers collected from PhD students were answers 'excellent', thus signalling the need for improving the methodology of conducting questionnaire as well as questionnaire design itself in terms of its structure, questions' formulations, order of questions, etc.

Recommendations:

The indicator fulfilled.

Criterion C.2. Transparency of information and accessibility of learning resources

DD, through IOSUD's and FEAA's official website, provides its PhD candidates, PhD students and other interested parties with all the necessary information regarding its doctoral programme activities. During their PhD study at DD, PhD students have access to all the learning resources needed for them to complete doctoral programme, such as free access to relevant scientific databases, access to anti-plagiarism software and access to all relevant research and training facilities and equipment.

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.

Performance Indicator C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:

- (a) the Doctoral School regulation;*
- (b) the admission regulation;*
- (c) the doctoral studies contract;*
- (d) the study completion regulation including the procedure for the public presentation of the thesis;*
- (e) the content of training program based on advanced academic studies;*
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);*
- (h) information on the standards for developing the doctoral thesis;*
- (i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.*

SDSE has posted, through IOSUD's and FEAA's website: a) and d) regulations of the doctoral school, covering admission procedure, procedure for successful competition of doctoral programme, including the procedure for public defence of thesis (https://www.ucv.ro/pdf/invatamant/management/regulamente/Regulamente%20studii/Regulamentul_de_organizare_si_functionare_programe_studii_doctorat_al_IOSUD.pdf; http://feaa.ucv.ro/one/images/docs/scoala_doctorala/Regulament_SDSE_02_02_2019_1.pdf); b) information about the doctoral admission and proposals for doctoral research topics, in



order to register for the admission colloquium (https://www.ucv.ro/pdf/invatamant/educatie/programe_doctorat/admitere/informatii/2019/Regulament_organiz_si_desf_concurs_de_admitere_2019_2020.pdf); c) doctoral contract (https://www.ucv.ro/invatamant/educatie/programe_doctorat/admitere_contract_e_studiu.php); e) the content of doctoral programme (http://feaa.ucv.ro/one/images/docs/2017-2018/admitere/doctorat/planui_invatamant/Plan_de_inv_2020-2021_Cibernetica_si_Statistica.pdf); f) basic scientific information on PhD supervisors (http://feaa.ucv.ro/one/index.php?option=com_content&view=article&id=2897:admiterea-la-scoala-doctorala-de-stiinte-economice-2020&catid=156:studenti-doctorat&lang=en); g) guide regarding writing, support and evaluation of the doctoral thesis (http://feaa.ucv.ro/one/images/docs/2017-2018/admitere/doctorat/Ghid_Teza_Doctorat_09_05_2017.pdf); h) guide on drafting, evaluation and support of scientific research reports (http://feaa.ucv.ro/one/images/docs/2017-2018/admitere/doctorat/Ghid_Raport_Cercetare_09_05_2017.pdf); i) the list of PhD students in the field, containing basic information (enrolment year) (http://feaa.ucv.ro/one/images/docs/2017-2018/admitere/doctorat/2021/Studenti_doctoranzi_SDSE_2020_2021_site.pdf); and announcements (at least 20 days prior to the dates of defences) of PhD theses to be defended, with committee composition, theses' summary, date, time and place where theses will be defended (https://www.ucv.ro/invatamant/educatie/programe_doctorat/programate.php).

Recommendations:

The indicator is fulfilled

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

SDSE, together with IOSUD, provides its PhD students with free access to relevant scientific databases, access to electronic system for verifying the degree of similarity with other existing scientific creations and access to research laboratories, classrooms and other facilities and equipment relevant for their PhD studies.

Performance Indicator C.2.2.1. All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.

At the level of IOSUD, thereby also at the level of DD, all enrolled PhD students are given access account from the IOSUD's Computer Centre, through which DD's PhD students have free access to 11 scientific databases and 6 databases for eBooks (*Annex A.2.1.1.4.*; http://biblio.central.ucv.ro/bib_web/ro/Resurse_electronice_open_access.php). Mobile access is also possible to the Anelis Plus database. Within these databases, scientific content relevant for PhD field of Cybernetics and Statistics is also accessible.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.2. Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.

Upon request and with the consent of PhD supervisor, PhD student has access to electronic system for verifying the degree of similarity with other existing scientific creations (software Sistemantiplagiat.ro) (*SER, p. 46*; [on-line meeting with academic staff](#); [on-line meeting with Ethics Committee](#)). At the level of SDSE and DD, Director of SDSE and PhD supervisors also have access to Plagiarism Detector software, recognized by CNATDCU (*Annex C.2.2.2.*). Out of 6 defended theses at



DD, 5 of them (1 thesis was defended before the software was in use) were checked for similarity with Sistemantiplagiat.ro software and according to results for both similarity indexes ([Annex B.3.2.1.; Annexes B.3.2.1.1.-B.3.2.1.5.](#)), there were no violations of scientific and professional ethics in the field of Cybernetics and Statistics.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.

According to the Regulations of SDSE (art. 38, point 5), and Doctoral contract (art. 9, points 9.1.-9.4.), all DD's PhD students have the right to use laboratories, classrooms, reading rooms, libraries and other facilities and resources related to the field of Cybernetics and Statistics ([Annex C.2.2.3.; http://feaa.ucv.ro/one/images/docs/scoala_doctorala/Regulament_SDSE_02_02_2019_1.pdf](#)).

Recommendations:

The indicator is fulfilled.

Criterion C.3. Internationalization

There is no formulated and implemented internationalization strategy at the level of IOSUD or at the level of SDSE, aimed to enhance the internationalization of doctoral studies. Apart from concluded Erasmus mobility contracts, individual/isolated and relatively rare guest lectures and individual PhD supervisors'/teachers' initiatives, there are no planned, systematic and continuous efforts taken by the DD, SDSE, and IOSUD as a whole, to internationalize their doctoral studies.

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

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*Performance Indicator *C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*

SDSE has 69 Erasmus agreements with foreign universities and university colleges for their students' mobility, out of which only 14 are Erasmus mobility agreements for PhD students (doctoral level of studying) ([Annex 3.1.1.1.](#)). From contracted universities, some do not have specified doctoral programme in the Cybernetics and Statistics field. In the last 5 years, 1 PhD student from abroad was studying at Cybernetics and Statistics doctoral programme ([on-line meeting with academic staff; on-line meeting with DD's contact person; Annex B.3.1.1.; Annex B.3.1.1.1.; Annex B.3.2.2.](#)), there were no DD's PhD students who completed a training course abroad due to the lack of funding ([additional clarifications of DD's contact person/person who drafted SER](#)), while only 27% (< minimum required 35%) of PhD students have participated in international scientific conferences abroad ([SER, p. 47; Annex C.3.1.1.2.](#)).



PhD students do publish articles in international journals, but this cannot be considered as international mobility of PhD students. At the level of IOSUD, Vice-rector's office and Department of International relations deal with collaboration with other universities; international students' mobility and international students admission, whereas strengthening the international collaboration is a part of IOSUD's 2021-2024 Strategy ([on-line meeting with Quality Assurance department](#)). IOSUD has also issued presentation guide of the Doctoral Schools and PhD supervisors in English language in order to increase the degree of internationalization of its doctoral schools ([SER, p. 23](#)), but this effort is too small to be considered a systematic and continuous activity (derived from formulated and implemented strategy), aimed at increasing the internationalization of IOSUD's doctoral programmes.

Recommendations:

The indicator is partially fulfilled

Performance Indicator C.3.1.2. In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.

According to the SER there are no co-supervision contracts with universities in Europe at the level of SDSE, nor there were doctorates in international supervision at DD in the last 5 years ([SER, p. 23, 48](#)). In the last 5 years, professor J. Zentes (Germany), apart from making presentations at the FEAA's international conference, for 2 years (2016-2017) taught the subject 'Global Strategic Management' at the FEAA's master's programme in English (in which PhD students in the field of Cybernetics and Statistics were also invited to participate) and also the subject 'Epistemology and Design of Economic Research' at SDSE's/DD's doctoral programme ([SER, p. 48](#); [additional documentation made available by DD's contact person](#)). Additionally, professor E. Thalassinos (Greece) in 2019 held one, one-day three hours long workshop entitled 'How to prepare a PhD thesis: Tips and techniques' on which SDSE's PhD students participated ([Annex C.3.1.2.](#); [Annex C.3.1.2.1.](#); http://feaa.ucv.ro/one/index.php?option=com_content&view=article&id=2710:workshop-how-to-prepare-a-phd-thesis-tips-and-techniques&catid=118&lang=en). Joint doctoral programmes, as well as visiting schemes involving world class experts that deliver courses/lectures to PhD students, are not put in place at SDSE's and DD's doctoral programmes in planned, systematic and continuous manner.

Recommendations:

The indicator is partially fulfilled.

Performance Indicator C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees, etc.).

Apart from plans for the future, there are no mentioning nor evidences in SER related to concrete measures undertaken by IOSUD, SDSE or DD, aimed at internationalization of the activities carried out during their doctoral programmes. In this sense, there were no participation in international educational fairs to attract foreign PhD students, only participation on fair Salon du livre Paris 2019 ([additional documentation made available by DD's contact person](#)). In addition, there were no integration of international experts in advisory committees or in thesis defence committees for the last 5 years ([Annex B.2.1.4.](#); [Annex B.3.2.1.](#)). Specific efforts such as 'encouraging PhD students to enrol to mobility program', trying to attract foreign experts', etc., ([on-line meeting with CSD](#); [on-line meeting with Directors of research](#)



[centres/laboratories](#)) are ad-hoc efforts and not concrete measures. Internationalization efforts at the level of DD are being undertaken individually by PhD supervisors/professors through their individual collaboration with foreign researchers/professors ([on-line meeting with DD's contact person/person who drafted SER](#)).

Recommendations:

The indicator is partially fulfilled.

IV. SWOT Analysis

<u>Strengths:</u>	<u>Weaknesses:</u>
<ul style="list-style-type: none"> - Good available research infrastructure, especially library; - IOSUD's and DD's regional reputation and recognisability; - Developed formal/legal framework (regulations, procedures, policies, etc.) for doctoral studies organization and functioning; - High quality of DD's PhD supervisors; - Good design of DD's doctoral programme in general; - Very individualized (ratio PhD students/PhD supervisors; ratio PhD students/PhD supervisors) and dedicated approach of PhD supervisors and research supervisors in guidance of DD's PhD students; - Great collaboration between DD's PhD supervisor and PhD student, which often continues after graduation; - DD's very good relationship with practice/employers; - Very positive and commendable impressions of DD's PhD students and PhD graduates (very good 'word of mouth' marketing). 	<ul style="list-style-type: none"> - IOSUD's financial limitations, reflecting on the quality of functioning of doctoral studies and motivation of academic staff; - Non-existence of clear mechanisms and transparent policy at the level of IOSUD and SDSE regarding the allocation of the money from the collected students' fees (reimbursement system for PhD students' professional training expenses); - IOSUD's almost exclusively regional orientation; - IOSUD's systematic inertia in attracting external funding and in internationalization of doctoral studies; - IOSUD's lack of planned and systematic approach to internationalization of doctoral studies; - Non-existence in practice of the plan-do-check-act cycle in quality assurance at the level of IOSUD and also at the level of SDSE and DD (especially the lack of improvement measures, action plans, etc., based on conducted monitoring and analyses); - Institutional (at the level of IOSUD and SDSE) lack of self-criticism and passive approach to improvement efforts - mind-set: <i>'we do not have problems, we follow the procedures'</i>, <i>'there are no problems at institution'</i> (statements by the IOSUD's and SDSE's leaders); - SDSE's rule of limited choice (min 5 students/subject in order for subject to be lectured) and (consequential) generality of subjects on DD's doctoral programme;

	<ul style="list-style-type: none"> - IOSUD's and DD's lack of focus on the development of well-defined learning outcomes; - The lack of grants and projects at DD and consequently the lack of engagement of PhD students in obtained grants and projects.
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> - Available external, non-state funding sources; - Growing trends of joint doctoral programmes development and establishment; - Rest of the country as a pool for student recruitment - expanding the IOSUD's influence outside the West part of the country; - Ever increasing mobility of students and professors in EU (excluding Covid-19 pandemic era). 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> - Demographic trends in Romania; - Decreasing quality of DD's PhD candidates upon admission (lacking required background knowledge as a result of SDSE's predominant focus on traditional fields of economics); - Decreasing financial support from the state; - Possible extended duration of Covid-19 pandemic.

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
A.1.1.1.		The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain: a) the internal regulations of the Doctoral School; b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct; c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies); d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad; e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings; f) the contract for doctoral studies; g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.	Fulfilled	
A.1.1.2.		The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.	Fulfilled	
A.1.2.1.		The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.	Fulfilled	



A.1.2.2.		The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.	Fulfilled	
A.1.3.1.		Existence of at least one research or institutional/human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development/human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.	Partially fulfilled	Development of motivational framework by IOSUD or SDSE to motivate PhD supervisors and other academic staff to obtain DD's field relevant research/ institutional/human grants and to engage PhD students in them.
A.1.3.2.	*	The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional/human resources development grants is not less than 20%.	Partially fulfilled	Development of motivational framework by IOSUD or SDSE to motivate PhD supervisors and other academic staff to obtain DD's field relevant research/ institutional/human resource development grants and to engage PhD students in them. Development of closer collaboration with business community in order to obtain funding for prospective research streams/PhD students potentially engaged in these research streams.
A.1.3.3.	*	At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).	Partially fulfilled	Development of institutional transparent reimbursement system for PhD students' professional training expenses, which will: 1) cover all available aspects of reimbursement, preconditions for reimbursement, amounts, etc., 2) will be legally defined and 3) should be presented to PhD students through permanent public announcement.
A.2.1.1.	C	The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.	Fulfilled	
A.3.1.1.	C	Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no	Fulfilled	

		less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.		
A.3.1.2.	*	At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.	Fulfilled	
A.3.1.3.		The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.	Fulfilled	
A.3.1.4.	*	The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs does not exceed 20%.	Fulfilled	
A.3.2.1.	C	At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad.	Fulfilled	
A.3.2.2.	*	At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.	Fulfilled	
B.1.1.1.	*	The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.	Fulfilled	

B.1.2.1.	*	Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.	Fulfilled	
B.1.2.2.		The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission does not exceed 30%.	Fulfilled	
B.2.1.1.		The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.	Fulfilled	
B.2.1.2.		At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.	Fulfilled	
B.2.1.3.		The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities.	Partially fulfilled	Development of adequate institutional framework for curricula development and learning outcomes definition based on benchmark international practice (learning outcomes' alignment matrix, generic doctoral programme competencies, specific learning outcomes for subject covering acquired knowledge, skills, responsibility and autonomy and also the context in which outcomes need to be demonstrated, more learning outcomes defined per subject, adoption of Bloom's or other similar and relevant taxonomy for the development of learning outcomes, etc.).
B.2.1.4.	*	All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.	Fulfilled	
B.2.1.5.	C	For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.	Fulfilled	
B.3.1.1.	C	For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must	Fulfilled	

		contain significant original contributions in the respective domain.		
B.3.1.2.	*	The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.	Fulfilled	
B.3.2.1.	*	The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.	Fulfilled	
B.3.2.2.	*	The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analysed.	N/A	
C.1.1.1.		The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory: (a) the scientific work of Doctoral advisors; (b) the infrastructure and logistics necessary to carry out the research activity; (c) the procedures and subsequent rules based on which doctoral studies are organized; (d) the scientific activity of doctoral students; (e) the training program based on advanced academic studies of doctoral students; (f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.	Fulfilled	
C.1.1.2.	*	Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.	Fulfilled	
C.2.1.1.	C	The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as: (a) the Doctoral School regulation; (b) the admission regulation; (c) the doctoral studies contract; (d) the study completion regulation including the procedure for the public presentation of the thesis;	Fulfilled	

		<p>(e) the content of training program based on advanced academic studies;</p> <p>(f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;</p> <p>(g) the list of doctoral students within the domain with necessary information (year of registration; advisor);</p> <p>(h) information on the standards for developing the doctoral thesis;</p> <p>(i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.</p>		
C.2.2.1.		All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.	Fulfilled	
C.2.2.2.		Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.	Fulfilled	
C.2.2.3.		All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.	Fulfilled	
C.3.1.1.	*	IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.	Partially fulfilled	<p>Intensifying collaboration with foreign universities.</p> <p>Concluding contracts with more foreign universities, especially more prestigious ones.</p> <p>Enhancing promotional activities aimed to increase PhD students' and academic staff's participations in mobility programs.</p> <p>Formally supporting, stimulating and adequately rewarding PhD students' participation in mobility programs and attendance at international conferences being held abroad.</p>
C.3.1.2.		In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.	Partially fulfilled	Establishment of institutional framework which will enable and stimulate cooperation of doctoral schools with leading foreign experts and professors (guest lectures, visiting professors, co-supervision, inclusion in guidance or doctoral committees; conducting joint researches, etc.).

C.3.1.3.		The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees, etc.).	Partially fulfilled	Formulation of institutional internationalization strategy and derived SDSE' and DD's action plans. Publishing of all SDSE's and DD's doctoral programmes relevant information in English on official website. Stimulation of introduction of subjects being lectured in English in doctoral programme. Attending international promotional events in order to attract foreign potential and current PhD students. More (pro)active approach to doctoral programmes' advertising; intensifying digital marketing efforts.
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VI. Conclusions and general recommendations

Doctoral Study Domain *Cybernetics and Statistics* (DD), as a part of the larger intuitional systems (SDSE, FEAA and IOSUD), shares number of their characteristics, positive and negative ones. In this sense, DD relies on small, but highly qualified team of PhD supervisors, accompanied with the small team of research supervisors, and nurtures individualized and dedicated approach of their academic/research staff to their PhD students' development into skilled researchers. General design of DD's doctoral programme, with great attention on scientific research training (research methodology and ethics), and on scientific publishing, is well suited for scientific maturation of their PhD students and writing of quality PhD thesis, all of which is demonstrated through productive scientific output of DD's PhD graduates. DD's doctoral programme is also recognized and appreciated by its business environment in terms of good relationships and collaboration. In conducting its doctoral activities, DD benefits from the use of appropriate material resources of FEAA and IOSUD.

On the other hand, DD lacks adequate learning outcomes definitions on its doctoral programme and needs to internationalize its doctoral programme in significantly greater amount in terms of larger number of foreign PhD students, higher rate of PhD students' participation in mobility programs and in international scientific events abroad, more frequent guest lectures, establishment of co-supervisions and visiting professors scheme. Due to the institutional financial restrictions, obtaining more research/institutional/human resource development grants or projects, and engaging PhD students in them, is a necessity for DD. DD should use its good relationship with business community and ensure greater financial support for its PhD students by the future employers.

Significant amount of identified DD's deficiencies are products of the systems they are a part of. In this sense, IOSUD and SDSE need to develop adequate regulative and motivational frameworks for academic staff's greater inclusion in obtaining research grants and other types of external funding, its closer collaboration with business community, and closer collaboration with foreign experts and professors. Furthermore, developing closer, more systematic and formalized relationships with employers (inclusion of employers' representatives in doctoral programme development, continuous collection of feedback from employers on various doctoral programmes' aspects, participation of employers in advisory



role in IOSUD 's and SDSE's strategic decision making) and with its PhD graduates (keeping track of PhD graduates' careers, collecting feedback, etc.) are important and necessary improvement steps for IOSUD and SDSE. Intensifying internationalization efforts on the level of IOSUD and SDSE, accompanied with the formulated Internationalization strategy and derived actions plans, and developed and put in practice reimbursement system for PhD students' professional training expenses, are all prerequisites for a greater international visibility and attractiveness of all IOSUD's and SDSE's doctoral programmes, as well as DD's doctoral programme. Finally, IOSUD, with its constituents SDSE and DD, needs to take more proactive and systematic approach in assuring and developing the level of quality in its academic and administrative processes, and not rely on individual, sporadic or ad-hoc initiatives as *modus operandi*. Conducting monitoring and analyses, without subsequent corrective and improvement actions based on analyses, needs to be upgraded to the full implementation of basic plan-do-check-act quality principle.

Having in mind analyses of all performance indicators in this report, identified DD's good practices and deficiencies, **International expert evaluator conducting the Periodic Evaluation:**

- **concludes that Doctoral Study Domain *Cybernetics and Statistics* (DD) at University of Craiova has achieved quality standards, i.e. demonstrates compliance with the system of criteria. standards and performance indicators, and thereby**

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VII. Annexes

- *The detailed schedule of The External Evaluation Report of a Doctoral Study Domain Cybernetics and Statistics (DD)*
- *Additional documentation made available by the DD's contact person/person who drafted SER*
 - *Response_Prof_Matić, I. - Request for additional documents*
 - *Evaluation answers from PhD students Cybernetics and Statistics-2019*
 - *Popescu Liviu research report-2017-2020*
 - *First year credit report and Second year credit report*
 - *Joachim Zentes Doctoral School courses*
 - *Pictures from workshop held by E. Thalassinos in 2019 at SDSE*
 - *Fotografii Salon du livre Paris 2019*
- *Screenshots/Print screens taken during the on-site visit of the relevant websites, proving specific claims in the report, accompanied by the date when they were accessed and saved*
 - *Poze_UCV*