Comparative Assessment of Global and Local Ranking of Higher Education Institutions

Dace Viksne[1], Dr.oec.; **Gunita Mazure**, Dr.oec.
Faculty of Economics, Latvia University of Agriculture

Abstract. National and international rankings are gaining attention and popularity, and not necessarily for academic reasons. Media, academic groups and the governments have indulged in various ranking efforts for various reasons. Media rankings are guided by 'what sells in the market' rather than the rigorous quality assurance practices of academic bodies (Stella A., Woodhouse D., 2006). The leading European economists emphasise that the education system, which ensures an effective and equal result, is a significant contribution to the economic growth and social cohesion. From the economists' point of view on the education quality, such notions as effectiveness and availability are the features describing quality. Opportunities of equal quality education become more significant in the education policy of Europe and most of the other developed countries. It has also to be admitted that the equality of achievements is a more complicated notion than the availability of education. Education quality and equally high achievements in the entire country are most likely to impact positively on the overall economic growth. Therefore, the research aim is to assess global and local university rankings and to draw parallels with the national ranking of Latvia. The authors conclude that rankings are aimed at the improvement of the HEI performance, study process, study quality and other aspects. However, no ranking is perfect and practically there are no at least two rankings that are comparable due to different methodologies and indicators applied when developing ranking.
Key words: rating, ranking, publications, higher education, universities.
JEL code: I20, I23, I28

Introduction

Ellen Hazelkorn (2009) emphasises that less than a decade ago, few people outside of the USA had heard of university rankings but today all has changed utterly. National rankings exist in over 40 countries. Global rankings are recent but they are also more influential; the SJT *ARWU* began in 2003, followed by *Webometrics* and Times QS *World University Ranking* in 2004, the Taiwan *Performance Ranking of Scientific Papers for Research Universities* in 2007, and *US News & World Report*'s (*USNWR) World's Best Colleges and Universities* in 2008.

Measuring institutional quality is gaining prominence in higher education due to the interplay between many factors. Some of the factors that trigger this interest among stakeholders are shrinking resource allocation for higher education from public funds, increasing competition among higher education institutions and growing awareness about value for money among the public. National and international rankings are gaining attention and popularity, and not necessarily for academic reasons. Media, academic groups and the governments have indulged in various ranking efforts for various reasons. Media rankings are guided by 'what sells in the market' rather than the rigorous quality assurance practices of academic bodies (Stella A., Woodhouse D., 2006). Similarly, there have been instances when governments have taken efforts close to ranking for specific purposes and the scope of those efforts has been very limited. However, in recent times there is a growing tendency in the academic discussions to misinterpret 'public popularity' as 'academic credibility' and 'limited scope' as 'need of the hour' that misguides many to believe that ranking efforts have to be considered seriously (Stella A., Woodhouse D., 2006).

Two notions widely used in the research, *rating and ranking*, should be clarified to avoid language-biased misunderstandings. ***Rating*** normally involves Likert-type scales on which respondents rate their level of agreement or the level of importance of a series of statements on a predefined number of scale points. Although, theoretically any number of scale points could be used, in practice most studies use either 5-point or 7-point Likert scales. ***Ranking*** can take a variety of forms. In studies of cross-cultural values, ranking has been used quite extensively (Harzing A. et al., 2009). Another explanation goes that a ***ranking*** is a relationship between a set of items such that, for any two items, the first is either 'ranked higher than', 'ranked lower than' or 'ranked equal to' the second. In mathematics, this is known as a weak order or total preorder of objects. It is not necessarily a total order of objects because two different objects can have the same ranking. The rankings themselves are totally ordered. For example, materials are totally preordered by hardness, while degrees of hardness are totally ordered (Rauhvargers A., 2011). ***Rating*** is a position on a scale, an evaluation of status, especially of financial status, or a number, letter, or other mark that refers to the ability of something. Basically, the term **ranking** is used speaking on higher education and universities.

Worldwide researchers (Baty P., 2010; Doneckaja S., 2009; Hazelkorn E., 2001; Kruzhalinin V., Artjushina I., 2008; Rauhvargers A., 2009, 2011; Saisana M., D'Hobres B., 2008; Stolz I., Hendel D., Horn A., 2010; van Vught F., 2008, 2009 etc.) more frequently carry out authoritative and comprehensive research, which in the

[1] *E-mail address*: Dace.Viksne@llu.lv

form of indices and ratings characterises higher education and research institutions.

Ranking of HEIs in Latvia was started only in 2008, thus, it could be interesting to compare the methodology applied in the world ranking and Latvia. **The research hypothesis:** profound comparison of university rankings is impossible due to different methodological approaches weighting education and research indicators. **The research aim** is to assess global and local university rankings and to draw parallels with the national ranking of Latvia. The following **research tasks** are advanced to achieve the set aim:

1) to describe the most common global university rankings;
2) to analyse the national ranking of higher education institutions;
3) to draw recommendations for the improvement of university rankings.

The research data of local and foreign authors, different working papers, scientific publications, and other materials have been used for the purpose of the study. The research is mainly based on the monographic descriptive method, and the methods of analysis and synthesis.

Research results and discussion

1. Necessity for and emergence of global university rankings

Across worldwide higher education, there are many different combinations of mission, structure and organisational culture, each set associated with distinctive traditions and models nested in national contexts, historical identities, and conditions. In the 'Westminster' countries (the UK, Australia, New Zealand) systems combine university autonomy and public/ private investment with explicit national steering. The Scandinavian university combines high and socially equitable participation, research culture and university autonomy with state investment (Valimaa, 2004; 2005 in Marginson S., 2007). The German-style university opts for elite participation, research culture, and state administration. The classical Latin American public university as at the University of Buenos Aires combines high participation, scholarly culture and a central social and political role in building the nation-state. The emerging science universities of East and Southeast Asia including China, Taiwan, Korea, and Singapore are fostered by state investment, and in Singapore are explicitly designed to secure global competitiveness. India has developed a unique model of technological and business-focused institutions combining high quality with commercialism. Beyond the research university are strong vocational sectors in Finland, Germany, France; other vocational and community-based programmes; and a wide range of for-profit providers, online institutions, and institutions with single-specialisms (Marginson S., 2007).

The offer of higher education in Europe and in the world has become more available and competitive; demand for information on the quality of higher education institutions and their effectiveness increases as well. Following the example of the USA, many European universities compete for their place in the global higher education environment. Considering the experience of other countries in developing both national and international ratings of higher education institutions, it is evident that none of the ratings is absolutely complete (Viksne D., Mazure G., 2011). Therefore, every user of the rating should critically assess it and receive only the most important information and indicators from the rating. The first ratings of higher education institutions in the USA appeared already in the 1870s. However, a unified, universal rating methodology has not been designed until present, and the approach to evaluating higher education institutions differs in different countries. Part of the countries with a wide higher education system develops their own national ratings, yet, international university ratings have gained bigger popularity in the world.

Assessing the current university ratings, in 2008 the European Commission indicated that the developers of SJTU and THES indices paid more attention to the research aspects, not the study process as well as to institutions as such, not to their programmes. Therefore, the European Union started a two-year project to develop and implement a new university assessment system. The new European League Rating is to balance research and education quality assessment in higher education institutions as well as to accept the variety of higher education institutions. In 2010, the European League Rating had to be tested with 150 higher education institutions in the world, initially concentrating on engineering sciences and business schools (Karklina, 2010).

Higher education supply in the European Union and in the world has become more open and competitive, thus, increasing the demand for information on the quality of HEIs and their efficiency. Many European universities following the example of the USA compete for the rank in global environment of higher education institutions. Certainly, it is worth mentioning that based on the experience of other countries in making both international and national university rankings, none of the rankings is perfect. Nevertheless, the first ranking appeared in the 19th century, there is still no single universal methodology for developing university rankings, and assessment approach differs by countries. Several countries develop their own national rankings, while the majority of countries apply international university rankings. Worldwide rankings are developed by journals, newspapers, HEIs, Ministries of Education of particular countries, accreditation agencies, professional associations, or other independent institutions.

2. Methodologies of the most popular global rankings

Quality of higher education institution may not be completely measured through certain figures and numbers, thus, any ranking is disputable, and each of them is arguable, especially in such a sensitive sphere as education. Therefore, annually several international and national rankings are developed to show the situation in higher education sphere (Pirmais visu Latvijas augstskolu reitings, 2008). There are several popular rankings in the world. The most popular global league tables (ARWU, THE-QS and THE-Thomson Reuters, US News and World report Ranking (USNWR), HEEACT,

Table 1

Types of rankings and institutions responsible for the provision of ranking

Types of rankings	Name of ranking	Institution responsible for the ranking
Academic rankings with the main purpose of producing university league tables	Academic Ranking of World Universities (ARWU)	Shanghai Ranking Consultancy
	THE World University Ranking	Times Higher Education
	World's Best Universities Ranking	US News & World Report in cooperation with Quacquarelli Symonds
	Global Universities Ranking	Reitor
Rankings concentrating on research performance only (with or without league tables)	Leiden Ranking	Leiden University
	Performance Rankings of Scientific Papers for World Universities	Taiwan Higher Education Accreditation and Evaluation Council
	Assessment of University-Based Research	European Commission
Multirankings – university rankings and classifications using a number of indicators without the intention of producing league tables	CHE University Ranking	Centre for Higher Education Development/*die Zeit*
	U-Map classification	CHEPS
	3 European Multidimensional University Ranking System (U-Multirank)	EU funded project
Web rankings	Webometrics Ranking of World Universities	-
Benchmarking based on learning outcomes	Assessment of Higher Education Learning Outcomes Project (AHELO)	OECD

Source: authors' construction based on Rauhvargers A., 2011

Reitor and others) concern the world's top universities only. The league tables include roughly 1% to 3% of universities (200-500) universities out of approximately 17,000 universities in the world (Rauhvargers A., 2011). Rankings can be grouped according to their purpose, parameters measured, presentation of the results, or intended impact (Table 1).

Table 1 includes five types of rankings, however, the present paper deals only with pure academic rankings due to the limited research scope. The academic ranking aimed at producing league tables includes four individual sets of rankings.

The Academic Ranking of World Universities (ARWU) was first published in June 2003 by the Centre for World-Class Universities and the Institute of Higher Education of Shanghai Jiao Tong University, China, and then updated on an annual basis. The majority of the world's higher education institutions is covered by Shanghai "Jiao Tong" University research, which compares 500 best universities from different countries and regions. The sources of information mainly are data available on the Internet. The ARWU and its content have been widely cited and employed as a starting point for identifying national strengths and weaknesses as well as facilitating reform and setting new initiatives. Starting from 2009, the ARWU has been published by Shanghai Ranking Consultancy, a fully independent organisation (ARWU, 2012).

The Times Higher Education World University Rankings was first published in 2004. In a way, it was an 'answer' to the Shanghai ARWU ranking. On 30 October 2009, Times Higher Education announced that it had signed an agreement with Thomson Reuters to provide the data for its annual World University Rankings (Baty P., 2010). This was followed by substantial changes in the set of indicators used and the overall methodology for the 2010 rankings.

Early in 2010, the US News and World Report (USNRW) began cooperation with QS and, on 25 February 2010, posted its new 2009 *World's Best Universities Ranking* on the web. This was done with a report based on the same QS results as were posted on the 2009 THE-QS World Universities Ranking website and on the QS website itself. The difference between these three is that the USNRW-QS ranking publishes a list of the Top 400 universities while the THE publishes a Top 200 list and QS publishes a Top 500+ list (USNRW, 2012).

The Reitor *Global Universities Ranking* is carried out by a ranking agency located in Moscow. However, the 'ideology' of the ranking originates from both Reitor and Lomonosov Moscow State University (STRF, 2008; Doneckaja, 2009). The first and so far only Reitor Global University Ranking was compiled during 2008, and the results were posted in February 2009. Although, it has been stated that there is an intention to turn it into a periodic ranking, no further information has been

Table 2

Dimensions of indicators weighting the rank of a university

Ranking system	Indicator dimension	Weighting
SJT *Academic Ranking of World Universities*	• Quality of Education	10%
	• Quality of Faculty	
	• Number of Nobel Prize/Field Medal	20%
	• Number of HiCi Researchers	20%
	• Research Output	
	• Number of Articles in Nature/Science	20%
	• Number of Articles in Citation Index	20%
	• Size of Institution	10%
Times QS *World University Ranking*	• Peer Appraisal	40%
	• Graduate Employability	10%
	• Teaching Quality/SSR	20%
	• International Students	5%
	• International Faculty	5%
	• Research Quality/Citations per Faculty	20%
Performance Ranking of Scientific Papers for Research Universities	• Research Productivity	
	• Number of Articles in last 11 years	10%
	• Number of Articles in current year	10%
	• Research Impact	
	• Number of Citations in last 11 years	10%
	• Number of Citations in last 2 years	10%
	• Average number of Citations in last 11 years	10%
	• Research Excellence	
	• HiCi index of last 2 years	20%
	• Number of HiCi Papers, last 10 years	10%
	• Number of Articles High-Impact Journals in Current Year	10%
	• Number of Subject Fields where University demonstrates Excellence	10%

Source: Hazelkorn E., 2009

supplied on this matter. The stated purpose of the ranking is to cater for the Russian academic world, which has a growing interest in the international assessment of Russian universities as a means of situating them within the global system of higher education.

Rankings compare HEIs using a range of different indicators, which are weighed differently according to each ranking system (Table 2). Information is generally drawn from three different sources: 1) independent third party sources, e.g. government databases; 2) HEI sources, or 3) survey data of students, employers, or other stakeholders. Considering the absence of reliable publicly available cross-national comparative data, global rankings (are forced to) measure research in broad-brush strokes, rather than the full range of higher education activity (Hazelkorn E., 2009).

Every ranking applies its own assessment methodology, and each of them has its own advantages and disadvantages. Like, the Shanghai method has been criticised for using the criteria that describe research activities of a university, irrespective of the fact that research is only one of the university activities (Pirmais visu Latvijas augstskolu reitings, 2008).

The British publication "*The Times Higher Education*" publishes the World university ranking, naming those 200 universities, which are the best in their opinion. London research differs not only because they publish only 200 universities but also because it includes regional assessment and the relation of assessment with the specialisation. From the methodological point of view, the biggest difference between Shanghai and London research is that they separate the USA and European universities from almost 1 466 Latin American and Caribbean universities. University ranking helps the potential students make the choice when evaluating the education opportunities.

The ARWU uses six objective indicators to rank world universities including the number of graduates and staff winning Nobel Prizes and Fields Medals, number of highly cited researchers selected by Thomson Scientific, number of articles published in journals of *Nature* and *Science*, number of articles indexed in Science Citation Index - Expanded and Social Sciences Citation Index, and per capita performance with respect to the size of an institution.

Times QS World University Ranking and Performance Ranking of Scientific Papers for Research Universities apply the measure of ***citations,*** which evaluated in some fashion to take into account the size of institution, are the best understood and most widely accepted measure of research strength. Often calculated on a "per paper" basis, the QS World University Rankings™ has adopted a "per faculty member" approach since its inception in 2004. The Citations per Faculty score contributes 20% to the overall rankings score. There are three major sources of publication and citation data worldwide, these are the Web of Science from Thomson Reuters; Scopus from Elsevier, and Google Scholar. Results from the

Table 3

Indicators and criteria for ranking higher education institutions in Latvia

No.	Measuring aspect	Indicator	Weighting
1	Students	Proportion of students and the academic staff	1
2		Proportion of graduates	0.5
3	Academic staff	Proportion of the academic staff having a doctor's degree and having the HEI as the principal place of employment (vs. all HEIs)	1.5
4		Proportion of the academic staff having a doctor's degree and having the HEI as the principal place of employment (vs. particular HEI)	1
5		Proportion of the academic staff having the HEI as the principal place of employment	0.5
6		Age structure of the academic staff (proportion of the academic staff between 30 and 50 years)	1
7	International cooperation	Proportion of international students	0.5
8	Research	Number of publications per one academic staff member	2
9	Public opinion	Quality of education	2
10		Popularity/recognisability of HEI	1

Source: Latvijas augstskolu..., 2010

Essential Science Indicators (ESI), a subset of the Web of Science were used in the first three years of the QS World University Rankings™. In 2007, the switch was made to Scopus for a number of reasons but principally due to broader journal coverage leading to results for a larger number of institutions.

The *Employer Reputation* component is unique amongst current international evaluations in taking into consideration the important component of employability. The majority of undergraduate students leave university in search of employment after their first degree, making the reputation of their university amongst employers a crucial consideration. A common approach to the evaluation of employability in domestic rankings is graduate employment rate, there are two reasons why this indicator does not work on an international level – the first is that this evaluation looks at the top universities in the world – all of whom have very high employment rates – so it does not provide very much discernment. The second is that, since Times QS is looking at different countries, the results would react to local economic conditions and not necessarily just the quality of the institution (Times QS World University Ranking, 2012).

Since aims of higher education policy and hence the role of higher education institutions differ by countries, it is impossible to advance a single quality definition. There is no correlation among various world rankings, as each of them outlines different aspects as the most significant ones. It means that the same universities take different ranks in different rankings and ratings. Nevertheless, comparing "The Times Higher Education" research results with other similar world university rankings show an essential difference – universities of the UK and the USA govern among the leading world universities. Yet, an interesting coincidence may be found if comparing universities, which have been ranked in the first 20 positions, it is possible to find 14 similar universities, i.e. 70% of coincidence. For example, Harvard University is the most qualified university in the world, while Cambridge University – in Europe.

Rankings reflect prestige and power; and rankings confirm, entrench and reproduce prestige and power. The particular systems in use further particular interests. Ranking determines the reputation of a university; they attract the interest of the society and change behaviour of universities and policy makers (Marginson S., 2007). Technically, it is problematic to acquire internationally comparable data; problems are caused by the name of institutions, establishment, merging and division of institutions, searching of publications and identification of authors (Liu N.C., Cheng Y., 2005). According to international research conducted in 2006 and 2008, (Hazelkorn, 2007; Locke et al., 2008), higher education leaders around the world believe high-achieving students use rankings to 'shortlist' university choice, especially on the postgraduate level, and stakeholders use rankings to influence their own decisions about funding, sponsorship, and graduate recruitment.

3. Ranking of higher education institutions in Latvia

Latvia lacked a common university and HEI ranking prior to 2008, thus, there were several rankings by different authors available. Over the past years, the most recognisable ranking of universities and HEIs in Latvia is the one developed by a daily newspaper "Latvijas Avize" in collaboration with the University of Latvia and experts from various industries. The ranking is developed based on internationally known and approbated methodology that includes 10 indicators (Table 3). In addition, the ranking is also based on data from a survey of Latvian inhabitants regarding popularity of universities, quality of education etc. For the past 4 years – ever since the ranking was established – the top 3 universities have not changed; they include University of Latvia, Riga Technical University, and Riga

Stradins University. However, according to the Ranking Web of World Universities in 2012, the three best universities from Latvia are the University of Latvia (882nd position), Riga Technical University (9150th position), and Latvia University of Agriculture (3119th position) (Webometrics, 2012).

Indicators that are used for the assessment of university quality may be divided into several groups, for example, resources of a HEI, indicators characterising the study environment (students, number of academic staff, available teaching and learning resources), indicators characterising the study process (students' satisfaction) and indicators characterising results (satisfaction of employers, research achievements, number of publications). In Latvia, the proportion of employees versus students is a classical indicator characterising the study process, the index of citing scientific publications is an indicator characterising the research process, while index of citing scientific publications per one employee is a quantitative value characterising the research process. This index shows the intellectual potential and strength of a university in relation to its number of employees. The citation of scientific publications is considered the most reliable indicator of research significance. Frequently, abstract and citation databases, like Sciverse Scopus or Thomson Reuters are used as the research significance basis. The share of foreign lecturers and students, in turn, shows the degree of internationalisation of a certain higher education institution.

Higher education policy makers and administrators require a quantitative, stable and based on facts frame of reference to quantify activities of higher education that are difficult to evaluate – studies, research, administration, functioning, and financing. Therefore, different indicators are use; besides indicators are variables, which refer to specific empirically obtainable characteristics of higher education institutions and their study programmes. Indicators identify the direction of performance; they allow comparing actual performance with the set targets. Indicators play a significant role for the improvement of a HEI operation. However, indicators serve as a starting point for discussion on institutional targets and create a much broader approach to planning, budget drafting, and human resource management in higher education institutions.

The majority of youngsters (83%) choose studies basing on the quality of higher education institutions and their study programmes as well as reputation and prestige (Karklina D., 2010). Besides, they emphasise that independent university ranking reports on the quality of studies, which are prepared with the participation of students, could help choosing a HEI. Internationalisation and ranking of HEIs have also intensified the competition among HEIs, while demographic and economic crisis have forced HEIs to assess their operation principles. Rankings of universities and other HEIs influence not only the future of a HEI and its staff but also the education sector in general. Rankings are influential as they both attract the attention of society and change future action of HEIs and policy makers.

In 2011, the fourth ranking of higher education institutions of Latvia was published by the newspaper "Latvijas Avize". Representatives of many HEIs criticise the ranking, even those that are placed in Top 5. Mainly, criticism is directed towards the proportion of international students at state founded HEIs. It is considered to be unfair to compare the number of international students at private and state founded HEIs, since the legislation of the Republic of Latvia regarding studies in other languages than the official language in state founded HEIs was changed only from August 2011. Thus, private HEIs were in more favourable situation, as they could provide studies in Russian and English as well. Another aspect relates to the publications cited in Scopus database, as it does not completely reflect scientific publications, for example, in arts and humanities. Nevertheless, according to Marcis Auzins, Rector of the University of Latvia "'university rankings exist irrespective of the fact whether individual higher education institutions like them or not. They are meant to provide information for experts and the society for discussions aimed at the improvement of HEIs activities" (Jau ceturto gadu..., 2011).

Conclusions, proposals, recommendations

1. Many and various rankings of higher education institutions are known worldwide. The first university rankings were developed 3-5 centuries ago; while the first ranking of HEIs in Latvia was developed only in 2008.
2. Rankings are aimed at the improvement of the HEI performance, study process, study quality, and other aspects. However, no ranking is perfect and practically there are no at least two rankings that are comparable due to different methodologies and indicators applied when developing ranking. This verifies the set hypothesis.
3. The offer of higher education in Europe and in the world has become more available and competitive; demand for information on the quality of higher education institutions and their effectiveness increases as well. Hence, university ranking is one of the aspects determining the choice for further place of studies.
4. University rankings exist irrespective of the fact whether individual higher education institutions like them or not. They are meant to provide information for experts and the society for discussions aimed at the improvement of HEIs activities.

Bibliography

1. Baty, P. (2010). The World University Rankings 27 May 2010. Retrieved: http://www.timeshighereducation.co.uk/story.asp?storyCode=411739&sectioncode=26. Access: 10 February 2012.
2. Doneckaja, S. (2009). Rossiskij podhod k ranzhirovaniju vedushchih universitetov mira (Russian Approach to Ranking of the Leading World Universities). EKO. No. 8, str. 137-150. Retrieved: http://www.sibupk.su/stat/publicat_nir/smk_4.pdf. Access: 10 February 2012.
3. Jau ceturto gadu publicejam augstskolu reitingu (Already for the Fourth Year We Publish the Ranking of Higher Education Institutions) (2011). Latvijas Avize, 2011. gada 11. maijs.
4. Harzing, A. et al. (2009). Rating versus Ranking: What is the Best Way to Reduce Response and

Language Bias in Cross-national Research? International Business Review, Volume: 18, Issue: 4, Publisher: Elsevier, pp. 417-432.
5. Hazelkorn, E. 2007. The Impact of League Tables and Ranking Systems on Higher Education Decision-Making. In: *Higher Education Management and Policy*, 19(2), OECD, Paris, pp. 87-110.
6. Hazelkorn, E. (2009). Impact of Global Rankings on Higher Education Research and the Production of Knowledge. Occasional Paper No. 15, UNESCO Forum on Higher Education, Research and Knowledge. Retrieved: http://unesdoc.unesco.org/images/0018/001816/181653e.pdf. Access: 10 February 2012.
7. Hazelkorn, E. (2011). Rankings and the Reshaping of Higher Education. The Battle for World-Class Excellence. Palgrave.
8. Karklina, D. (2010). Eiropas studenti grib tuvak darba tirgum (European Students Willing to Approach the Labour Market). *Diena*, Nr.98, 28.apr., 3.lpp. Iel.: Karjeras Diena.
9. Kruzhalinin, V., Artjushina, I. (2008). Rankings and Quality of Education. Retrieved: http://reitor.ru/ru/observatory/global/index.php?id19=474. Access: 10 February 2012.
10. Latvijas augstskolu reitings – jau treso reizi (Ranking of Latvian HEIs – already for the Third Time) (2010). Latvijas Avize, 2010. gada 19. maijs.
11. Liu, N.C., Cheng, Y. (2005) Academic Ranking of World Universities – Methodologies and Problems. *Higher Education in Europe,* Vol. 30, No. 2, p. 14.
12. Locke, W.D., Verbik, L., Richardson, J.T.E., King, R. (2008). Counting what is Measured or Measuring what Counts? League Tables and the Impact on Higher Education Institutions in England. In: *Appendix A. Research Methodologies Circular 2008/14*, Bristol, Higher Education Funding Council for England.
13. Marginson, S. (2007). Global University Rankings: where to from Here? Papers of the Conference Singapore, 7-9 March, p. 21. Retrieved: http://www.cshe.unimelb.edu.au/people/staff_pages/Marginson/APAIE_090307_Marginson.pdf. Access: 10 February 2012.
14. Pirmais visu Latvijas augstskolu reitings (The First Ranking of Latvian HEIs) (2008). Latvijas Avize, 2008. gada 19. maijs.
15. Rauhvargers, A. (2011). Global University Rankings and their Impact. EUA Report on Rankings 2011. European University Association, p. 85.
16. Rauhvargers, et al. (2009). Bologna Stocktaking Report 2009. Retrieved http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/Stocktaking_report_2009_FINAL.pdf. Access: 10 February 2012.
17. Saisana, M., D'Hombres, B. (2008). Higher Education Rankings: Robustness Issues and Critical Assessment. How much confidence can we have in Higher Education Rankings? Luxembourg, Office for Official Publications of the European Communities. Retrieved: http://globalhighered.files.wordpress.com/2008/11/eur23487.pdf. Access: 10 February 2012.
18. Stella, A., Woodhouse, D. (2006). Australian Universities Quality Agency Ranking of Higher Education Institutions. AUQA Occasional Publications Number 6. Retrieved: http://www.auqa.edu.au/files/publications/ranking_of_higher_education_institutions_final.pdf. Access: 16 February 2012.
19. Stolz, I., Hendel, D., Horn, A. (2010). Ranking of Rankings: Benchmarking Twenty-five Higher Education Ranking Systems in Europe. Higher Education, Online, Springer, Netherlands. p. 22.
20. Valimaa, J. (2004). Nationalisation, Localisation and Globalisation in Finnish Higher Education. *Higher Education*, 48, pp. 27-54.
21. Valimaa, J. (2005). Globalisation in the Concept of Nordic Higher Education. In A. Arimoto, F. Huang, K. Yokoyama (Eds.). *Globalisation and Higher Education*. International Publications Series 9, Research Institute for Higher Education, Hiroshima University. Retrieved: http://en.rihe.hiroshima-u.ac.jp/pl_default_2.php?bid=63653. Access: 17 February 2012.
22. van Vught, F., Ed. (2009). Mapping the Higher Education Landscape: Towards a European Classification of Higher Education. Dordrecht etc., Springer, p. 170.
23. van Vught, F., Kaiser, F., Bohmert, D., File, J., van der Wende, M. (2008). Mapping Diversity; Developing a European Classification of Higher Education Institutions. Enschede.
24. Viksne D., Mazure G. (2011). Quality Assurance Aspects of Higher Education in Latvia. In: *The 2011 Barcelona European Academic Conference:* Proceedings of International Academic Conference, Barcelona, Spain, pp. 923-933. ISSN: 1539-8757 (print), 2157-9660 (online).
25. Webometrics, (2012). Ranking Web of World Universities. Retrieved: http://www.webometrics.info/rank_by_country.asp?country=lv. Access: 14 January 2012.