

# The methodology for quantitative evaluation of academic staff with Doctors degree

**I Spica, B Berzina, E Spics**

*ISMA University, Scientific Institution Business Competence Centre, Lomonosova Str. 1, Building 6, LV-1003 Riga, Latvia*

*\*Corresponding author's e-mail: inese.spica@gmail.com*

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## Abstract

In modern day world intellectual capital presents ever greater share in the total capital structure. Competitiveness of a country and welfare of its people is very closely connected to the scope and quality of intellectual capital. Major part of intellectual capital is created in universities, scientific institutes and research institutions. Methodology of quantitative evaluation of the quality of academic staff with Doctors degree encompasses three basic principles: 1) calculation of the indicators of the efficiency of the involvement of academic staff in the formation of intellectual capital; 2) comparative analysis of the indicators of the efficiency of the involvement of academic staff in the formation of intellectual capital; 3) annual evaluation of the indicators of the efficiency of the involvement of academic staff in the formation of intellectual capital.

*Keywords:* Methodology, academic staff, quantitative evaluation, intellectual capital, higher education establishments

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## 1 Introduction

Objective of the present study is to develop the basic principles of methodology for quantitative evaluation of academic staff with Doctors degree.

## 2 Research methods, period and research basis

Comparative analysis of the rating of higher education establishments in Latvia is based on "Rating of Higher Education Establishments in Latvia" developed by the newspaper "Latvijas Avīze". It is based on previously elaborated methodology with world wide recognition and approbation including ten criteria of higher educational establishments: percentage of the number of students and graduates, percentage of the employed academic staff with Doctors degree, percentage of the employed academic staff, age structure of the academic staff, percentage of foreign students, number of publications per one academic staff unit (from "ISI Web of Knowledge" or "Scopus"), as well as opinion of the Latvian public regarding popularity and recognition of each higher education establishment and quality of education offered. Quantitative statistical data publicly available from website of Ministry Education and Science of the Republic of Latvia have been used for the purpose of comparing the higher education establishments in Latvia. Each evaluation criterion has been allocated specific ratio between 0,5 and 2.

Authors of the present study calculated the efficiency of involvement of academic of the higher education establishments of Latvia in the formation of intellectual capital (AIK) by using the initial data from "Rating of Higher Education Establishment in Latvia" concerning the number of scientific publications and the number of employed academic staff and worked out the rating for each higher education establishment.

Authors of the present study calculated the efficiency of

involvement of academic with Doctors degree of the higher education establishments of Latvia in the formation of intellectual capital (DIK) by using the initial data from "Rating of Higher Education Establishment in Latvia" concerning the number of scientific publications and the number of employed academic staff with Doctors degree and worked out the rating for each higher education establishment.

Mutual efficiency of involvement of academic staff with Doctors degree and without the Doctors degree in the formation of intellectual capital of higher education establishments (DE) was calculated by the authors of the present study by way of dividing indicator DIK by indicator AIK and thus determining rating of each higher education establishment.

Development of trial methodology of quantitative evaluation of academic staff with Doctors degree by applying previously calculated indicators of higher education establishments in Latvia AIK, DIK, DE and comparative analysis of rating the indicators mentioned above.

The research period is from the year 2003 till the year 2017, separate theme have been studied for a shorter period of time or by way of comparison.

## 3 Discussion

By way of comparison of ranking of a higher education establishment in "Rating of Higher Education Establishments in Latvia" according to ranking indicators AIK and DIK we can conclude that only the first three ranking in all three ratings are more or less the same, but other ratings demonstrate considerable differences. Even more differences can be observed by comparing the first three ratings with the ranking of rating DE.

Namely, the University of Latvia is ranked in the first place according to the "Rating of Higher Education Establishments in Latvia", in the second place in DIK indicator, but the eleventh place in DE indicator rating. Whereas Latvian Academy of Culture is ranked in the twentieth place according to the "Rating of Higher Education Establishments in Latvia", shares fifteenth till

sixteenth place in DIK indicator rating, but is ranked in the first place in DE indicator rating. This allows to conclude that in the year 2014 the quality of academic staff with Doctors degree representing Latvian Academy of Culture is higher than the quality of academic staff with Doctors degree representing University of Latvia.

#### 4 Conclusions

Methodology of quantitative evaluation of the quality of

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academic staff with Doctors degree encompasses there basic principles:

1. calculation of the indicators AIK, DIK, DE;
2. comparative analysis of AIK, DIK, DE indicators;
3. annual evaluation of AIK, DIK, DE indicators.

Methodology of quantitative evaluation of the quality of academic staff with Doctors degree will ensure impartial evaluation as well as facilitate efficiency of involvement of academic staff in formation of intellectual capital.

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