

Intellectual Capital of Humanities and Art Sciences and the Efficiency of its Formation at Scientific Institutions

Inese Spica, Baiba Berzina, Ernests Spics, Rozite Katrina Spica and Peteris Ponnis

Scientific Institution Business Competence Centre, Riga, Latvia

inese.spica@gmail.com

baiba.berzina@tvnet.lv

ernests.spics@gmail.com

rozite.spica@gmail.com

peteris.ponnis@gmail.com

Abstract: In the present situation of the formation of intellectual capital (IC) of humanities and art sciences at scientific institutions (SIs) in Latvia, the theme of the research is highly topical. The object of the research is the formation of IC of humanities and art sciences at SIs while the subject of the research is the comparative analysis of the efficiency of the involvement of academic staff and students in the formation of IC of humanities and art sciences at SIs of Latvia. The objective of the research is to study the involvement of academic staff and students in the formation of IC of humanities and art sciences at SIs in Latvia in the period from 2013 to 2018. The following tasks were determined to reach the objective: to study the formation of IC of humanities and art sciences at SIs; to identify the concept of the efficiency of the involvement of academic staff and students in the formation of IC of humanities and art sciences; to calculate main indicators thereof, and, to carry out the comparative analysis of indicators characterising the efficiency of the involvement of academic staff and students in the formation of IC of humanities and art sciences at SIs in Latvia. Research methods used in the paper are content analysis, economic analysis, and economic experiment.

Keywords: Intellectual capital indicators, Social sciences, Scientific institution, Academic staff, Students

1. Introduction

Compared to the previous work by Spica et al (2022) this paper draws a more complete portrait of IC of humanities and art sciences and the efficiency of its formation at SIs in Latvia. Here, the same methodology as in the previous work has been applied.

Every six years, the Ministry of Education and Science of the Republic of Latvia (MoES) organises an international evaluation of SIs registered in Latvia. The previous International Evaluation of Scientific Institutions' Activity (IESIA) in Latvia covered the period from 2006 to 2011. The last IESIA refers to the period from 2013 to 2018. In order to establish the dynamics of the efficiency indicators of academic staff involved in the formation of IC in humanities and art sciences at SIs of Latvia (MoES, 2021), the authors used the output data of findings across the set of evaluation of SIs of humanities and art sciences per period from 2013 to 2018 offered by "Technopolis-group" (TG).

TG developed the above IESIA for the periods from 2006 to 2011 and from 2013 to 2018 using similar methodology. It enables the authors to calculate the IC indicators in humanities and art sciences at SIs of Latvia and to compare their dynamics during the period from 2013 to 2018.

The comparative analysis of efficiency indicators of involvement of academic staff of humanities and art sciences at SIs of Latvia in the IC formation will let them to establish whether and how the technological business environment affects them. The IESIA was organized during the economic crisis caused by Covid-19. Data of the comparative analysis will help to develop support programs to increase the efficiency of involvement of the academic staff in the IC formation. In addition, the comparative analysis will reveal whether the score of humanities and art sciences at SIs of Latvia in the IESIA of TG coincides with the place of SIs of Latvia in the ratings of IC indicators, and whether the overall score of SIs of Latvia also reflects the efficiency of the involvement of academic staff of SIs of Latvia in the IC formation.

Hypothesis: The overall score of SIs shows the efficiency of the IC formation at SIs of Latvia.

2. Theoretical Background

Spica et al (2017a) state that IC is an economic category, a spiritual value created by the human potential, and it can be accumulated and converted into the value of other capitals. By investigating certain information about educational management, we can increase the capacity and significance of the country's total economic capital

movement. Rondeau et al (2022) remind that peer reviewed publications remain a traditional form of academic productivity.

Spica et al (2017a; 2017b) have elaborated four indicators of the efficiency of the IC formation in a higher education establishment (HEE): (1) the efficiency of the involvement of academic staff in the IC formation per year in percentage (AIK); (2) the efficiency of the involvement of academic staff with a Doctorate degree in the IC formation per year in percentage (DIK); (3) the efficiency of the involvement of students in the IC formation per year in percentage (SIK) and, (4) mutual efficiency of the involvement of academic staff with Doctorate degrees and academic staff without Doctorate degrees in the IC formation per year in times (DE).

3. Methodology

In order to calculate the AIK, DIK, SIK, and DE of a HEE, Spica et al (2017a; 2017b) have developed four formulas: (1) $AIK = (ZPS : AS) \times 100$; (2) $DIK = (ZPS : DS) \times 100$; (3) $SIK = (ZPS : SS) \times 100$; (4) $DE = DIK : AIK$. Where: ZPS represents the number of scientific publications of the HEE per year; AS represents the number of academic staff in full-time jobs per year; DS represents the number of academic staff with Doctorate degrees holding full-time jobs per year; SS represents the number of students per year.

For the purposes of the study, the authors modified these formulas. Namely, they calculated IC efficiency indicators for total numbers of full time equivalent (FTE) academic and research personnel (KIK), for FTE academic personnel (AIK), for FTE academic and research personnel (PIK) and for PhDs obtained at SIs (SIK). In addition, all the said IC efficiency indicators were calculated for different forms of IC such as total number of self-reported outputs of IC (KS), articles in peer reviewed scientific edited journals, and conference proceedings included in WoS or SCOPUS (WS), articles in peer reviewed edited journals and conference proceedings not included in WoS or SCOPUS (RS), monographs (MS), and Latvian patents (LPS). The authors calculated mutual efficiency indicators (PE) regarding involvement of the FTE academic and research personnel (PS) and the FTE academic personnel (AS) in formation of IC in times.

In the present research, the authors used the following data from the IESIA: output data on the number of FTE academic personnel (AS), the number of FTE academic and research personnel (PS), the total number of FTE academic and research personnel (KS), the number of PhDs obtained (SS), the number of articles in peer-reviewed scientific edited journals and conference proceedings included in WoS or SCOPUS (WS), the number of articles in peer-reviewed scientific edited journals and conference proceedings not included in WoS or SCOPUS (RS), the number of monographs (MS), the number of Latvian patents (LPS), and the total number of self-reported outputs (KS) in period from 2013 to 2018 per SI of humanities and art sciences in Latvia. The authors revised the above WS, RS, MS, LPS, and KS for one year.

The number of scientific publications and patents represents the main results of the IC formation at SIs of humanities and art sciences. TG analysed 11 SIs of humanities and art sciences of Latvia. Within the IESIA, output data on 10 public SIs and one private SI of Latvia were collected.

During the period analysed in the IESIA, there were only 11 such SIs in Latvia: Faculty of Architecture and Design and Faculty of Media and Creative Technologies of RISEBA University of Applied Sciences (RISEBA/H); National Library of Latvia (NLL); Latvian Academy of Culture (LAC); Faculty of Architecture of Riga Technical University (RTU/H); Faculty of Translation Studies of Ventspils University of Applied Sciences (VeU/H); Faculty of Humanities and Arts of Liepaja University (LU/H); Daugavpils University Research programme "Regional studies, literature and arts" (DU/H); Art Academy of Latvia (AAL); Institute of Literature, Folklore and Art of the University of Latvia (UL/LFA); Jāzeps Vītols Latvian Academy of Music (JVLAM); and, Cluster of Humanities and Arts of the University of Latvia (UL/CHA).

In this study, one scientific publication or one patent is accepted as one unit of IC. Further, KIK, AIK, PIK, SIK, PE were calculated using the modified formulas 1; 2; 3; and 4. Next, according to the results obtained through the authors calculations, a corresponding rating place was assigned to each SI of Latvia per year and each of the above indicators KIK, AIK, PIK and SIK.

Each place in the rating was then assessed with an appropriate score, where the lowest score is 1 point, while the highest score is 5 points. Thus, the SI, which took first to second place in- KIK, AIK, PIK and SIK received 5 points in the ranking, third to fourth place received 4 points, fifth to sixth place received 3 points, seventh to eighth place received 2 points, and ninth to eleventh place received 1 point.

The above-mentioned assessment system allows to compare the quantitative efficiency indicators of SIs of humanities and art sciences in Latvia calculated by the authors to IESIA overall assessment criterion - quality of

the SI research performance. The relevant TG Panel was the score of research performance of each SI using a scale where score 5 means an outstanding level of research, score 4 means a very good level of research, score 3 means a good level of research, score 2 means an adequate level of research, and score 1 means a poor level of research (MoES, 2021).

The score assigned to the overall assessment by the relevant TG Panel was based on the assessment of five sub-elements from A to E, where element A characterises the quality of the research, element B - the impact on the development of the specific field of science, element C - the economic and social impact of the research, element D - the research environment and infrastructure of the institution, element E - the institution development potential. The Panel was provided with scores against each sub-element and the overall score and was also provided with narrative descriptions of their scores, the overall score and the sub-elements (MoES, 2021).

The follow-up authors compared the results of their own estimates of SIs quantitative indicators to the qualitative indicators of the relevant TG Panel and calculated the difference between the indicators and the changes. For this purpose, the authors calculated the average score of indicators for each SI recording the efficiency of the IC formation and compared these scores to scores of the research quality of each SI and overall score developed by the TG Panel.

4. Results

It follows from the IESIA that in Latvia, 9 SIs of humanities and art sciences have corresponding fields of science in Art, 6 SIs have corresponding fields of science in Languages and Literature, 5 SIs have corresponding fields of science in Other Humanities, 4 SIs have corresponding fields of science in History and Archaeology, 3 SIs have corresponding fields of science in Philosophy, Ethics, and Religion, and, 2 SIs have corresponding fields of science in Media and Communications. In turn, such corresponding fields of sciences as Psychology; Other Social Sciences; Social and Economic Geography; Other Engineering and Technologies; Educational Sciences; Computer and Information Sciences; Sociolinguistics, Psycholinguistics, Contact Linguistics, Cognitive Linguistics, Literary Science are operated by 1 SI in each field of science.

According to the authors' estimates, from the IESIA data show that the total number of self-reported outputs of SIs of humanities and art sciences in Latvia is taken in the largest proportion by the RS - 70,16%, which is followed by the WS 16,22%, the MS -13,55%, and the LPS 0,07%.

To calculate the efficiency of the involvement of academic and research staff in the WS formation, the authors used formulas that have been developed and applied already before and are modified now.

$$AIK = (WS : AS) \times 100 \quad (1)$$

$$PIK = (WS : PS) \times 100 \quad (2)$$

$$KIK = (WS : KS) \times 100 \quad (3)$$

$$SIK = (WS : SS) \times 100 \quad (4)$$

$$PE = PIK : AIK \quad (5)$$

These indicators of SIs and their place in the rating of SIs of humanities and art sciences in Latvia as well as its scores are summarized in Table 1. The table of SIs indicators, ratings, and score was drawn up by the authors. The summarized indicators show that in general, in Table 1, the figure rests in the range from 3% to 450% in respect of a SI in Latvia. The highest indicator is SIK in the NLL, while the lowest indicator is KIK in the AAL. Comparing the figures collected in Table 1, the authors conclude that the highest AIK indicator of 54% goes to the DU/H, while the lowest AIK indicator of 4% belongs the AAL; the highest KIK indicator of 53% is owned by the NLL while the lowest KIK indicator of 3% is held by the AAL; the highest SIK indicator of 450% goes to the NLL while the lowest SIK indicator of 13% belongs to the JVLAM. The PS of the AAL is 11.6 times more efficient in the WS formation while the PS of the UL/CHA is only 0.5 times more efficient.

In Table 1, the authors created the rating and score of the SIs in Latvia based on the AIK, PIK, KIK, and SIK indicators of the efficiency of academic research personnel and PhDs involvement in the WS formation. According to the AIK indicator, the first place and highest score is taken by the DU/H; according to the PIK indicator, the first place and highest score is taken also by the DU/H; according to the KIK indicator, the first place and highest score is taken by the NLL; and, according to the SIK indicator, the first place and highest score is taken also by the NLL.

Table 1: The Efficiency of the Involvement of Academic and Research Staff in the WS Formation at SIs of Humanities and art Sciences in Latvia per Year in Period From 2013 to 2018

SI	AIK (%)	AIK ra-ting	AIK sco-re	PIK (%)	PIK ra-ting	PIK sco-re	KIK (%)	KIK ra-ting	KIK sco-re	Ave-rage of AIK & PIK score	PE in ti-mes	SIK (%)	SIK ra-ting	SIK sco-re	Ave-rage of AIK & PIK & SIK score
RISEBA/H	39	3	4	42	7	2	20	4	4	3,0	1,1	0	0	0	2,0
NLL	0	0	0	53	4	4	53	1	5	2,0	0	450	1	5	3,0
LAC	9	7	2	73	3	4	8	9	1	3,0	8,4	49	5	3	3,0
RTU/H	23	4	4	121	2	5	19	5	3	4,5	5,2	58	4	4	4,3
VeU/H	10	6	3	44	6	3	8	8	2	3,0	4,5	36	7	2	2,7
LU/H	19	5	3	52	5	3	14	7	2	3,0	2,7	42	6	3	3,0
DU/H	54	1	5	354	1	5	47	2	5	5,0	6,6	130	3	4	4,7
AAL	4	9	1	41	8	2	3	11	1	1,5	11,6	24	9	1	1,3
UL/LFA	0	0	0	28	10	1	28	3	4	0,5	0	344	2	5	2,0
JVLAM	5	8	2	35	9	1	5	10	1	1,5	6,8	13	10	1	1,3
UL/CHA	49	2	5	22	11	1	15	6	3	3,0	0,5	34	8	2	2,7
Average	23			39			14				1,7	51			

On the other hand, when comparing the average KIK without the SIK, the highest score is obtained by the DU/H, and the comparison of the average KIK with the SIK shows that the highest score goes again to the DU/H.

The authors compared the SIK indicators of all students of HEE in Latvia to SIK indicators of PhDs students of SIs and found that SIK indicators of the PhDs students were considerably higher. It follows from the study by Spica et al (2018) that the highest SIK indicators were held by Daugavpils University (1,45% in 2013) and the University of Latvia (1,82% in 2014). Meanwhile, between 2013 and 2018, the highest annual SIK indicator for PhD students was held by the NLL and it represented 450%.

When analysing the results obtained by SIs in the IC formation in the field of humanities and art sciences, the same methodology was used as in the field of social sciences. Thus, the quantitative results of SIs in both fields can be compared. One of the main criteria for the quantitative evaluation of SIs is the efficiency of the involvement of the SI staff in the formation of WoS and SCOPUS publications.

The comparison of the results of the two fields of science leads to conclusion that the highest score of the KIK in the field of social sciences is 278 % and it is obtained by the ISMA/S (Spica et al, 2022) while the highest score of the KIK in the field of humanities and art sciences is 53 % and it is obtained by the NLL. In addition, it should be noted that the highest score of the KIK in the field of humanities and art sciences is nevertheless lower than the 58 % received by the SBF/S, which is the lowest score in the field of social sciences (Spica et al, 2022).

A similar trend is observed when comparing the efficiency of the involvement of PhD degree holders in the formation of WoS and SCOPUS publications in the two above-referred fields of science. Here, the highest rate of the SIK in social sciences is 667 % and it belongs to the RAT/BS (Spica et al, 2022) while in humanities and art sciences the highest rate is 450 % and it belongs to the NLL. In turn, the lowest rate of the SIK in the field of

social sciences is 58 % and it is held by the CSSR (Spica et al, 2022), and the lowest rate of the SIK in the field of humanities and art sciences is 13 % and it is held by the JVLAM. This means that the lowest score in the field of social sciences, however, is almost 5 times higher than the lowest score in the field of humanities and art sciences.

In Table 2 the authors have calculated the efficiency of the involvement of academic and research staff in the RS formation, the authors used formulas 6; 7; 8; 9; and 10.

$$AIK = (RS : AS) \times 100 \quad (6)$$

$$PIK = (RS : PS) \times 100 \quad (7)$$

$$KIK = (RS : KS) \times 100 \quad (8)$$

$$SIK = (RS : SS) \times 100 \quad (9)$$

$$PE = PIK : AIK \quad (10)$$

Table 2: The Efficiency of the Involvement of Academic and Research Staff in the RS Formation at SIs of Humanities and art Sciences in Latvia per Year in Period From 2013 to 2018

SI	AIK (%)	AIK ra-ti-ng	AIK sco-re	PIK (%)	PIK rat-ing	PIK sco-re	KIK (%)	KIK ra-ti-ng	KIK sco-re	Ave-rage of AIK & PIK score	PE in ti-mes	SIK (%)	SIK ra-ti-ng	SIK sco-re	Ave-rage of AIK & PIK & SIK
RISEBA/H	527	1	5	567	4	4	273	1	5	4,5	1,1	0	0	0	3,0
NLL	0	0	0	198	6	3	198	3	4	1,5	0	1683	1	5	2,7
LAC	20	8	2	165	7	2	18	10	1	2,0	8,4	110	9	1	1,7
RTU/H	309	2	5	1615	1	5	259	2	5	5,0	5,2	779	3	4	4,7
VeU/H	143	5	3	647	3	4	117	5	3	3,5	4,5	531	4	4	3,7
LU/H	55	7	2	148	8	2	40	9	1	2,0	2,7	121	8	2	2,0
DU/H	186	4	4	1228	2	5	162	4	4	4,5	6,6	451	5	3	4,0
AAL	4	9	1	52	11	1	4	11	1	1,0	11,6	31	10	1	1,0
UL/LFA	0	0	0	96	9	1	96	6	3	0,5	0	1167	2	5	2,0
JVLAM	57	6	3	382	5	3	49	8	2	3,0	6,8	138	7	2	2,7
UL/CHA	201	3	4	90	10	1	62	7	2	2,5	0,5	140	6	3	2,7
Average	98			170			62				1,7	222			

In Table 2, in respect of SIs of humanities and art sciences in Latvia, the figure rests in the range from 4% to 1683%. The highest indicator is the SIK in the NLL but the lowest indicators are the AIK and the KIK in the AAL. Comparing the figures collected in Table 2, the authors conclude that the highest AIK indicator of 527% is held by the RISEBA/H, while the lowest AIK indicator of 4% belongs to the AAL; the highest PIK indicator of 1615% is held by the RTU/H while the lowest PIK indicator of 52% belongs to the AAL, the highest SIK indicator of 1683% is held by the NLL, while the lowest SIK indicator of 31% belongs to the AAL. When comparing the average AIK

and PIK, the highest score is obtained by the RTU/H and the comparison of the average KIK with the SIK shows that the highest score is also obtained by the RTU/H.

In Table 3 the authors have calculated the efficiency of the involvement of academic and research staff in the MS formation, the authors used formulas 11; 12; 13; 14; and 15.

$$AIK = (MS : AS) \times 100 \quad (11)$$

$$PIK = (MS : PS) \times 100 \quad (12)$$

$$KIK = (RS : KS) \times 100 \quad (13)$$

$$SIK = (RS : SS) \times 100 \quad (14)$$

$$PE = PIK : AIK \quad (15)$$

Table 3: The Efficiency of the Involvement of Academic and Research Staff in the MS Formation at SIs of Humanities and art Sciences in Latvia per Year in Period From 2013 to 2018

SI	AIK (%)	AIK ra-ti-ng	AIK sco-re	PIK (%)	PIK ra-ti-ng	PIK sco-re	KIK (%)	KIK ra-ti-ng	KIK sco-re	Ave-rage of AIK & PIK	PE in ti-mes	SIK (%)	SIK ra-ti-ng	SIK sco-re	Ave-rage of AIK & PIK &
RISEBA/H	54	2	5	59	5	3	28	2	5	4,0	1,1	0	0	0	2,7
NLL	0	0	0	4	11	1	4	9	1	0,5	0	33	5	3	1,3
LAC	24	4	4	198	2	5	21	3	4	4,5	8,4	132	3	4	4,3
RTU/H	21	5	3	112	3	4	18	4	4	3,5	5,2	54	4	4	3,7
VeU/H	7	7	2	30	6	3	6	8	2	2,5	4,5	25	7	2	2,3
LU/H	124	1	5	335	1	5	91	1	5	5,0	2,7	274	1	5	5,0
DU/H	10	6	3	67	4	4	9	7	2	3,5	6,6	24	8	2	3,0
AAL	2	9	1	26	7	2	2	11	1	1,5	11,6	16	9	1	1,3
UL/LFA	0	0	0	15	10	1	15	5	3	0,5	0	178	2	5	2,0
JVLAM	2	8	2	16	9	1	2	10	1	1,5	6,8	6	10	1	1,3
UL/CHA	44	3	4	20	8	2	14	6	3	3,0	0,5	30	6	3	3,0
Average	24			41			15				1,7	54			

In Table 3, according to the AIK , PIK, KIK, and SIK indicators, the first place and highest score is taken by the LU/H.

The authors compared the average AIK and PIK: the highest score is obtained by the LU/H. In addition, also the comparison of the average AIK, PIK ,and -SIK, shows that the highest score is also obtained only by the LU/H.

In Table 4 the authors have calculated the efficiency of the involvement of academic and research staff in the LPS formation the authors used formulas 16; 17; 18; 19; and 20.

$$AIK = (LPS : AS) \times 100 \quad (16)$$

$$PIK = (LPS : PS) \times 100 \quad (17)$$

$$KIK = (LPS : KS) \times 100 \quad (18)$$

$$SIK = (LPS : SS) \times 100 \quad (19)$$

$$PE = PIK : AIK \quad (20)$$

Table 4: The Efficiency of the Involvement of Academic and Research Staff in the LPS Formation at SIs of Humanities and art Sciences in Latvia per Year in Period From 2013 to 2018

SI	AIK (%)	AIK ra-ting	AIK sco-re	PIK (%)	PIK ra-ting	PIK sco-re	KIK (%)	KIK ra-ting	KIK sco-re	Ave-rage of AIK & PIK score	PE in ti-mes	SIK (%)	SIK ra-ting	SIK sco-re	Ave-rage of AIK & PIK
RISEBA/H	15	1	5	17	1	5	8	1	5	5,00	1,1	0	0	0	3,3
Average	15			17			8				1,1				3,3

In Table 4, according to the AIK , PIK, KIK and SIK indicators, the first place and highest score is taken by the RISEBA/H.

From the results summarised in the tables 1; 2; 3; and 4, the authors conclude that the average SIK indicators are the highest for all IC forms. They are followed by the average PIK, AIK and KIK indicators.

Table 5: The Comparison of the Results of Qualitative and Quantitative Evaluation of Latvian SIs in the Field of Humanities and Art Sciences Using the IC Form for Period From 2013 to 2018

SI	Quality score by TG (QTG)	Overall score by TG (OTG)	Total Average score of AIK & PIK by IC form (TAAP)	Difference of score (QTG-TAAP)	Difference of score (OTG-TAAP)	Total average score of AIK & PIK & SIK by IC form (TAAPS)	Difference of score (QTG-TAAPS)	Difference of score (OTG-TAAPS)
RISEBA/H	2	1	3,3	-1,3	-2,3	2,2	-0,2	-1,2
NLL	4	4	0,8	3,2	3,2	1,4	2,6	2,6
LAC	4	4	1,9	2,1	2,1	1,8	2,2	2,2
RTU/H	3	3	2,6	0,4	0,4	2,5	0,5	0,5
VeU/H	2	2	1,8	0,2	0,2	1,3	0,7	0,7
LU/H	3	3	2,0	1,0	1,0	2,0	1,0	1,0
DU/H	4	4	2,6	1,4	1,4	2,3	1,7	1,7
AAL	4	4	0,8	3,2	3,2	0,7	3,3	3,3
UL/LFA	4	5	0,3	3,7	4,7	1,2	2,8	3,8
JVLAM	3	3	1,2	1,8	1,8	1,1	1,9	1,9
UL/CHA	3	3	1,7	1,3	1,3	1,7	1,3	1,3

From data summarized in tables 1; 2; 3; and 4 the follow-up authors calculated total average score of the AIK and the SIK by IC form (TAAP), and the total average score of the AIK, PIK and SIK by IC form (TAAPS). Then, the authors calculated differences of quality and overall scores by TG and TAAP, and TAAPS calculated by the authors (see Table 5).

Table 6: The Comparison of the Results of Qualitative and Quantitative Evaluation of Latvian SIs in the Field of Humanities and art Sciences Using the Overall IC for Period From 2013 to 2018

SI	Quality score by TG (QTG)	Overall score by TG (OTG)	Total average score of KIK by IC overall (TAKO)	Difference of score (QTG-TAKO)	Difference of score (OTG-TAKO)	Total average score of KIK & SIK by IC overall (TAKOS)	Difference of score (QTG-TAKOS)	Difference of score (OTG-TAKOS)
RISEBA/H	2	1	3,8	-1,8	-2,8	1,9	0,1	-0,9
NLL	4	4	2,0	2,0	2,0	2,3	1,7	1,7
LAC	4	4	1,2	2,8	2,8	1,4	2,6	2,6
RTU/H	3	3	2,4	0,6	0,6	2,4	0,6	0,6
VeU/H	2	2	1,4	0,6	0,6	1,5	0,5	0,5
LU/H	3	3	1,6	1,4	1,4	1,8	1,2	1,2
DU/H	4	4	2,2	1,8	1,8	2,0	2,0	2,0
AAL	4	4	0,6	3,4	3,4	0,6	3,4	3,4
UL/LFA	4	5	2,0	2,0	3,0	2,5	1,5	2,5
JVLAM	3	3	0,8	2,2	2,2	0,8	2,2	2,2
UL/CHA	3	3	1,6	1,4	1,4	1,6	1,4	1,4

In Table 6 the authors summarised the results of calculation of total average score of the KIK by IC overall (TAKO) and total average score of the KIK and the SIK by IC overall (TAKOS), and its differences of quality score and overall score by TG.

5. Conclusions

The study of the authors did not result in confirmation of their hypothesis. When comparing the qualitative ratings of TG group to the quantitative assessments performed by the authors, it can be concluded that they differ from minus 2.8 to plus 4.7 points in total. The hypothesis is accepted *pro tem* for other branches of SIs of Latvia.

The study evidences that the KIK, AIK, PIK, and SIK of SIs of humanities and art sciences in Latvia were lower than the results compiled by the relevant TG Panel except for one SI of humanities and art sciences.

References

- Latvijas Republikas Izglītības un zinātnes ministrija (2021) "International Evaluation of Scientific Institution Activity, Latvia", Report by the Technopolis group per period 2013.-2018, Riga, 5 March
- Rondeau, K., Dillon, J., Mansour, N. and Daniels, J. (2022) "Managing Knowledge and Identity across the Boundary of Academic and Commercial Science", *Proceedings of the 17th European Conference on Innovation and Entrepreneurship*, 15-16 September, pp 432-440.

- Spica, I., Berzina, B., Spics, E. and Spica, R.K. (2022) "Intellectual Capital of Social Sciences and the Efficiency of its Formation at the Scientific Institutions", *Proceedings of the 17th European Conference on Innovation and Entrepreneurship*, 15-16 September, pp 512-520.
- Spica, I., Garleja, R., Berzina, B. and Spics, E. (2018) "The Involvement of Students in the Formation of Intellectual Capital in Latvia", *Proceedings of the 19th European Conference on Knowledge Management, Padua, Italy, 6-7 September*, pp. 811 -820.
- Spica, I., Garleja, R. and Berzina, B. (2017a) "Intellectual Capital as the Performance Indicator of the University Studies", *Proceedings of the 9th European Conference on Intellectual Capital, Lisbon, Portugal, 6-7 April*, pp. 312 -320
- Spica, I., Garleja, R. and Berzina, B. (2017b) "The Efficiency of the Involvement of Academic Staff in the Formation of Intellectual Capital in Latvia", *Poster of the 9th European Conference on Intellectual Capital, Lisbon, Portugal, 6-7 April*.