

AN EMPIRICAL EXAMINATION OF THE JOURNAL SCORING SYSTEM OF THE IX. SECTION OF ECONOMICS AND LAW OF HAS BASED ON DATA OBTAINED FROM 2020 AND 2021

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Abstract

During the habitus examination of the IX. Section of Economics and Law of the Hungarian Academy of Sciences, it can be observed that almost half of the points of all scientific publications along with the references made to them (between 250 and 300 points) must be obtained by publishing in domestically and internationally listed journals (120 or 160 points). Within this, a minimum requirement has been formulated for internationally listed articles (35 and 40 points). International journal articles of the same category (A, B, C or D), co-author number and length will receive between 33% and 200% more points than domestic articles. Empirical sampling research demonstrates that social scientists receive on average 35% more points for an article of the same category and size but with a different number of co-authors, suggesting unreasonably low scoring. Points obtained in this way prove to be low and do not reflect the extra work that needs to be done when writing an international article, hence authors are not motivated to write international articles. However, for international rankings, international visibility and publication-based funding of foundation universities, articles published annually in indexed journals (Scopus or Web of Science) would be necessary.

Keywords: *repository, Hungarian Academy of Sciences, journal list*

1. Introduction

The IX. Section of Economics and Law (SEL (GJO)) of the Hungarian Academy of Sciences publishes the following requirements for applicants for the title of doctor of the HAS, which will be applied for applications submitted from 1 February 2006. (Zalai, 2006)

- Publication activity. The main criterion for the habitus examination is the applicant's publication activity. In accordance with the criteria of the habitus examination, the applicant must submit the list of scientific publications in the required grouping, format, and numbering.
- Impact, international recognition, school founding. The assessment of these, among other factors, is essentially based on a list of independent references.

- Participation in scientific further training and certification. The GJO does not consider teaching activity per se in the habitus examination, but it takes, to a limited extent, the activity in the field of scientific training of the new generation into account.
- Research projects, practical works. The GJO also takes, to a limited extent, practical applications and creations with a significant impact that have not been published in scientific publications but are documented and certified into account.
- Prestigious scientific public activity. This includes activities in scientific bodies of major national or international importance (holding or obtaining membership of scientific societies of an academic nature), or work in the editorial boards of or participating in national or international journals.
- Presentation of the most important scientific results achieved so far (self-evaluation). The assessment of the quality of the scientific work carried out will be based essentially on the 6–10 scientific publications (journal articles, book chapters) identified by the applicant as the most important.
- Pre-screening based on scoring and qualitative assessment. The GJO also scores, and pre-selects applicants based on the overall point obtained. Accordingly, it has set a minimum threshold for substantive evaluation.

For the purposes of this assessment, a scientific publication is generally understood to be a work that is published or accepted for publication (in particular: journal articles, books, and book chapters), peer-reviewed and officially distributed, accessible to a wide audience, and that presents new scientific results and/or summarises a field of study in a synthesising way and with a new perspective.

The minimum point values indicate that almost half of the points of all scientific publications along with the references made to them (between 250 and 300 points) must be obtained by publishing in domestically and internationally listed journals (120 or 160 points). Within this, a minimum requirement has been formulated for internationally listed articles (35 and 40 points).

When writing the study, I assumed that international journal articles of the same category, co-author number and length would receive between 33% and 200% more points than domestic articles, which is not enough, and does not reflect the extra work that needs to be done when writing an international article, hence authors are not motivated to write international articles. Through my empirical sampling research, I will demonstrate that there is a committee international list of authors where authors, on average, obtained lower points for publishing in international category A journals compared to their domestic articles in the same category in 2020 and 2021.

The low proportion of international articles suggests that the publication strategy of the applicants

- in the case of international articles, to reach the minimum point for a given type, finding a satisfactory solution,
- in the case of articles in the domestic list, to publish as many articles as possible, preferably with few co-authors, and to maximise points

is the priority for scored journals.

In other words, applicants are satisfied with the minimum points in the case of international journal articles, (Simon 1957) and aim for the maximum points in the case of domestic articles, which will bring them closer to the doctor of the HAS title. But

- the publication of certain international journal articles is an additional source of funding for foundation universities, and
- international rankings are based on continuous international publication.

2. Theoretical Background

Only works published in widely available, edited and peer-reviewed journals and by recognised publishers, and listed in the Hungarian Scientific Bibliography (HSB) on the date of application, will be considered for the HAS GJO doctoral habitus examination.

The publications are weighted differently according to the number of authors and the forums, and places of publication, namely:

- individual works (without co-authors) and co-authored or multi-authored publications,
- publications in domestic and international journals (with special emphasis on publications in leading international journals),
- publications that have been judged, reviewed or peer-reviewed, and papers that have passed such a screening,
- works published only once and publications that have been published more than once, especially scientific works that have been published independently in several countries and languages.

The publications are scored (weighted) differently according to the number of authors and the forums and places of publication, namely:

- studies and articles published in scientific journals that are considered prestigious (highly ranked) in the field of the given discipline,
- scientific specialist books, monographs published by prestigious publishers, covering a larger field of specialization,
- editing scientific specialist books and volumes of studies with ISBN numbers,
- chapters published in scientific volumes of studies with ISBN numbers,
- studies published in edited and referenced volumes of scientific conferences, with ISBN numbers.

According to the decision of the HAS Board of 25 September 2012, only “complete scientific works”, books, book chapters, journal articles, conference proceedings of scientific classification are considered by the IX. Section of Economics and Law (SEL (GJO)) of the HAS when evaluating the applications for winning the doctor of the HAS title.

Only publications (journal articles, abstracts, essays) and references longer than 3 journal pages (including spaces, 11.5 thousand characters) and published in internationally registered scientific journals with ISSN number will be considered when evaluating the applications.

The GJO-listed journals are the published lists of journals published by the scientific and doctoral committees, which list the default journals and the point values given to publications and references in these journals, sorted into categories A, B, C and D. The number of points available varies between 2 and 10 for domestic journal articles and between 6 and 25 for international articles, for exclusive articles and for articles of more than 7 pages (Table 1). Each committee also accepts journals not included in its own list but included in the lists of other GJO committees as category D. The points in the scoring table apply to publications exceeding 7 journal pages. Articles of 4–7 pages and their references will be scored at half the points.

The following GJO committees have a list of journals:

- Committee on Legal and Political Sciences (CLPS (ÁJB))
- Interdepartmental Standing Committee on Demography (ISCD (DEM)),
- Doctoral Qualification Committee on Economic Science (DQCES (GMB)),
- Committee on Military Science (CMS (HTB)),
- Doctoral Committee on World Economics and Development Studies (DCWEDS (NFDB)),

- Committee on Political Science (CPS (PTB))
- Committee on Regional Studies (CRS (RegTB))
- Committee on Sociology (CS (SZOC))

Table 1. Points per single-authored journal article of at least 8 pages by committee

Committee / Category	ÁJB	DEM	GMB	HTB	NFDB	PTB	RegTB	SZOC
International A	15	25	20	25	20	25	20	18
Domestic A	8	10	10	10	10	10	10	9
International B	11	16	15	16	15	16	15	13
Domestic B	6	8	8	8	8	8	8	6
International C	7	8	10	8	10	8	10	8
Domestic C	4	6	6	6	6	6	6	4
International D	6	6	8	6	8	6	8	6
Domestic D	2	4	4	2	4	4	4	2

Source: Own editing based on the current minimum requirements for doctoral studies (28 June 2019.)

For each publication other than the complete book, you will receive a fraction of the default point for both publications and references to them. Two-author publications are equivalent to 0.6; three-author publications are equivalent to 0.4; more than three-author publications are equivalent to 0.3 single-author units.

At the Section, it is a general expectation and a minimum requirement at some committees that applicants should have at least one single-authored or two co-authored specialist books or monographs with a significant body of new scientific work, mainly based on new scientific work achieved since the previous degree (Table 2).

The total number of points for articles published in listed international and domestic scientific journals, weighted by category—A, B, C and D—and by the number of authors and length, and their expected minimum point (between 120 and 160 points) were determined by the GJO. For the international list, a separate minimum point value has been defined (35 and 40 points different at each committee), which must be calculated separately for the applicant.

Thus, it can be said that in respect of the minimum points for the doctor of the HAS habitus examination, 43% (120/280) of the points must come from domestic and international journal articles, and 12.5% (35/280) from international.

If these minimum values are compared with the points available for a journal article, it quickly becomes clear that a very large number of journal articles need to be written and published to reach the minimum point.

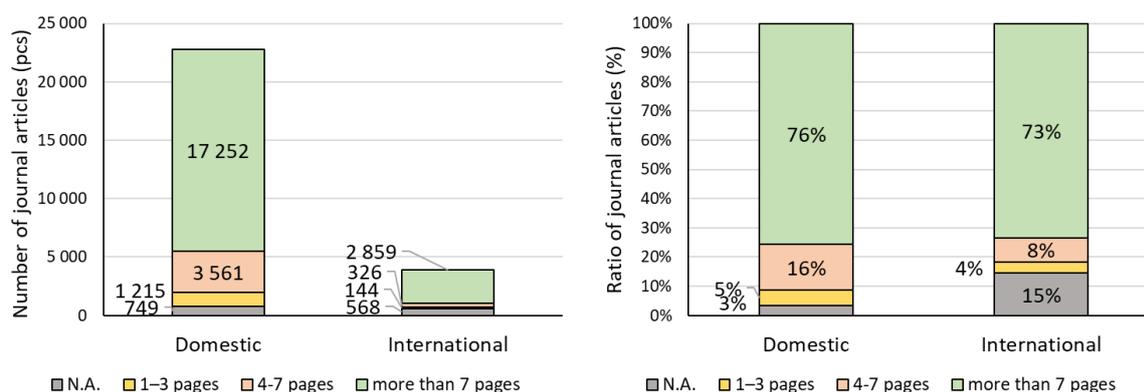
Table 2. Required minimum points per category

Categories with minimum points / Committee	ÁJB	DEM	GMB	HTB	NFDB	PTB	RegTB	SZOC
1. Highly valued specialist book, monograph	60	(GMB) 0/40 (SZOC)	0	60	30	30	30	40
2. Scored articles published in a journal	120	120	120	140	120	120	160	120
2.1. of which internationally listed journal articles	35	35	35	35	35	35	40	35
1–2. Total	180	180	180	180	180	180	190	180
4. Scored references (scientific)	60	60	60	60	60	60	110	80
of these 4.1. references from international GJO-listed journals and 4.2. references from non-international GJO-listed journals	30	30	30	30	30	30	40	40
Total	280	250	250	290	280	280	300	280

Source: Own editing based on the current minimum requirements for doctoral studies in force from 28 June 2019.

3. Results

In 2020 and 2021, 13,047 different domestic and internationally listed journal articles were published, according to the HSB. Since a journal article is included in several domestic and international committee lists, the 13,000 articles resulted in 26,674 entries. Three quarters of the publications (20,111) were more than 7 pages, 15% were between 4 and 7 pages (3,887), 5% were less than 4 pages (1,359) and 5% had no recorded length (1,317) (Figure 1) (Table 4).



1 I. Number and distribution of domestic and international journal articles by volume in 2020 and 2021

Source: Own editing based on HSB data

International publications have a very high rate (15%, 749 pieces) of recording without volume, partly due to the recording of “Article in Press” journal articles. “Article in Press” articles are documents that have been accepted for publication but do not yet have a journal number, no booklet, volume or final page number. Therefore, for such publications, the first and last page numbers are not recorded in the HSB, so the length cannot be calculated automatically.

The **SCImago Journal & Country Rank (SJR)** is a free portal that provides scientific indicators for journals and countries based on Elsevier's Scopus database. The SJR is primarily used to show which quarter a journal falls into a given specialization ranking: the first quarter (0–25%, **Q1**, the first quarter from the top, where Q indicates the quartile), or the second (**Q2**), third (**Q3**) or last quarter (**Q4**). And **D1** represents the top 10%.

Scopus is the largest abstract and reference database of peer-reviewed literature—scientific journals, books, and conference proceedings.

Web of Science (WoS) is the world's most trusted publisher-independent global reference database.

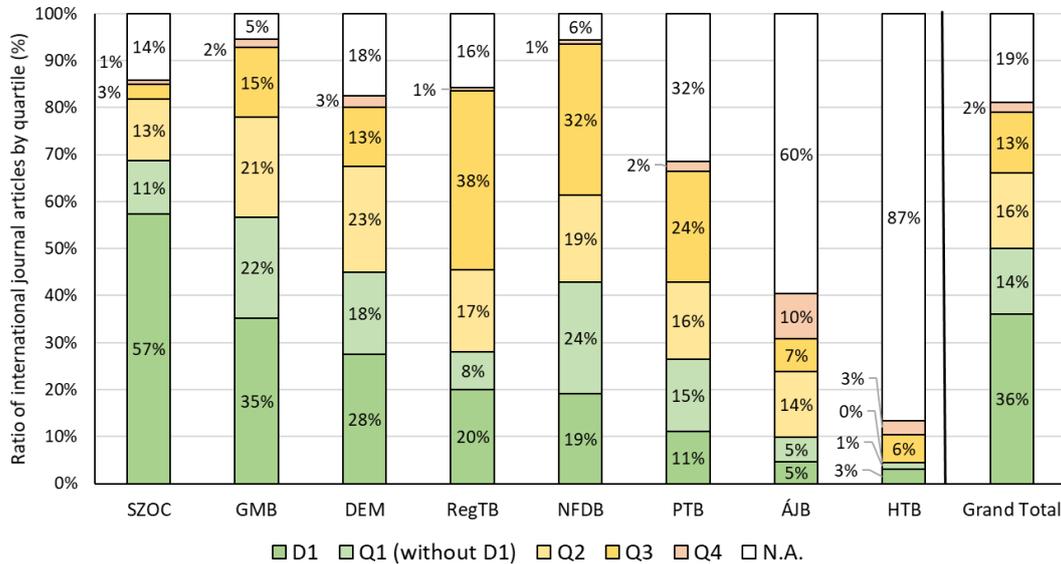
My assumption is that where there is a lower proportion of Scopus indexed journals among the internationally listed journals of a given committee, a lower proportion of Scopus indexed articles is expected in relation to the number of published journal articles (Table 3) (Sasvári et. al 2021; Sasvári 2022). Based on previous measurements, the HTB (29%) and the ÁJB (27%) list include the fewest Scopus indexed journals.

Table 3. Ratio of international journals and Polish, Scopus, WoS-listed journals falling under the GJO

Committee	Number of international journals (pcs)	Of which number of journals on the Polish list (pcs)	Polish list ratio	Scopus list ratio	WoS list ratio
ÁJB	1295	423	33%	27%	23%
DEM	108	91	84%	80%	72%
GMB	1742	1512	87%	84%	72%
HTB	63	24	38%	29%	24%
NFDB	592	474	80%	75%	65%
PTB	782	635	81%	75%	65%
RegTB	273	218	80%	72%	69%
SZOC	1559	1495	96%	97%	92%

Source: Own editing based on GJO committees and Polish scientific categories journal lists

In terms of internationally listed articles published in 2020 and 2021, the lowest indexability by Scopus is observed for HTB (13%) and ÁJB (40%) listed journal articles (Figure 2) (Table 7). The highest ratios are found for GMB (95%) and NFDB (94%).

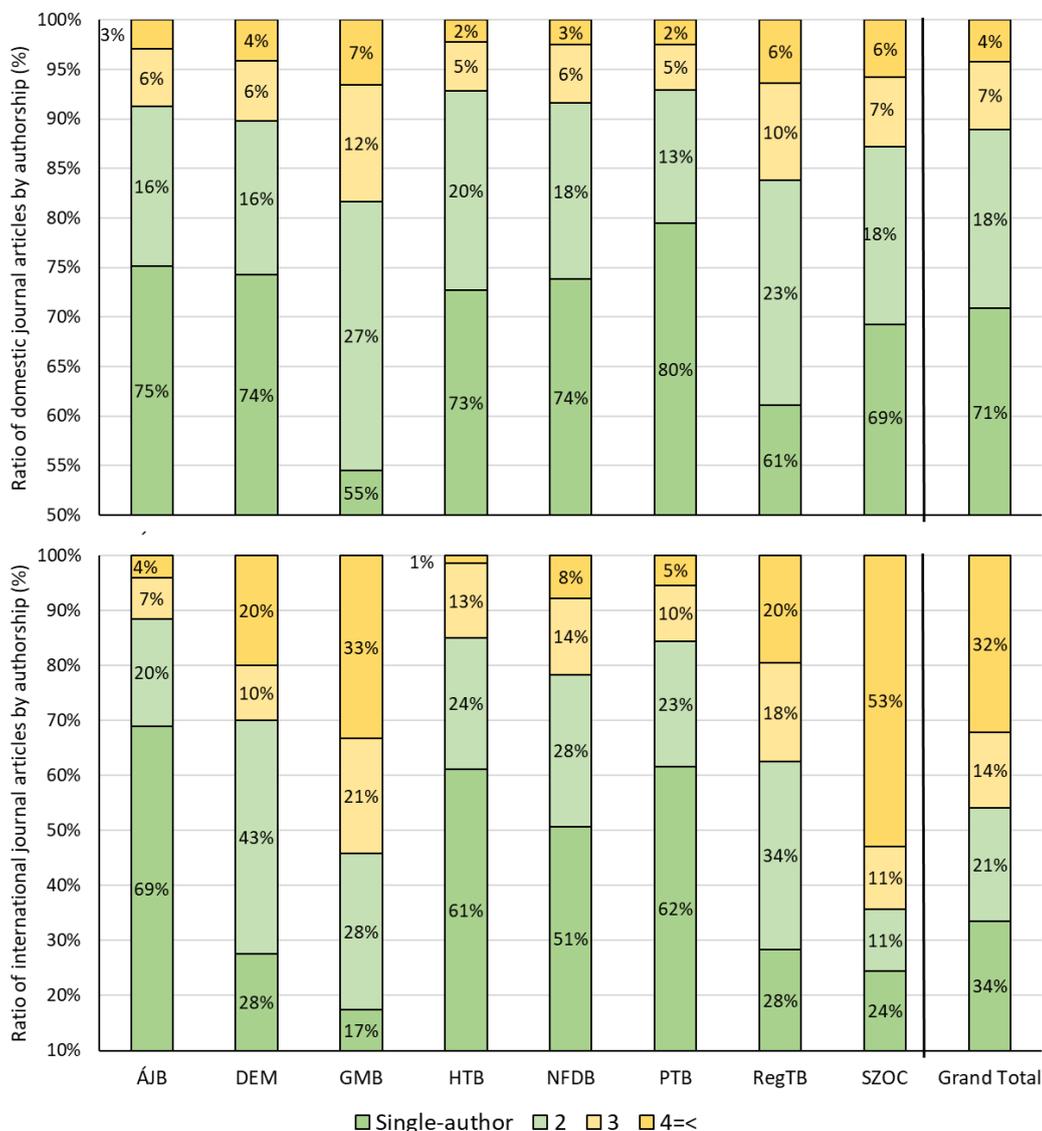


2.2. Distribution of international journal articles by quartile in 2020 and 2021

Source: Own editing based on HSB data.

In terms of co-authorship, 71% (16,146) of the domestically listed journal articles were single authored, 18% (4,116) were co-authored by two authors, 7% by three authors and 4% by four or more. In contrast, for international articles, 34% (1,307) were single authored, 21% were co-authored by two authors, 14% by three authors, and 32% by four or more authors (Table 7).

There is a wide variation between committees, with the lowest number of single-authored articles attributed to GMB, both domestically (55%) and internationally (17%). The PTB-listed articles have the highest number of domestic, while the ÁJB publications have the highest number of international single-authored articles (69%) (Figure 3).



3. Distribution of domestic and international journal articles by author in 2020 and 2021

Source: Own editing based on HSB data.

The category classification, the number of co-authors and the length of the publication affect the number of points per article. In relation to the maximum number of points available (Table 4)

- the highest points for domestic articles are in HTB categories C and D (83% compared to single-author articles longer than 7 pages),
- the lowest points for domestic articles are found in SZOC D (60%),
- the highest points for international articles are in ÁJB category D (94%),
- the lowest points for international articles are found in SZOC A (35%) and B (37%), GMB A (44%), HTB D (44%).

4. Average scores of domestic and international journal articles by category compared to the maximum points available based on publications in 2020 and 2021

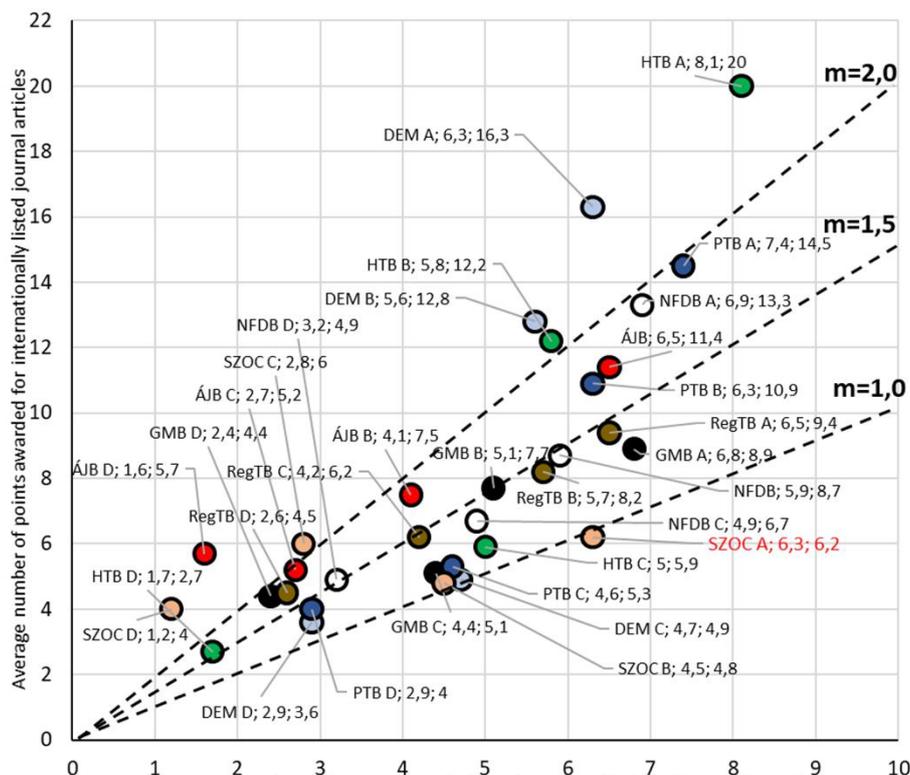
Type	Domestic				International			
Committee, Category	Average A point / maximum A point	Average B point / maximum B point	Average C point / maximum C point	Average D point / maximum D point	Average A point / maximum A point	Average B point / maximum B point	Average C point / maximum C point	Average D point / maximum D point
ÁJB	81% (6.5 / 8)	68% (4.1 / 6)	68% (2.7 / 4)	82% (1.6 / 2)	76% (11.4 of 15)	68% (7.5 / 11)	74% (5.2 / 7)	94% (5.7 / 6)
DEM	63% (6.3 / 10)	70% (5.6 / 8)	79% (4.7 / 6)	73% (2.9 / 4)	65% (16.3 / 25)	80% (12.8 / 16)	62% (4.9 / 8)	61% (3.6 / 6)
GMB	68% (6.8 / 10)	63% (5.1 / 8)	73% (4.4 / 6)	60% (2.4/4)	44% (8.9 / 20)	51% (7.7 / 15)	51% (5.1 / 10)	54% (4.4 / 8)
HTB	81% (8.1 / 10)	73% (5.8 / 8)	83% (5.0 / 6)	83% (1.7 / 2)	80% (20.0 / 25)	76% (12.2 / 16)	73% (5.9 / 8)	44% (2.7 / 6)
NFDB	69% (6.9 / 10)	74% (5.9 / 8)	81% (4.9 / 6)	80% (3.2 / 4)	66% (13.3 / 20)	58% (8.7 / 15)	67% (6.7 / 10)	62% (4.9 / 8)
PTB	74% (7.4 / 10)	79% (6.3 / 8)	77% (4.6 / 6)	72% (2.9 / 4)	58% (14.5 / 25)	68% (10.9 / 16)	66% (5.3 / 8)	67% (4.0 / 6)
RegTB	65% (6.5 / 10)	71% (5.7 / 8)	70% (4.2 / 6)	64% (2.6 / 4)	47% (9.4 / 20)	54% (8.2 / 15)	62% (6.2 / 10)	57% (4.5 / 8)
SZOC	70% (6.3 / 9)	75% (4.5 / 6)	71% (2.8 / 4)	60% (1.2 / 2)	35% (6.2 / 18)	37% (4.8 / 13)	74% (6.0 / 8)	66% (4.0 / 6)

Source: Own editing based on HSB.

If we examine the absolute values, we can see that the authors in the international SZOC A category (6.2 points) scored on average less than the authors in the domestically listed SZOC A (6.3 points, [Figure 4](#), Table 10).

The points for internationally and domestically listed journal articles in the same category but in different committees were proportionated. This shows that you can meet:

- with a ratio below 1 for 1 committee (SZOC A),
- between 1 and 1.5 value in 13 cases (DEM C, DEM D, GMB A, GMB C, HTB C, NFDB B, NFDB C, PTB C, PTB D, RegTB A, RegTB B, RegTB C, and SZOC B),
- between 1.5 and 2 number for 11 committee categories (ÁJB A, ÁJB B, ÁJB C, GMB B, GMB D, HTB D, NFDB A, NFDB D, PTB A, PTB B and RegTB D),
- with a ratio above 2 in 7 cases (ÁJB D, DEM A, DEM B, HTB A, HTB B, SZOC C, and SZOC D)



4. Average number of points awarded for internationally and domestically listed journal articles by committee and category in 2020 and 2021

Source: Own editing based on HSB.

For all journal articles, the ratio of international to domestic articles was 1.35 (6.5/4.8) based on 2020 and 2021 data. This means that for an international article of the same category and committee classification, the author receives on average 35% more points.

The HAS GJO currently has 209 living doctors of the HAS, of whom 170 men and 39 women are in the database. The earliest degree holder obtained doctorate in 1969, and in 2021, 4 persons earned a doctor of the HAS title. For 88% of the doctors of the HAS (186 persons), an average of 253 publications can be found, based on the HSB. For 119 persons, the HAS GJO's table of specialization is included in the HSB. Based on the table of specialization, it is possible to assess which publications can be considered in the HAS GJO during the doctor of the HAS habitus examination to meet the requirements. The current rules are valid from 2006, so there are 78 persons with a publicly visible table of specialization who obtained a doctor of the HAS degree in 2006 or later.

Of the 78 persons, the majority are linked to the ÁJB (25 persons) and the Committee of Economics (KTB, 17 persons) (Table 5.).

The average number of internationally listed journal articles by doctor of the HAS is 12.4, and the average number of domestically listed journal articles is 47.6. Thus, the ratio of international to domestically listed articles can be characterized by the 1:3.8 ratio.

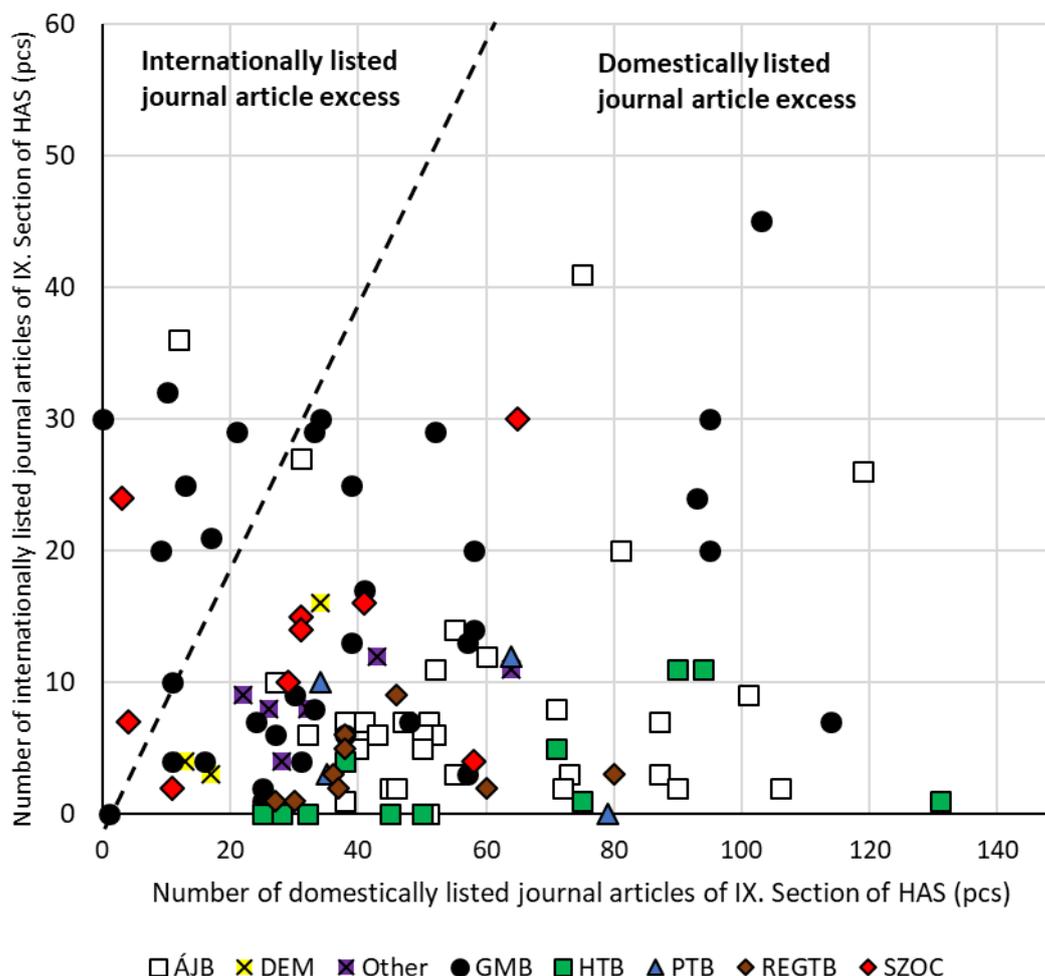
5. Journal article publication patterns of those who were conferred doctors of HAS between 2006 and 2021, until March 2022

Committee ¹	Number of people (persons)	The number of internationally listed journal articles (pcs) of the IX. Section of HAS			The number of domestically listed journal articles (pcs) of the IX. Section of HAS			Ratio II./I.
		Min.	Average I.	Max.	Min.	Average II.	Max.	
ÁJB	25	0	9.1	41	27	61.2	119	6.7
DEM	1	16	16.0	16	34	34.0	34	2.1
EEGTB	2	8	8.0	8	26	29.0	32	3.6
GTB	8	4	22.4	30	11	39.3	93	1.8
HTB	7	0	4.4	11	28	60.1	94	13.6
KTB	17	2	18.2	96	0	40.3	114	2.2
NFTB	4	4	10.8	19	14	34.3	73	3.2
PTB	3	3	8.3	12	34	44.3	64	5.3
RegTB	2	2	3.5	5	37	37.5	38	10.7
SJTB	2	4	8.0	12	28	35.5	43	4.4
SZOC	7	4	13.7	30	4	37.0	65	2.7
Grand Total	78	0	12.4	96	0	47.6	119	3.8

Source: Own editing based on HAS and HSB.

Big variances can be measured by committees. The highest domestic article ratios are found in the HTB (1:13.6) and the RegTB (1:10.7), while the lowest ratios are found in the Committee on Business Administration (CBA (GTB)) (1:1.8) and the DEM (1:2.1).

¹ Abbreviations: Committee on Demography (Emberi Erőforrások Gazdaságtana Tudományos Bizottság (EEGTB)); Committee on Business Administration (Gazdálkodástudományi Bizottság (GTB)); Committee on Economics (Közgazdaság-tudományi Bizottság (KTB)); Committee on World Economics and Development Studies (Nemzetközi és Fejlesztéstanulmányok Tudományos Bizottság (NFTB)); Committee on Future Research and Statistics (Statisztikai és Jövőkutatási Tudományos Bizottság (SJTB))



5. Journal article publication data of those who were conferred doctors of HAS between 2006 and 2021, in March 2022

If we look at the doctors of the HAS individually, we find that 9 of them have more internationally (than domestically) listed journal articles, of which 1 is a member of the ÁJB, 2 belong to the SZOC, and the rest are members of the GMB ([Figure 5.](#)).

4. Summary

One of the bases for the funding of foundation universities is the measurement of academic performance, including the change and continuous increase in the number of publications. A 3% increase in the number of total scientific publications per year, and a 10% increase in the number of total scientific publications with WoS or Scopus identifiers is expected from the institutions for the additional funding. One half of the international rankings—the QS and THE rankings—are based on the Scopus database, the other half—the ARWU—uses Web of Science data. In both cases, continuous international

publication is a requirement for academics. For the HAS GJO doctor of the HAS doctoral habitus examination, publication in own internationally and domestically listed journals is required. The GJO international list only partially matches the journals in the Scopus and WoS databases. There is a minimum value requirement for internationally listed publications of 12.5% of the total minimum point. For internationally listed publications of journal articles of the same category and committee classification, if the number of co-authors and the volume are considered, the author receives on average 35% (6.5/4.8) more points for the international article. This does not compensate for more work compared to domestic publications. It follows from this that authors in the social sciences tend to aim for the minimum number of points for internationally listed publications and to maximise the number of articles for domestic ones. This is further confirmed by the study conducted among doctors of the HAS, where the dominance of domestically listed publications is clearly visible, albeit with a large variation for each committee.

The number of points awarded for internationally listed publications should be reviewed and increased in order to make it more worthwhile for social scientists to write internationally listed articles, which in the longer term would contribute to the funding of foundation institutions and the development of international rankings.

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Annex

6. Number of GJO-listed publications by type, committee, and volume in 2020 and 2021

Committee/ Category	Domestic					International					Grand Total
	N/A	Page 0–3	Page 4–7	More than 7 pages	Total	N/A	1–3 page	4–7 page	more than 7 pages	Total	
ÁJB	167	166	663	3018	4014	18	15	58	231	322	4336
A	61	63	256	1238	1618	5	6	18	88	117	1735
B	39	70	195	570	874	7	2	34	78	121	995
C	29	22	132	623	806	5	7	6	58	76	882
D	38	11	80	587	716	1	0	0	7	8	724
DEM	83	205	523	2267	3078	2	0	0	38	40	3118
A	0	51	95	453	599	1	0	0	10	11	610
B	20	80	124	675	899	1	0	0	4	5	904
C	29	21	116	711	877	0	0	0	6	6	883
D	34	53	188	428	703	0	0	0	18	18	721
GMB	63	97	313	1535	2008	149	18	47	678	892	2900
A	3	1	19	230	253	60	5	12	137	214	467
B	5	35	86	476	602	45	7	11	191	254	856
C	25	19	69	473	586	27	4	14	208	253	839
D	30	42	139	356	567	17	2	10	142	171	738
HTB	30	31	173	868	1102	2	4	8	53	67	1169
A	10	18	29	287	344	1	0	0	5	6	350
B	10	13	137	394	554	0	0	2	29	31	585
C	9	0	5	167	181	1	0	4	11	16	197
D	1	0	2	20	23	0	4	2	8	14	37
NFDB	49	89	231	1388	1757	22	21	3	185	231	1988
A	0	1	35	267	303	4	0	0	16	20	323
B	12	53	108	488	661	9	7	0	42	58	719
C	26	14	40	356	436	9	11	2	118	140	576
D	11	21	48	277	357		3	1	9	13	370
PTB	164	242	677	3054	4137	28	45	52	351	476	4613
A	5	50	143	610	808	6	5	1	31	43	851
B	74	63	170	1282	1589	8	7	3	62	80	1669
C	29	50	123	495	697	10	27	42	207	286	983
D	56	79	241	667	1043	4	6	6	51	67	1110

Committee/ Category	Domestic					International					Grand Total
	N/A	Page 0–3	Page 4–7	More than 7 pages	Total	N/A	1–3 page	4–7 page	more than 7 pages	Total	
RegTB	85	173	468	2542	3268	16	10	21	239	286	3554
A	3	34	105	506	648	8	3	1	33	45	693
B	16	38	109	649	812	4	4	2	46	56	868
C	37	36	99	1084	1256	3	3	3	120	129	1385
D	29	65	155	303	552	1		15	40	56	608
SZOC	108	212	513	2580	3413	331	31	137	1084	1583	4996
A	19	9	93	664	785	105	11	44	336	496	1281
B	18	38	117	770	943	181	12	31	369	593	1536
C	56	96	205	994	1351	33	5	54	253	345	1696
D	15	69	98	152	334	12	3	8	126	149	483
Grand Total	749	1215	3561	17252	22777	568	144	326	2859	3897	26674

Source: Own editing based on HSB.

7. Number of GJO-listed publications in 2020 and 2021 by type, committee, and co-author

Committee/ Category	Co-authors of Hungarian journal articles (persons)					Co-authors of international journal articles (persons)					Grand Total
	Single- author	2	3	4=<	Total	Single- author	2	3	4=<	Total	
ÁJB	3017	647	232	118	4014	222	63	24	13	322	4336
A	1378	173	42	25	1618	88	21	5	3	117	1735
B	646	138	56	34	874	71	29	13	8	121	995
C	443	215	102	46	806	57	11	6	2	76	882
D	550	121	32	13	716	6	2			8	724
DEM	2286	478	187	127	3078	11	17	4	8	40	3118
A	352	146	65	36	599	3	4	2	2	11	610
B	645	141	69	44	899	2	3	0	0	5	904
C	662	138	41	36	877	1	4	0	1	6	883
D	627	53	12	11	703	5	6	2	5	18	721
GMB	1095	545	236	132	2008	156	253	186	297	892	2900
A	105	100	36	12	253	17	56	54	87	214	467
B	315	155	81	51	602	44	79	57	74	254	856
C	369	146	44	27	586	54	59	39	101	253	839

Committee/ Category	Co-authors of Hungarian journal articles (persons)					Co-authors of international journal articles (persons)					Grand Total
	Single- author	2	3	4=<	Total	Single- author	2	3	4=<	Total	
D	306	144	75	42	567	41	59	36	35	171	738
HTB	801	222	55	24	1102	41	16	9	1	67	1169
A	275	49	17	3	344	4	1	1	0	6	350
B	386	124	30	14	554	18	7	6	0	31	585
C	123	44	8	6	181	11	5	0	0	16	197
D	17	5	0	1	23	8	3	2	1	14	37
NFDB	1297	313	103	44	1757	117	64	32	18	231	1988
A	146	101	44	12	303	5	9	3	3	20	323
B	519	97	29	16	661	28	14	8	8	58	719
C	334	71	21	10	436	74	39	21	6	140	576
D	298	44	9	6	357	10	2		1	13	370
PTB	3289	557	189	102	4137	293	109	48	26	476	4613
A	613	131	51	13	808	18	14	5	6	43	851
B	1204	249	85	51	1589	46	21	8	5	80	1669
C	603	72	15	7	697	186	60	30	10	286	983
D	869	105	38	31	1043	43	14	5	5	67	1110
RegTB	1998	740	322	208	3268	81	98	51	56	286	3554
A	359	172	80	37	648	7	13	8	17	45	693
B	526	164	67	55	812	16	19	11	10	56	868
C	665	337	148	106	1256	39	48	24	18	129	1385
D	448	67	27	10	552	19	18	8	11	56	608
SZOC	2363	614	238	198	3413	386	179	181	837	1583	4996
A	416	223	89	57	785	32	52	53	359	496	1281
B	664	152	56	71	943	49	61	67	416	593	1536
C	972	225	87	67	1351	235	35	28	47	345	1696
D	311	14	6	3	334	70	31	33	15	149	483
Grand Total	16146	4116	1562	953	22777	1307	799	535	1256	3897	26674

Source: Own editing based on HSB.

8. Number and ratio of GJO-listed publications by type and by committee in 2020 and 2021

Committee / Category	Domestic	International	Grand Total	Domestic	International	Grand Total
ÁJB	4014	322	4336	93%	7%	100%
A	1618	117	1735	93%	7%	100%
B	874	121	995	88%	12%	100%
C	806	76	882	91%	9%	100%
D	716	8	724	99%	1%	100%
DEM	3078	40	3118	99%	1%	100%
A	599	11	610	98%	2%	100%
B	899	5	904	99%	1%	100%
C	877	6	883	99%	1%	100%
D	703	18	721	98%	2%	100%
GMB	2008	892	2900	69%	31%	100%
A	253	214	467	54%	46%	100%
B	602	254	856	70%	30%	100%
C	586	253	839	70%	30%	100%
D	567	171	738	77%	23%	100%
HTB	1102	67	1169	94%	6%	100%
A	344	6	350	98%	2%	100%
B	554	31	585	95%	5%	100%
C	181	16	197	92%	8%	100%
D	23	14	37	62%	38%	100%
NFDB	1757	231	1988	88%	12%	100%
A	303	20	323	94%	6%	100%
B	661	58	719	92%	8%	100%
C	436	140	576	76%	24%	100%
D	357	13	370	96%	4%	100%
PTB	4137	476	4613	90%	10%	100%
A	808	43	851	95%	5%	100%
B	1589	80	1669	95%	5%	100%
C	697	286	983	71%	29%	100%
D	1043	67	1110	94%	6%	100%
RegTB	3268	286	3554	92%	8%	100%
A	648	45	693	94%	6%	100%
B	812	56	868	94%	6%	100%

Committee / Category	Domestic	International	Grand Total	Domestic	International	Grand Total
C	1256	129	1385	91%	9%	100%
D	552	56	608	91%	9%	100%
SZOC	3413	1583	4996	68%	32%	100%
A	785	496	1281	61%	39%	100%
B	943	593	1536	61%	39%	100%
C	1351	345	1696	80%	20%	100%
D	334	149	483	69%	31%	100%
Grand Total	22777	3897	26674	85%	15%	100%

Source: Own editing based on HSB.

9. Number and ratio of GJO internationally listed journal articles by type, committee, and quartile published in 2020 and 2021

Committee / Category	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total
ÁJB	15	17	45	22	31	192	322	5%	5%	14%	7%	10%	60%	100%
A	6	6	19	1	25	60	117	5%	5%	16%	1%	21%	51%	100%
B	7	5	1	8	1	99	121	6%	4%	1%	7%	1%	82%	100%
C	1	5	25	13	5	27	76	1%	7%	33%	17%	7%	36%	100%
D	1	1	0	0	0	6	8	13%	13%	0%	0%	0%	75%	100%
DEM	11	7	9	5	1	7	40	28%	18%	23%	13%	3%	18%	100%
A	5	4	0	0	0	2	11	45%	36%	0%	0%	0%	18%	100%
B	2	1	1	1	0	0	5	40%	20%	20%	20%	0%	0%	100%
C	0	2	4	0	0	0	6	0%	33%	67%	0%	0%	0%	100%
D	4	0	4	4	1	5	18	22%	0%	22%	22%	6%	28%	100%
GMB	314	192	189	133	16	48	892	35%	22%	21%	15%	2%	5%	100%
A	139	69	6	0	0	0	214	65%	32%	3%	0%	0%	0%	100%
B	94	74	74	10	2	0	254	37%	29%	29%	4%	1%	0%	100%

Committee / Category	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total
C	69	33	54	81	4	12	253	27%	13%	21%	32%	2%	5%	100%
D	12	16	55	42	10	36	171	7%	9%	32%	25%	6%	21%	100%
HTB	2	1	0	4	2	58	67	3%	1%	0%	6%	3%	87%	100%
A	0	0	0	1	0	5	6	0%	0%	0%	17%	0%	83%	100%
B	2	1	0	0	0	28	31	6%	3%	0%	0%	0%	90%	100%
C	0	0	0	0	0	16	16	0%	0%	0%	0%	0%	100%	100%
D	0	0	0	3	2	9	14	0%	0%	0%	21%	14%	64%	100%
NFDB	44	55	43	74	2	13	231	19%	24%	19%	32%	1%	6%	100%
A	13	5	2	0	0	0	20	65%	25%	10%	0%	0%	0%	100%
B	22	26	10	0	0	0	58	38%	45%	17%	0%	0%	0%	100%
C	8	24	24	70	2	12	140	6%	17%	17%	50%	1%	9%	100%
D	1	0	7	4	0	1	13	8%	0%	54%	31%	0%	8%	100%
PTB	53	73	78	112	10	150	476	11%	15%	16%	24%	2%	32%	100%
A	30	6	7	0	0	0	43	70%	14%	16%	0%	0%	0%	100%
B	20	32	23	3	0	2	80	25%	40%	29%	4%	0%	3%	100%
C	2	31	24	102	4	123	286	1%	11%	8%	36%	1%	43%	100%
D	1	4	24	7	6	25	67	1%	6%	36%	10%	9%	37%	100%
RegTB	57	23	50	109	2	45	286	20%	8%	17%	38%	1%	16%	100%
A	37	8	0	0	0	0	45	82%	18%	0%	0%	0%	0%	100%
B	15	8	27	3	0	3	56	27%	14%	48%	5%	0%	5%	100%
C	4	6	14	89	2	14	129	3%	5%	11%	69%	2%	11%	100%

Committee / Category	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total	D1	Q1 (without D1)	Q2	Q3	Q4	N.A.	Grand Total
D	1	1	9	17	0	28	56	2%	2%	16%	30%	0%	50%	100%
SZOC	908	180	207	51	14	223	1583	57%	11%	13%	3%	1%	14%	100%
A	441	46	6	1	0	2	496	89%	9%	1%	0%	0%	0%	100%
B	435	54	96	8	0	0	593	73%	9%	16%	1%	0%	0%	100%
C	22	63	43	16	3	198	345	6%	18%	12%	5%	1%	57%	100%
D	10	17	62	26	11	23	149	7%	11%	42%	17%	7%	15%	100%
Grand Total	1404	548	621	510	78	736	3897	36%	14%	16%	13%	2%	19%	100%

Source: Own editing based on HSB

10. Average point and number of co-authorship for GJO-listed journal articles published in 2020 and 2021 by type, committee, and category

Committee / category	Domestically listed		Internationally listed		Total	
	Average points	Average number of co-authors (persons)	Average points	Average number of co-authors (persons)	Average points	Average number of co-authors (persons)
ÁJB	4.4	1.4	8.4	1.5	4.6	1.4
A	6.5	1.2	11.4	1.4	6.8	1.2
B	4.1	1.4	7.5	1.7	4.5	1.5
C	2.7	1.7	5.2	1.6	2.9	1.7
D	1.6	1.3	5.7	1.3	1.7	1.3
DEM	4.9	1.5	8.1	3.2	4.9	1.5
A	6.3	1.7	16.3	3.5	6.5	1.8
B	5.6	1.5	12.8	1.6	5.6	1.5
C	4.7	1.4	4.9	2.2	4.7	1.4
D	2.9	1.2	3.6	3.7	3.0	1.2
GMB	4.4	1.7	6.5	4.7	4.9	2.7
A	6.8	1.9	8.9	5.8	7.6	3.7
B	5.1	1.9	7.7	4.3	5.7	2.6

Committee / category	Domestically listed		Internationally listed		Total	
	Average points	Average number of co-authors (persons)	Average points	Average number of co-authors (persons)	Average points	Average number of co-authors (persons)
C	4.4	1.6	5.1	5.6	4.6	2.8
D	2.4	1.8	4.4	2.6	2.8	1.9
HTB	6.3	1.4	9.3	1.8	6.5	1.4
A	8.1	1.3	20.0	1.5	8.3	1.3
B	5.8	1.4	12.2	1.6	6.2	1.4
C	5.0	1.4	5.9	1.3	5.1	1.4
D	1.7	1.3	2.7	2.7	2.1	1.9
NFDB	5.3	1.4	7.6	2.1	5.5	1.5
A	6.9	1.8	13.3	4.1	7.2	1.9
B	5.9	1.3	8.7	2.5	6.1	1.4
C	4.9	1.3	6.7	1.7	5.3	1.4
D	3.2	1.3	4.9	1.4	3.3	1.3
PTB	5.4	1.3	6.7	1.7	5.5	1.4
A	7.4	1.3	14.5	2.8	7.7	1.4
B	6.3	1.4	10.9	1.8	6.5	1.4
C	4.6	1.2	5.3	1.5	4.8	1.3
D	2.9	1.3	4.0	1.7	3.0	1.3
RegTB	4.8	1.7	6.7	2.5	4.9	1.7
A	6.5	1.8	9.4	3.5	6.6	1.9
B	5.7	1.6	8.2	2.4	5.8	1.7
C	4.2	1.8	6.2	2.3	4.4	1.9
D	2.6	1.3	4.5	2.4	2.8	1.4
SZOC	3.9	1.6	5.5	13.7	4.4	5.4
A	6.3	1.8	6.2	33.1	6.3	13.9
B	4.5	1.7	4.8	7.1	4.6	3.8
C	2.8	1.5	6.0	2.4	3.4	1.7
D	1.2	1.1	4.0	2.0	2.0	1.4
Grand Total	4.8	1.5	6.5	7.4	5.0	2.3

Source: Own editing based on HSB.