



ÓBUDAI EGYETEM
ÓBUDA UNIVERSITY

Interdisciplinarity in the changing world: The challenges of doctoral education in Hungary in the 21th century

MAB 30 Jubilee Conference

Prof. László Gulácsi, DSc., Vice rector for research, Óbuda University

Budapest, 11th July 2024

Semmelweis University Basic Medical Science Centre, Budapest Tűzoltó
street 37 – 47 Hevessy Lecture Room

Ranking resilience – publication and ranking tendency

General challenges / obstacles

PhD students (NOT ESRs!) – what are they doing? What expectations they must meet?

Interdisciplinarity Challenges

Who we are? ,Scientific fingerprint' – subject areas

Value structure requirements for researchers

How good we are? Heads of Doctoral School Business and Management

Suggestions

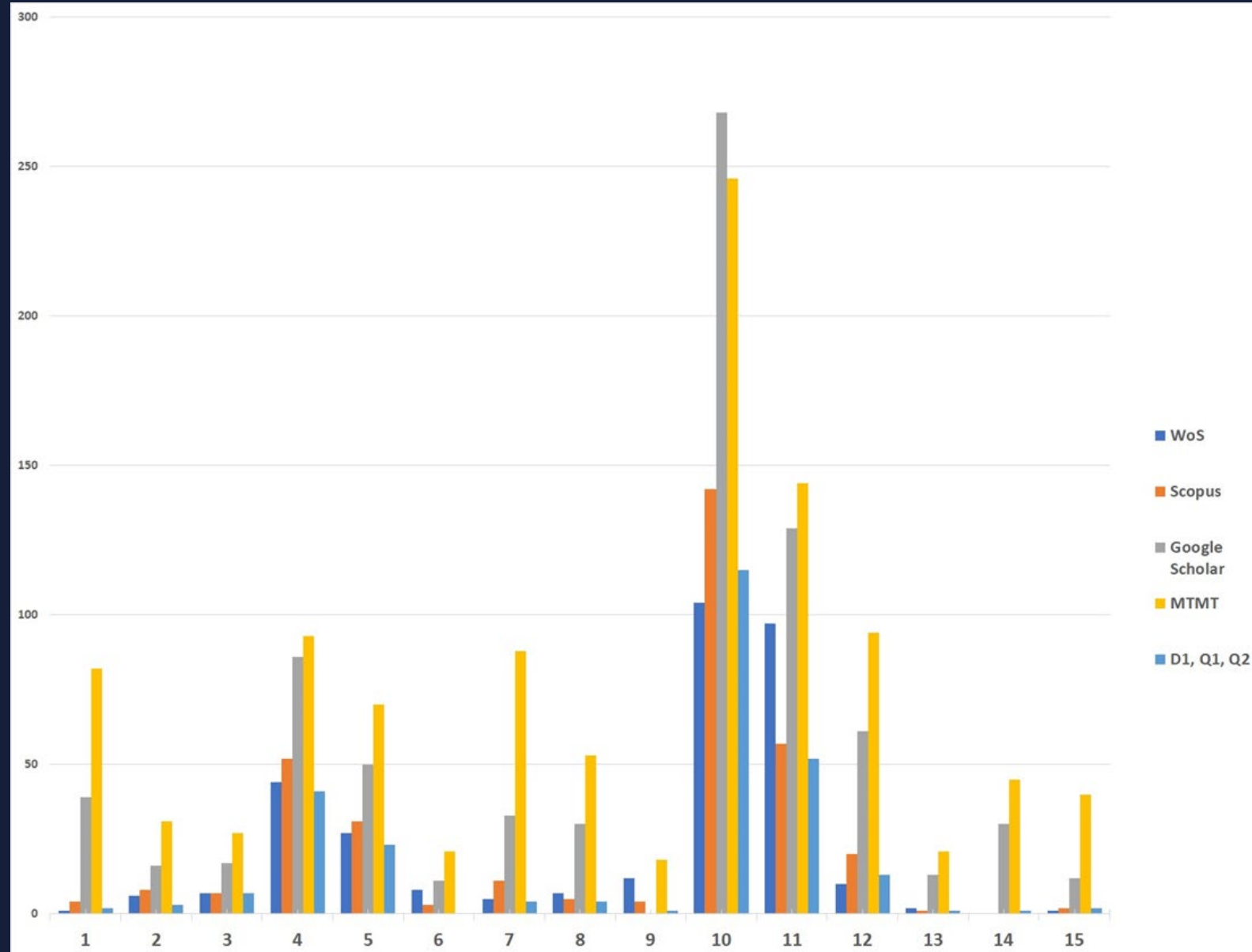


General challenges / obstacles

- PhD students - NOT ESRs! Ineffective time management: 0-24 months credit collection, assistant teaching – minimal research and publication requirements. If PhD students spend the first 2 years attending classes and earning credits, they don't have time and motivation (pressure) to do research and publish, which is not a requirement in some (most?) Doctoral Schools (DS).
- Research results, publications are often measured in 'kilos' - number of pages, even in sheets, number of words.
- Publication credit: divided by the number of authors: this is against multidisciplinary collaboration demotivating and against the internationalisation, against interdisciplinarity and ranking requirements, less citations etc.
- Catch-174 (Catch-22 Joseph Heller) – we need 174 wonderful DS heads, 174x8-10 excellent core members etc. But the most important problem is the fragmentation.
- Co-supervisorship is valued only 50% (2 supervisors) – this is against multidisciplinary collaboration, demotivating and competitive disadvantage!

No outcome measures (research delivery) of the Doctoral Schools

WoS (Web of Science)
Scopus
Google Scholar
MTMT
D1, Q1, Q2
Past 5 years













Ranking resilience V4

- THE Times Higher Education World University Ranking

Scientometrics
<https://doi.org/10.1007/s11192-023-04920-1>



Ranking resilience: assessing the impact of scientific performance and the expansion of the Times Higher Education World University Rankings on the position of Czech, Hungarian, Polish, and Slovak universities

Barbara Tóth¹  · Hossein Motahari-Nezhad¹  · Nicki Horseman²  ·
László Berek^{3,4}  · Levente Kovács⁵  · Áron Hölgyesi^{1,6}  · Márta Péntek¹  ·
Seyedali Mirjalili^{6,7}  · László Gulácsi¹  · Zsombor Zrubka¹ 

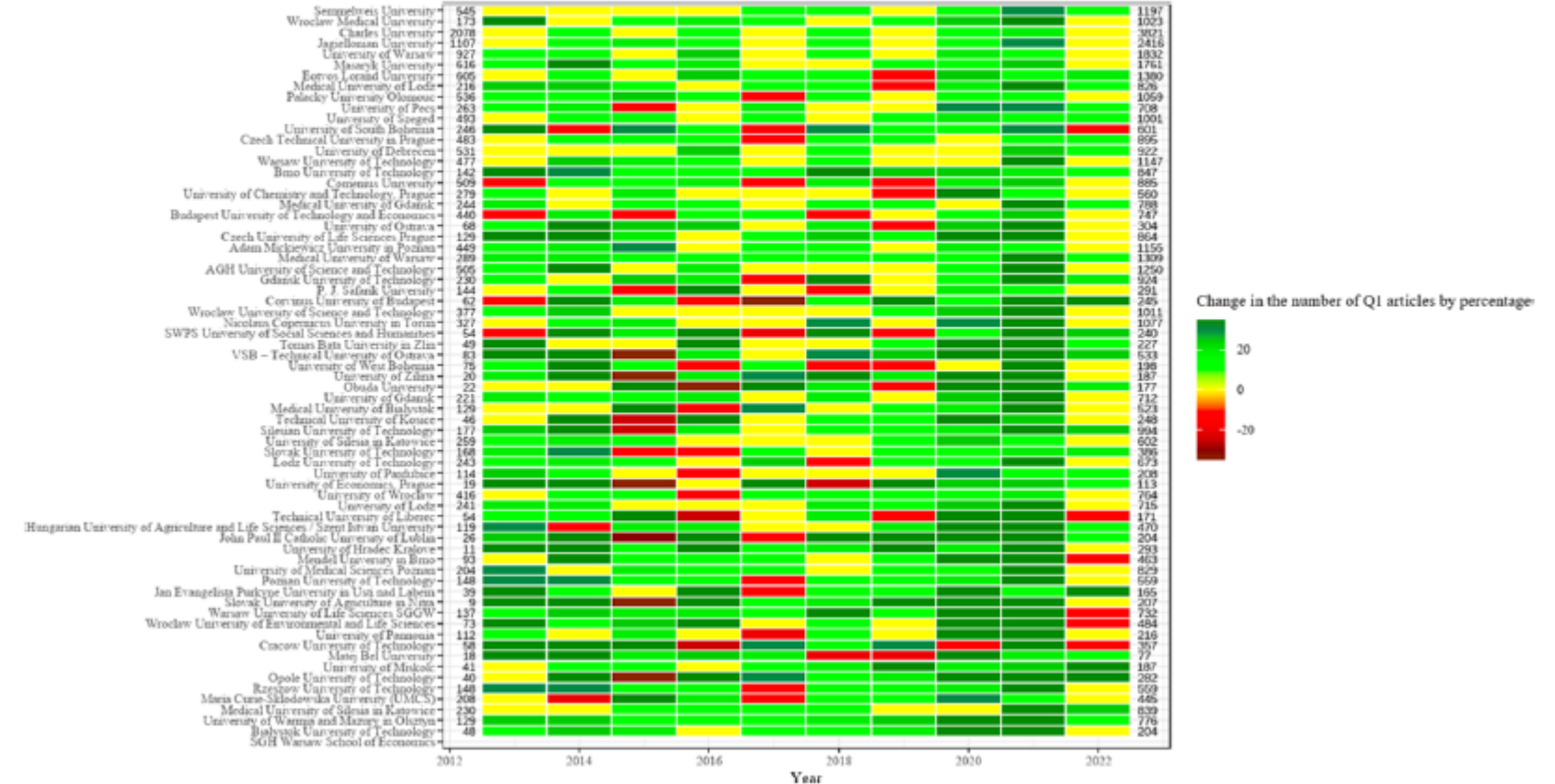
Received: 5 June 2023 / Accepted: 13 December 2023

© The Author(s) 2024

Year-on-year growth rates in the number of Q1

2019-2023

Scientometrics



Ranking status of universities in the region 2019-2023

It should be noted that most universities in the region have ranked below 800, and while research output has been increasing, it was observed that ranks worsened for most universities from these four countries.



Interdisciplinary Challenges I.

Let's assume we do research and we have scientific results, what next?

Where to publish? Complex and contradictory standards (value) and incentive structure. Whose value it is, and which one to be followed?

Stakeholders - Who wants us (researchers, PhD students) to do and what exactly? Ministry, Academy of Science, and other stakeholders ...

different values / requirements – Which should we follow? I.

The structure of the Hungarian Academy of Sciences
11 sections and 44 committees

- I. Section of Linguistics and Literary Scholarship
- II. Section of Philosophy and Historical Sciences
- III. Section of Mathematics
- IV. Section of Agricultural Sciences
- V. Section of Medical Sciences
- VI. Section of Engineering Sciences
- VII. Section of Chemical Sciences
- VIII. Section of Biological Sciences
- IX. Section of Economics and Law - including sociology, demography and political sciences
- X. Section of Earth Sciences
- XI. Section of Physical Sciences



Committees VI. Section of Engineering Sciences:

- Committee on Architecture
- Committee on Automation and Computer Science
- Committee on Electrical Engineering
- Committee on Electronic Devices and Technologies
- Committee on Energetics
- Committee on Fibre Technology
- Committee on Hydrodynamics and Thermal Energy Engineering
- Committee on Information Science
- Committee on Materials Science and Technology
- Committee on Mechanical Structures
- Committee on Metallurgy
- Committee on Telecommunication Systems
- Committee on the History and Theory of Architecture
- Committee on Theoretical and Applied Mechanics
- Committee on Town Planning
- Committee on Transport Engineering
- Committee on Water Management
- Complex Committee on Acoustics

ÓÚ has colleagues
with membership in
the red sections



Different values – Which should we follow? II.

The system of research outcome categorization of the Hungarian Academy of Sciences

Each Section specifies their own scientific requirements which vary greatly from departments to departments.

As for publication (research) Sections and often committees within the Sections set up their own categorization of the Journals from 'A' to 'D'

- international A-D
- national A-D

They set their own value category from 'A' to 'D' and they categorize scientific journals both on section and committee level.

The methodology behind this categorization is not known.



Different values – Which should we follow? III.

Issues:

Double (multi) value system in place

-researchers have to comply with the national system if they want to proceed with their professional career

-e.g. *European Journal of Health Economics* is category 'C' according to the Section IX. – not the same level as the international recognition on the other hand *Közgazdasági Szemle (Review)* is category 'A' – however, it is not Scimago ranked.

Confusing incentive system

Difficult to navigate. Which value should be followed?

What requirements should we follow? National vs. International?

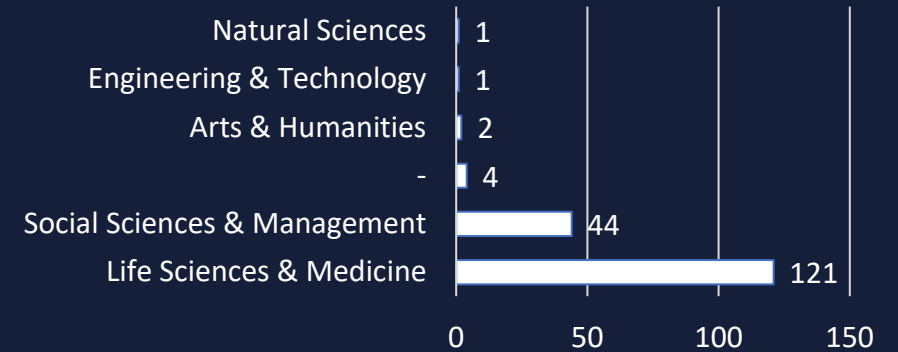
How to improve international visibility?

How could our ranking position be improved?

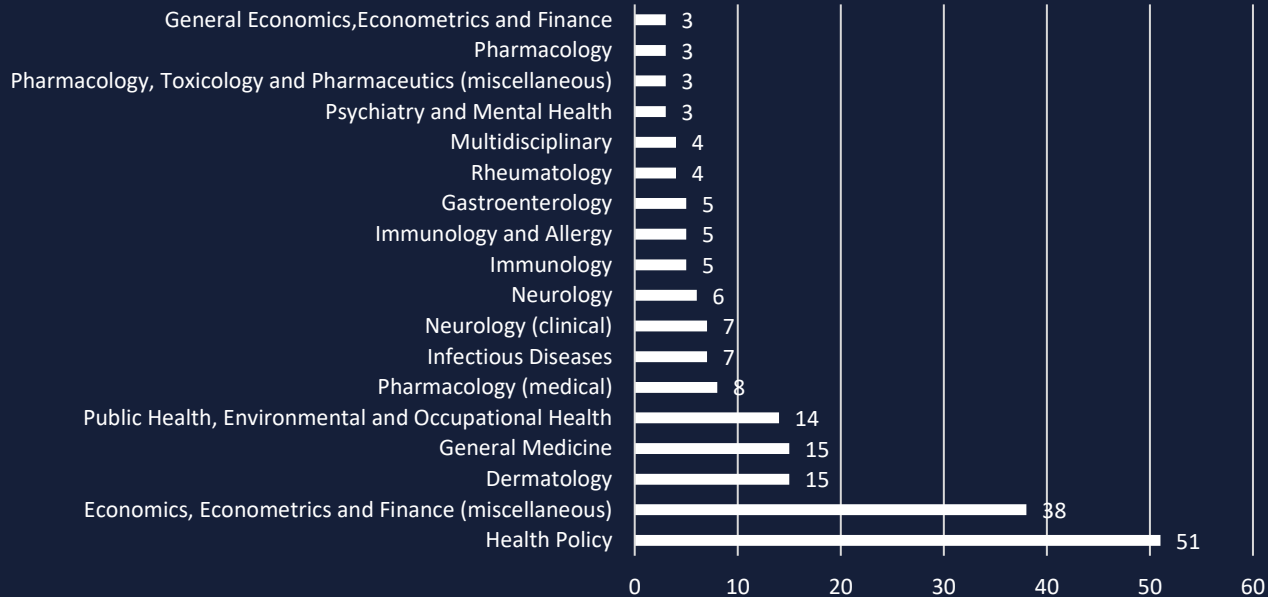


Interdisciplinary challenge II. Who we are, in scientific finger print? – subject areas (Gulácsi)

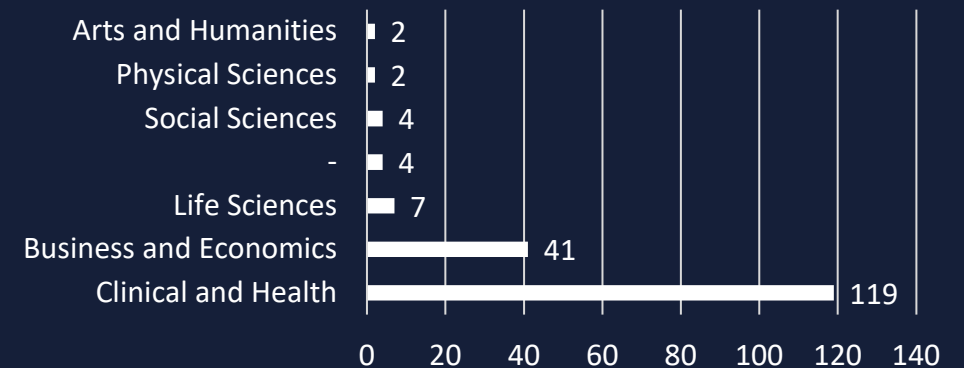
Broad QS subject areas
publications 2013-2022 (n=130)



Scopus subject areas publications 2013-2022 (n=130)



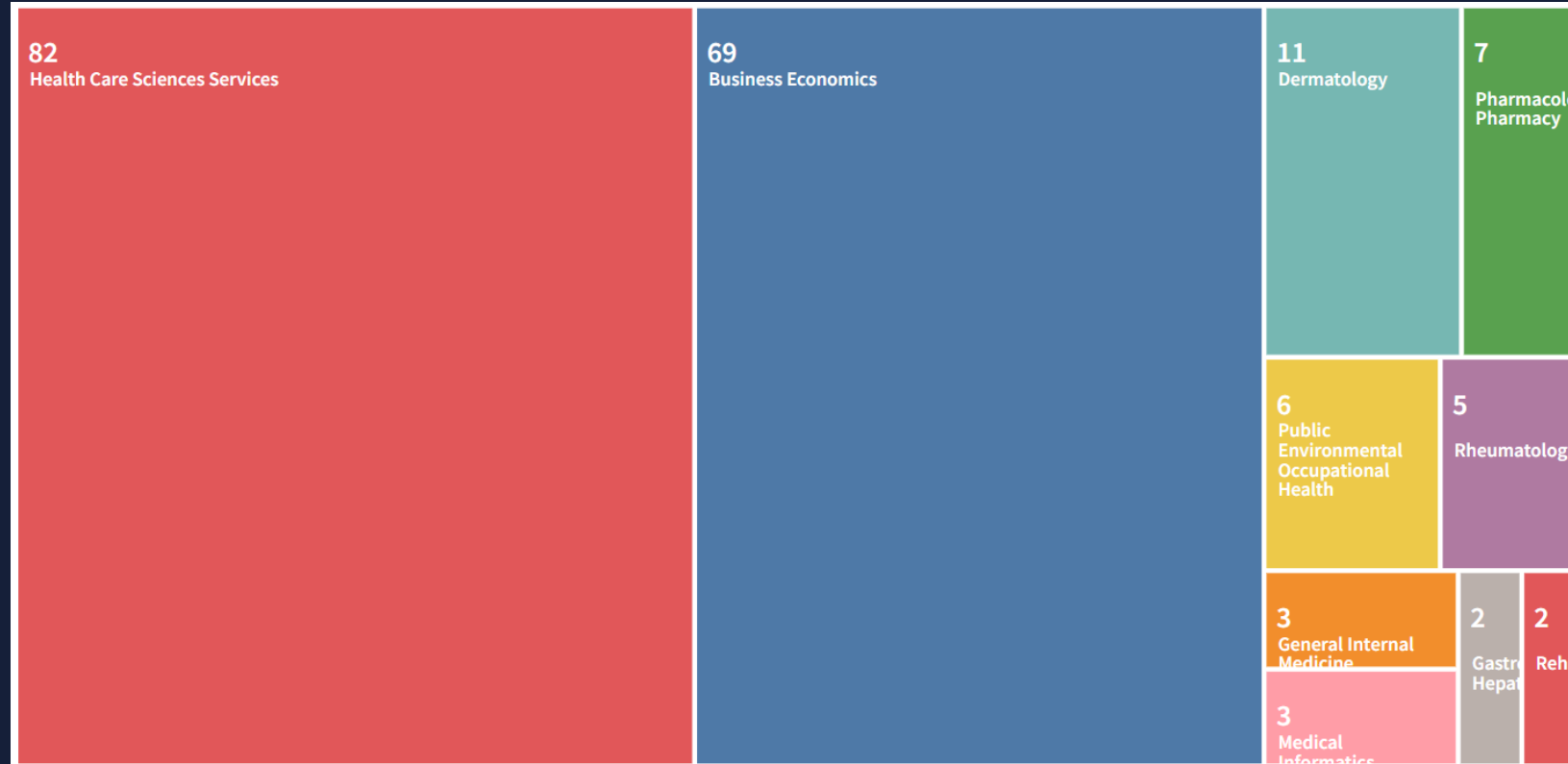
Broad THE subject areas publications 2013-2022
(n=130)



Multidisciplinarity – on personal level

Past 5 years D1: 34, Q1: 13, Q2: 7, Q3: 6, Q4: 2 in Total: 62

Health Care Sciences Services	70
Business Economics	62
Public Environmental Occupational Health	5
Pharmacology Pharmacy	4
Medical Informatics	3
Environmental Sciences Ecology	2
General Internal Medicine	2
Biochemistry Molecular Biology	1
Chemistry	1
Computer Science	1
Engineering	1
Orthopedics	1
Otorhinolaryngology	1
Rehabilitation	1
Research Experimental Medicine	1
Rheumatology	1



Conclusions - PhD outcome to be increased

PhD sector is growing. strategic and feasibility plan is essential: institutionalisation, professionalisation, internationalisation, financing.

Some very good innovations: UNKP 2016 (Új Nemzeti Kiválósági Program) Koóperatív Doktori Program (KDP), Egyetemi Kutatói Ösztöndíj Program (EKÖP).

Outcome – complex outcome structure is needed for PhD students AND SUPERVISORS

It's all about results, quality research and publications, winning grants, industrial and social impact.

Outcome informed resource allocation. Today the distribution is 'historically' determined.

There should be far fewer administrative constraints and requirements, only one thing should matter and that is scientific, societal and economic achievements / outcome. And we need to achieve this in the most cost-effective way possible, given our scarce resources (D1/HUF/subjects or scientific area).



ÓBUDAI EGYETEM
ÓBUDA UNIVERSITY

Prof. Gulácsi László, DSc.

Óbuda University Budapest, Hungary
Vice-Rector for Research
Room 103., Budapest, Bécsi út 96b, 1034

Professor, Health Economics Research Center, University Research and
Innovation Center, Room 230, Budapest, Bécsi út 96b, 1034

Head, Innovation Management Doctoral School, Óbuda University Budapest

<http://uni-obuda.hu/hecon>