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Approaches to Measuring Internationalisation in Romanian Higher Education Institutions

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Approaches to Measuring Internationalisation in Romanian Higher Education Institutions

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Abstract: *International dimension of higher education (HE) has become a key thematic area, shaping and challenging the growing global competition all over the world. In Europe a supranational framework was implemented for more internationally attractive research, teaching and learning HE institutions (HEI), based on the core objectives of the Bologna Process, Lisbon Strategy and Strategy 2020. Starting with the HE internationalisation literature overview, the paper reviews and operationalises the highly complex, multidimensional and multifaceted process dealing with institutions, people and knowledge. In order to systematise its' content, some definitions, approaches and measurement rationales of firm internationalisation will be transposed and extrapolated to the academic heartland and particularly its' second level. With respect to profiling the HE internationalisation, quantitative assessment frameworks and indicators are assessed, being an essential compulsory aspect in current international commitment status evaluation and to further assemble new ways of international involvement improvement. Empirically, based on available secondary data we discuss some dimensions of university internationalisation in the European Union "periphery", especially the Romanian reality. Using ASIGMA Project data, we highlight the heterogeneity of measurement indicators applied by the national HEI in their perception of internationalisation degree evaluation. Also as a case study, the internationalisation effects accounted in 2010 by the West University of Timișoara are highlighted. The contribution closes with a few proposals for the Romanian context.*

Keywords: *higher education, internationalisation process, internationality, internationalisation measurement.*

Rezumat: *Dimensiunea internațională a învățământului superior (IS) a devenit un domeniu tematic cheie, ce modelează și provoacă competiția crescândă la nivel mondial. În Europa un cadru supranațional a fost pusă în aplicare pentru activități de cercetare, de predare și învățare mai atractive internațional în instituțiile de învățământ superior (IIS), pe baza obiectivelor Procesului de la Bologna, Strategiei de la Lisabona și a Strategiei 2020. Începând cu alcătuirea unei imagini asupra literaturii de internaționalizare a IIS, lucrarea revizuiește și operaționalizează procesul extrem de complex, multidimensional și cu multiple fațete, ce se ocupă cu instituții, oameni și cunoștințe. Cu scopul de a sistematiza conținutul său, unele definiții, abordări și raționamente de măsurare a internaționalizării firmei vor fi transpuse și extrapolate în domeniul academic și în special cel masteral. În ceea ce privește profilarea internaționalizării IS, sisteme și indicatori cantitativi sunt evaluate, fiind un aspect esențial și obligatoriu în evaluarea angajamentului internațional curent și în a găsi în continuare noi modalități de îmbunătățire a implicării internaționale. Empiric, pe baza datelor secundare disponibile vom discuta unele dimensiuni ale internaționalizării universităților în periferia Uniunii Europene, în special realitatea românească. Utilizarea datelor primare din proiectul ASIGMA, permit sublinierea caracterului eterogen al indicatorilor de măsurare aplicate de către instituțiile de învățământ superior naționale în percepția lor de evaluare a gradului de internaționalizare. De asemenea, sub forma unui studiu de caz se prezintă gradului de internaționalizare în 2010 a Universității de Vest din Timișoara. Contribuția se încheie cu o serie de propuneri pentru contextul românesc.*

Cuvinte cheie: *învățământ superior, procesul de internaționalizare, grad de intrenaționalizare, măsurarea internaționalizării.*

Introduction: Higher Education between Internationalisation, Regionalisation and Globalisation

Nowadays knowledge based global economy, impose that national and organisational competitiveness to be largely based on their research and entrepreneurial capabilities (OCDE, 2009), transforming in their need of international connectedness.

Internationalisation of higher education institutions has become one of the key thematic areas since about the mid-1990s in the developed countries and afterwards the new millennium in the whole world, including emerging economies.

International (OCDE, IAU), regional (EU, EAIE) and national institutions around the world recognised internationalisation as a critical importance issue. Moreover, starting with Kehm, Teichler (2007), the international dimensions of higher education is an obviously desirable research direction.

The ambitious goal to create a unified and worldwidely attractive European Higher Education Area, the freedom of people and workforce movement and the Lisbon strategy of a sustainable and competitive knowledge-based economy, tends to trigger and promote not just the regional dimension of higher education, also suggesting that by internationalisation EU member states can develop an additional external dimension of the Bologna process.

Since Romania's adhesion to the EU, internationalisation has emerged, especially in theory and more limited in practice, as an important, with impact, dynamic and complex element in the national higher education, while corroborated with the European dimension the pace and shape of the phenomenon is increasing, although the question remains if the European response can be effectively applied to the eastern side of the continent. The emergent and transition countries seek to attract foreign students to their universities in order to improve the quality and cultural composition of the student-staff-scholar body, gain international prestige and earn more income.

The paper is organized into five sections additional to introduction. The second section provides a brief theoretical overview about the concept of internationalisation in HEIs and its dimensions and components. The third part constitutes aspects regarding internationalisation operationalisation and quantitative measurement, along the comparison among some widely accepted international measurements, with a special focus on how internationalisation is reflected in each of them. The fourth block contains elements of applied methodology, data sources and variable organization. The fifth division is a detailed empirical analysis of the national reality and the main Romanian universities. The last section summarizes the main conclusions, limitations and implications, and highlights several lines for future research.

Literature Review on the International Dimension of Higher Education

As the international dimension of higher education is becoming increasingly important, complex, interdisciplinary and somehow confusing, there is a need to re-examine the notion, its current content and measurement.

The Internationalisation Concept – in Business and Higher Education

Historically, universities have been international from their medieval origins, with a more limited international status-quo after the rise of smaller national states and national universities establishment, even if currently they are trying to return and regain their international direction, scope and maturity.

The purpose of this section is to take an in-depth look at the internationalisation expression at institutional level (bottom-up approach) where the real process of internationalization is taking place, even if internationalization can be considered also at national level too.

Starting with the basic idea of the aim to participate in the international marketplace by the universities (transposed from Hitt et al., 1997, definition: internationalisation refers to the process of

extension of the firms' presence, through its activities on foreign markets), a great deal of confusion originates from the high diversity and heterogeneity of individual perception expressed by different stakeholders regarding the way how they understand the concept of HEI internationalisation. Because of its high profile, currently is employed as an all encompassing term to describe everything linked to worldwide, intercultural, global, regional or international.

A fine example in this sense is the most frequently cited is the Knight (2003) working definition, being the most broad and all-encompassing concept, consequently highlighting several dimensions besides the international one: "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of postsecondary education" (Knight 2003, p. 2), although it must be mentioned the evolving character of the definition, emphasizing in Knight (1994, p. 7) only the international and intercultural elements, a neutral process view. Similar, can be considered the enxt definition as "a complex process that gives universities an international dimension, and it should aim values, beliefs and intellectual insight, in which both domestic and international students and staff benefits equally. It should develop global perspectives, international, cultural and ethical sensivity and useful knowledge, skills and attitudes for the globalised market place" (Elkin et al, 2005, p. 321).

Soderqvist introduced another definition that focuses on the education "change process from national to international HEI and leading to the inclusion of an international dimension in all aspects of a holistic view institution management, in order to enhance the quality of teaching and learning and to achieve the desired competencies" (Soderqvist, 2002, p. 29), including rationales of internationalization, broader than teaching, learning and competencies, but with limited applicability.

A more mature and comprehensive definition was proposed, emphasizing what internationalisation from the perspective of HEIs should take in consideration: "a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education"(Hudzik, 2011, p. 6). Following, internationalisation assumes a more integral process-based approach, aimed at a better quality of higher education and competencies of scholars, staff and students.

A new definition proposed for HE internationalisation as an entrepreneurial process, "manifestation of the process of international entrepreneurship. ... a combination of innovative, proactive and risk-seeking behaviour that crosses national borders and is intended to create value in organisation" (McDougall, Oviatt , 2000), applicable also in the context of educational institutions, demanding the identification and exploitation of new business opportunities in order to create by being innovative, proactive and risk assuming attitude through entering foreign markets (Jones, Coviello, 2005, p. 288).

Figure no. 1. The evolutional international engagement framework

Adopting the evolutional framework international engagement of organisations from the international business mainstream, easily can be differentiated between the several versions and definitions regarding internationalisation. Two major streams of internationalisation occur either in the home campus, either relating to what happen across national borders. Consequently, international at home or internationalisation on home campus takes place "by developing curricula and activities that focus on internationalisation without the need to travel" (Wachter, 2003, p. 6), sustaining the fact that there are ways and opportunities to internationalise which do not necessitate mobility. Contrary, the transnational aspect of higher education programs have become an active integral part of the internationalisation process, by including "all types of higher education study in which learners

are located in a country different from the one in which the awarding institution is based", "in situations where the teacher, student, programme, institution/provider or course materials cross national jurisdictional borders" (UNESCO/OECD, 2005).

The recent inclusion of education services in the General Agreement for Trade in Services by the World Trade Organisation, because of the growing higher education programs exports and imports, determined the education sector as a lucrative market, subject to multilateral trade regulations.

HE internationalisation can be considered simply "the flow of technology, economy, knowledge, people, values, [and] ideas . . . across borders" (Knight, de Wit, 1997, p. 6), and more complex "process in which basic arrangements within and around the university are disembedded from their national context due to the intensification of transnational flows of people, information and resources" (Held, 2000, p. 24) after the erosion of traditional national borders.

Tabel no. 1. *Approaches regarding HEI internationalisation*

Approach	Authors	Highlighted aspects
Process	Knight, 1994; de Witt (2002); Hudznik (2011)	integration of an international dimension into teaching, learning, research and service functions
Ethos/Culture/ At home	Hanson, Meyerson, (1995); Pickert, Turlington, (l992)	create a culture or climate that values intercultural perspectives and initiatives in campus ? inward internationalisation
Rationales	de Witt (2000); Altbach, Knight (2007)	motivations driving internationalisation process: students, faculty profile, geographic location, funding, resources
Competency/ Outcome	van der Wende (2007); Elkin et al. (2008)	development of skills, knowledge, attitudes and values to be able to compete in the global marketplace
Activity/ Instrumental	Arum,van de Water (1992); Mestenhauser (1998); Javalgi et al.(2003)	activities promoting the intercultural dimension: presence of international students, curriculum, student/ scholar/ staff mobility.
Abroad / cross-border	Knight, de Wit (1999)	cross-border delivery of education through a variety of delivery modes ? outward internationalisation
Holistic	Soderqvist (2002); Teichler (2003)	combination of previous approaches, within globalisation context

Source: developed based on Knight, J., (1994). "*Internationalization: Elements and Checkpoints*". *Research Monograph*, No 7. Ottawa: Canadian Bureau for International Education, p. 4; Knight, J., (2004). *Internationalization remodeled: Definition, approaches, and rationales. Journal of Studies in International Education*, Vol. 8, No. 1, p. 19; Delgado-Márquez, B., Hurtado-Torres, N., Bondar, Y., (2011). "*Internationalization of Higher Education: Theoretical and Empirical Investigation of Its Influence on University Institution Rankings*", in: "*Globalisation and Internationalisation of Higher Education*", *Revista de Universidad y Sociedad del Conocimiento* , Vol. 8, No 2, pp. 270.

Considering the multiple definitions offered by scholars, a number of approaches can be identified from the literature, in a complementary manner, emphasizing different components and aspects: the process based view, the ethos or culture or at home perspective, internationalisation rationales competency or outcome, activity and finally the holistic view (Tabel no. 1).

Definitions, as well as approaches (values, priorities and actions reflected during the implementation) to internationalisation can be grouped in four categories, based on Knight's (1997; Knight, de Wit, 1999) criterions, extending them in Knight (2004) by adding rationales and cross-border perspective. Reviewing the definitions, still there is a predominant activity-oriented approach toward internationalisation, even if a process approach is emerging.

Internationalisation Dimensions and Components

The international activities of universities dramatically expanded. A great deal of confusion about internationalisation is due multidimensional and multicomponent nature of the process. Even if there is no agreement on a precise definition, internationalization needs to have parameters to be assessed. Systematic analyses on the international dimension of higher education became more complex, including issues regarding Figure no. 2.

Figure no. 2. Proposed framework regarding dimensions and components of HEI internationalisation

From the HE internationalisation literature a few dimensions and components can be identified.

The activities, function or product dimension considers as subordinates the heartland of education: (i) teaching, as the (foreign) language of teaching, international component of curricula, delivery modes (face to face, distance or e-learning); (ii) learning from the student's perspective need to consider the existence of a language centre, exchange/ mobility opportunities, international students enrolment; (iii) research regarding the scholars activity of language centre existence, mobility programs, international enrolment/ training, visiting professorship, joint research chances, international development projects; (iv) services considering staff access to language centre, exchange programs, international trained staff, networking, agreements, international office with special facilities (library, housing, counselling) for international students.

The market dimension, considering where to operate internationally, differentiate between international, regional (European), transnational and global geographical areas.

International support dimension, considers the internal institutional resources, capability and strategy developed and engaged specifically for the internationalisation process.

The performance or outcome dimension permits to classify HEI with low, medium or high degree of internationalisation.

Turning again toward the international business field, some new dimensions can be added. Alike is the attitude dimension, considering a proactive (entrepreneurial), reactive or passive institution toward the changes in their external environment. Corresponding can be recognised the importance of the time and speed dimensions determining a slow-sequentionnal or rapid-accelerated-parallel internationalisation process. Besides, the operation mode dimension distinguishes between inward mode as at home internationalisation, intermediary modes like franchise, twinning, strategic alliances

and outward mode as branch campuses, within a wide range of delivery modalities, from the face-to-face to distance and e-learning.

Operationalising Internationalisation – Measurement Challenges

Different approaches to measurement exists thanks to the numerous definitions of internationalisation, like tracking measures for the progress of the process and performance indicators regarding the process finality and output (Knight, 2008), or input indicators, linking weaknesses to certain organisational aspects and output indicators, unveiling possible trouble areas in need of improvement (Brandenburg et al., 2007).

In order to create some order in chaos, one should consider the difference between the process and outcome of internationalisation. In this context, internationality or internationalisation degree or international openness will refer to an institution's (current) status with respect to international activities, while internationalisation sees the whole process in which an institution moves, from an actual status of internationality at a time towards a modified future status of extended internationality.

As a result of a wide range study, Brandenburg et al., (2007) identified 162 key figures and indicators from the areas of input and process; 24 determined for the output area; 69 indicators refer to "overall aspects", 45 to "research", and 72 to "teaching and studies", each applicable for the overall university or a specific program of study.

Delgado-Márquez et al. (2011, p. 12) proposed a measure that provides an impression of how attractive an institution is around the world, being a proxy for the internationalisation degree of HEI as academic performance in relation to institution size with a 10% weight, number of web pages returned by search engines accounting 20%, involved international staff and proportion of international students, each totalling 5%.

To date, there have been a limited number of initiatives to identify and measure the key variables in developing an international university. Some comparative measures are included in Table no. 3, referring to ones proposed by NAFSA, Knight and Brandenburg, Federkeil.

Tabel no. 2. Approaches regarding HEI internationalisation measurement

NAFSA	Guidelines of Internationalisation Quality Review	Knight (1994)	Brandenburg et al. (2007)
• Internationalized campus across schools, divisions, departments and disciplines. • Genuine administrative or board support for internationalisation. • Results for students of campus-wide internationalisation • Institution's mission or planning documents contain statement regarding international education • Commitment to internationalisation in curriculum • Results within faculty of campus-wide internationalisation	• Internationalisation strategies and policies • Organizational and support services • Academic programmes and students • Study abroad and student exchange programmes • Research and scholarly collaboration • Contracts and services	• Organisational support • Students international activity • Curriculum • International development and technical assistance • Research • International academic agreements • Foreign language study • Training and contract education • External partnerships and cooperation	• Overall aspects: • Management in general • Professors • Young researchers • Administrative staff • Resources • International networking • Academic research: • Professors • International networking in research • Resources • International research projects • Research findings • Young researchers • Teaching and studies: • Lecturers

• International dimension in off-campus programs • Internationalisation in research and/or faculty exchange • Support for education abroad, international faculty, scholars and students			• Service, administration • International networks for teaching and studies • Resources • Curricula • Graduates • International reputation

Source: de Wit, H., (2010), *"Internationalisation of Higher Education in Europe and its assessment trends and issues", Accreditation Organisation of the Netherlands and Flanders* , Colophon, p. 18-19.

The measurement of internationalisation is conceived, within the strategic plans of HEIs, as the achievement of a specific position. The international ranking "game" is another illustration of international standings based on indicators. Also, HEI should consider the fact that ARWU, WUR, and SCHIMAGO rankings also take in consideration the international dimension as criteria of measuring excellence. The first rank considers research quality, teaching quality, graduate employability, internationalisation, while the second one is based on the quality of education, quality of faculty, research output per capita performance. Despite their acceptance as relevant tools, a great debate about the validity and reliability of the rankings exists (Delgado-Márquez et al., 2011, p. 7).

Regarding measurement, in the literature there is still no clear consent about assessing how and based which indicators to use.

Research Methodology

In preparing the empirical part of the paper, for the Romanian reality description secondary data was used from INSSE (2009/2010), Eurostat (2009) and Institution of International Education (2010).

The assessment of partner universities perception is founded on the primary data gathered within the ASIGMA Project (2011), while for the inquiry a double way of information collecting process was applied based on the analysis of documents (institutional reports and visit reports) and interviews.

For the case study development internal public reports were considered for secondary data collection from the Rectors Annual Report (2010), D.R.I. Annual Report (2010) and DCSMP Annual Report (2010). A particular emphasis is placed on the methodology applied to evaluate the internationalisation of the West University of Timișoara, as a simplified version of the Elkin et al. (2005, 2008) strategic assessment model. Elkin et al. (2005) developed an 11 relevant dimension model, measured on a 10 point Likert scale, visually presenting the difference between the current/achieved and the desired state of a HEI international performance, based on internationally focused program of study, international institutional links, student exchange program, international research collaborations, internationally recognised research activity, staff interaction in international context, support for international students, attendance to international conferences, international postgraduate students, international undergraduate students, staff exchange programs, all presented as a series of radiating spokes. The model is already functional in Australia and New Zeeland shows that the model has applicability in different national contexts and educational systems.

## Empirical Findings and Discussion – From Theory to the Romanian Reality

The Romanian HE system is already suffering inconveniences. Starting from 2007/2008 academic year the number of tertiary students decreased substantially with 1.8% in the next year and 14.9% in 2009/2010, levelling around of the 2006/2007 value, meaning a backset of 3–4 years. In

order to create the big image, must be mentioned the fact that 2007/2008 was the year with two parallel graduating generations, increasing somehow the statistical number of the tertiary students too.

Source: based on statistical data from (Romanian) National Statistical Institution, 2010 Statistical Yearbook: Education, available: www.insse.ro, 2011.

Figure no. 3. The Romanian reality – evolution of total number of tertiary students
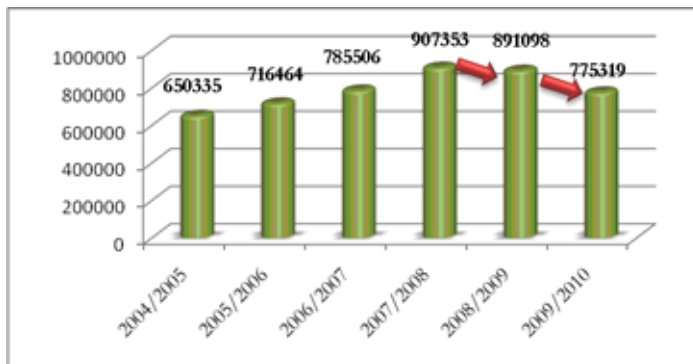

Currently, more than 2 million students are studying abroad, and it is estimated that this number will increase to 8 million by 2025. The Romanian share of international students has remained steady since 2000, at a very low percent.

From statistical point of view, in 2009/2010 the international position of the Romanian HE levelled to 25100 student mobility in Europe on the outgoing side while just 3100 on the incoming part (as presented by Eurostat). Also there were 2204 outgoing international students and 521 outgoing international scholars (as presented by the Institute of International Education).

Source: Eurostat (2011), Population and social conditions - Education and training- Mobility of students in Europe, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database; Institute of International Education. (2010). "International Students by Academic Level and Place of Origin, 2009/10." Open Doors Report on International Educational Exchange, http://www.iie.org/opendoors;

Figure no. 4. The Romanian reality – exchange and international students and scholars
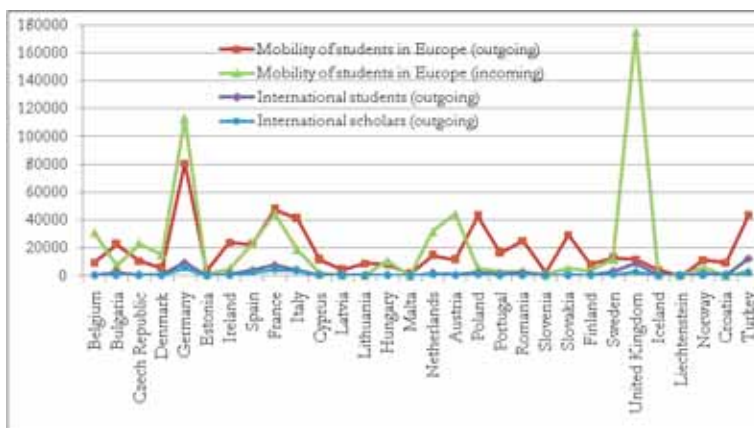
Regarding Romania's' position in the European context, a limited capitalisation of mobility opportunities are captured, both by international students and international scholars. This is in contrast to the highly dynamic and ambitious European educational initiatives, the Eastern-European academic culture is characterized by limited academic possibilities.

Partner Institutions Perceptions Regarding Internationalisation Measurement

The internationalisation barometer for the Romanian educational landscape, as showed by the primary data of the ASIGMA project shows appears in Table no. 3. on blue background. Based on available data, some composed indexes are developed, like the international fraction of the institutions all master programs, the percentage of students enrolled to international master programs in all master programs, the part of international students in total students enrolled to the institutions international master program, average number of international students enrolled to an international master program.

Tabel no. 3. Internationalisation barometer within Partner Universities

Internationalisation barometer	UBB	UTBv	UGal	ASE	UAIC	UOC	UPT	UVT
Total number of master programs at the institutional level	233	54	57	69	156	85	68	128
Total number of students enrolled in masters of the institution	10081	2160	1800	10908	8342	3205	3250	2508
The total number of masters taught in foreign languages? / international profile	37	6	6	15	18	4	6	8
Total number of students enrolled in these programs	704	200	152	2058	200	129	357	95
Total number of international students enrolled in these programs	115	1	12	10	N/A	6	3	0
International/ all master programs of the institution	15,88%	11,11%	10,53%	21,74%	11,54%	4,71%	8,82%	6,25%
Students enrolled to international/ all master programs of the institution	6,98%	9,26%	8,44%	18,87%	2,40%	4,02%	10,98%	3,79%
International/total of students enrolled to international master program	16,34%	0,50%	7,89%	0,49%	N/A	4,65%	0,84%	0,00%
Average number of international students enrolled to an international master program	3,108	0,1667	2	0,6667	N/A	1,5	0,5	0

Considering these indexes, we can determine the place held by each partner university in ASIGMA project. In this sense, with green are highlighted the best performing universities, while with red the worst performers, leaving space for continuous improvement.

A few universities offered some additional measurement indicators, but in the majority of the cases without offering any quantitative equivalent: percentage of master programs taught in foreign language of from all accredited master programs, percentage of internationalized master programs from all functional master programs; number of students admitted to internationalised master out of all admitted master students, number of international projects; recruiting international students; share of admitted students with scholarships to universities abroad; number of regional and cross-border cooperation; number of modules taught in foreign language; accession to the European interuniversity networks, number of foreign students enrolled in foreign language programs; number of Romanian students that before finalising their studies benefits from international academic experience; number of teaching international scholars; number of Romanian scholars who benefits from international academic experiences (studies, guest lecturers); number of foreign researchers working in Romanian universities' research centres; number of Romanian researchers with aboard research experience; number of joint-degree study programs with universities abroad; number of international research projects developed in partnerships with other universities; international visibility level of scientific publications by Romanian authors.

Case Study - West University of Timișoara

For the case study based of the West University of Timisoara, a simplified and modified version of the Elkin model, based on available data.

Tabel no. 4. Internationalisation degree of the West University of Timișoara in 2010

LABEL	INDICATOR	VALUE
Internationally focused program of study	Number of international/ total study programs	5,75%
International institutional links	Annual increase in signed international agreements	12,93%
Student exchange program	Mobilities (incoming/outgoing)	67,41%
International research collaborations	International/national research projects	30,00%
Internationally recognised research activity	(Highly cited researchers + ISI + BDI + international books)/ scholars	50,10%
Staff interaction in international context	(International projects + international lectors+papers international con f+ international published books)/ scholar	21,00%
Support for international students	Staff/ international students	7,36%
Attendance to international conferences	Publications at international/national conferences	57,38%
International postgraduate students	Number of international/ total students at master programs	2,65%
International undergraduate students	Number of international/ total students at BA studies	2,21%
Staff exchange programs	Scholars+Staff with overseas training/ Total number of staff	8,86%

As results shows (Tabel no. 4, Figure no. 6), there is a place for improvement regarding the number of internationally focused program of study, support system for international students, and the number of attracted international undergraduate and postgraduate students.

Figure no. 5. Graphical representation of the case study
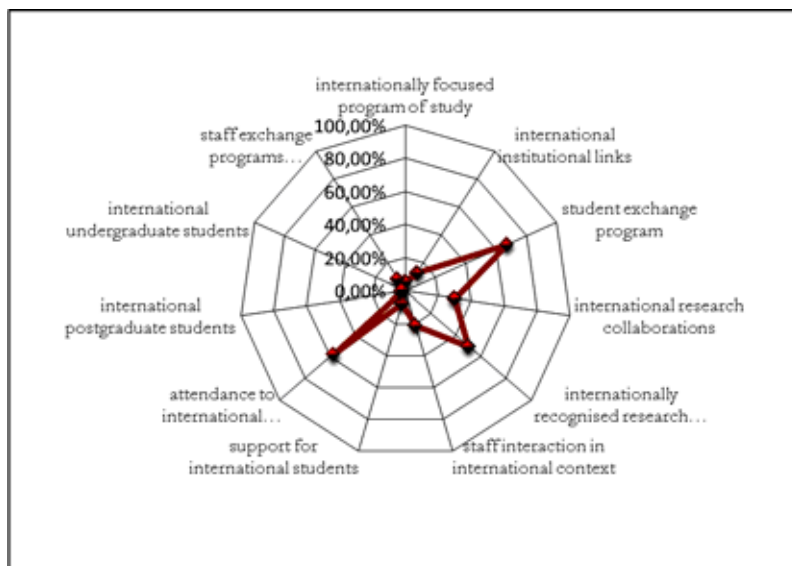
In Romania the international bachelor and master programs are quite new, universities are lacking significant experience and for this reason the spider-web graphic is quite small.

Additionally, our results demonstrate that the position achieved by university is hardly determined just by their degree of international faculty ratio and international student ratio, being far from reflecting the main variables involved in their internationalisation processes.

Conclusions, Limitations and Future Research Recommendations

Internationalisation might be considered the answer to common HE problems, because it may assure, on medium and long term, the positive effects currently needed by HEIs. From the conducted research can be detected the fact that in order to pass to an advanced level of internationalization, all the Romanian HEI must strive to increase their attractiveness for international students, scholars and must engage in international research networks. The multicultural reality in Romania is a fertile background for the internationalisation, but is similarly also vital for HEI that internationalisation becomes a core element in their implemented strategic development plan and an essential part of all educational reforms. There is an accentuated need for a national policy to stimulate activities directed towards HE internationalisation and some clarity about legal instruments to foster the internationalisation of the educational system. This is particularly important within the context on recent economic crises causing financial constraints as major barriers to internationalisation, lack of funding as the top obstacles.

The starting point is to make clear the issues that need to overcome the measurement challenges ahead of the national universities. Also, there is a need for regional or international mechanisms to monitor the international evolution of these institutions.

Internationalization should be considered as an instrument to improve the quality of education or research. In order to measure internationality and/or internationalisation, a comprehensive set of instruments of possible indicators should be developed, accepted and applied, to become more competitive on the global marketplace of educational services.

The measurement tool developed by Elkin et al. (2005), perhaps with modified indicators can be considered an excellent measurement tool, applicable, both to HEIs and to programs, respectively to measure and compare on this bases not just institutions, but countries too.

Regarding the internationalisation barometer, on one hand the small sample of universities allowed only a limited level of validity, but contains the most relevant entities, on the other hand the "blurry" understanding of HEI internationalisation when transmitting quantitative data, are source of possible errors.

Because the case-study was developed on the basis of indicators availability, considered to be representative for the study. The model can be further developed by a questionnaire-based comparative study, which may rely not only on quantitative, but also qualitative data, in order to enrich the available data content, generating possible clearer results.

Transforming the applied model in a time-lagged one should permit the inclusion of internationalisation aspirations too, and the domains with gap between current and desired internationality. Accordingly, a research extension, using data with longer time series or time-lagged variables, could allow more accurate model development, that should permit a better operationalisation of behaviour and aspiration (Nitu et al., 2010, p. 589).

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