Summer School

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

29. 07. - 02. 08. 2019

Melaka, Malaysia

Co-funded by the
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How to Prepare a Successful Project Proposal (Case of CBHE Scheme)

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Assessing and Improving Research Performance at South East Asian Universities

29. 07. -02. 08. 2019, Universiti Teknologi MARA, Campus Bandaraya, Melaka, Malaysia

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HOW TO PREPARE A SUCCESSFUL PROJECT PROPOSAL (Case of CBHE scheme)

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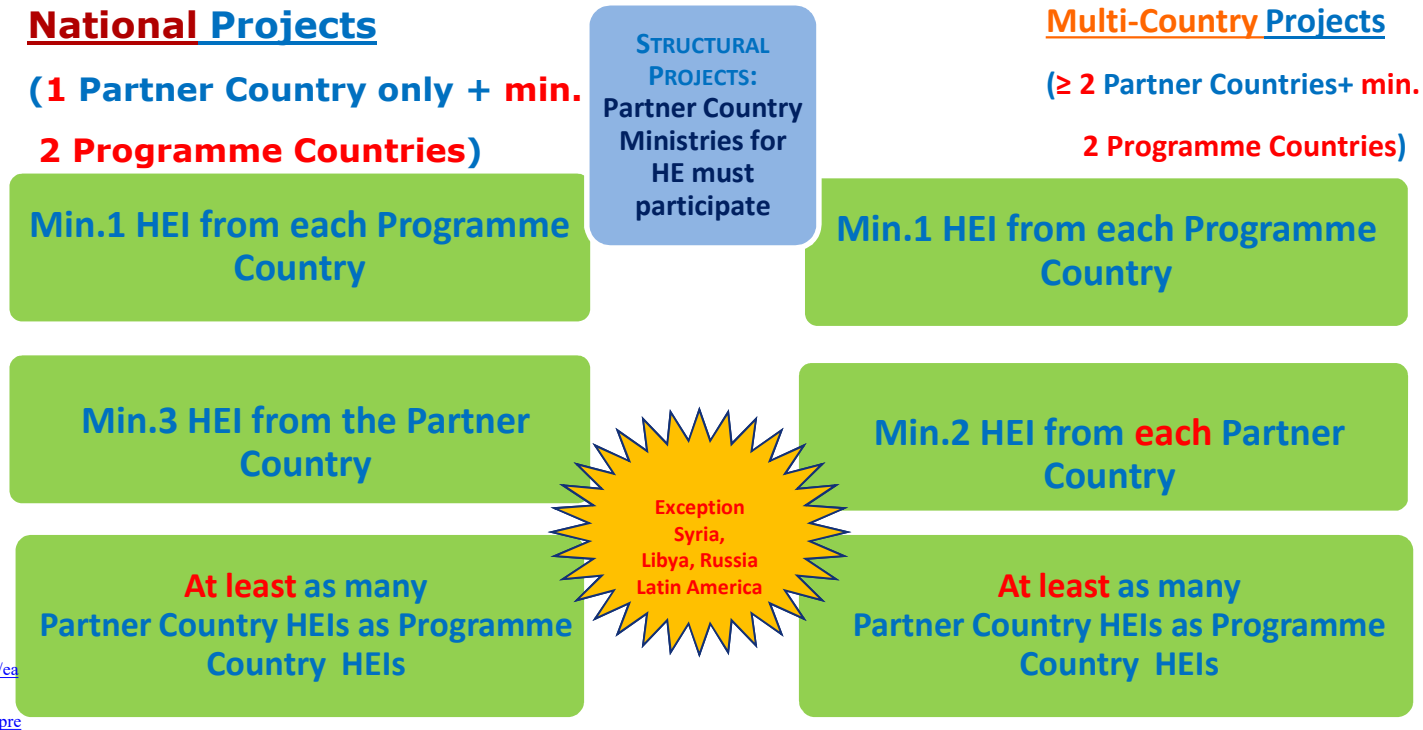
Content of the training

1. Overview of the CBHE scheme
2. Considerations for preparing the CBHE proposal
3. Structure of the CBHE proposal
4. Award criteria
5. Hands on exercise

1. CBHE -Consortium structure



EACEA standard presentation, Call 2019, Available at: https://eacea.ec.europa.eu/sites/eacea-site/files/2019_cbhe_standard_presentation.pptx

Types of the CBHE Projects

Joint Projects: => Impact Institutions

- curriculum development
- university governance & management
- Links between HE **institutions** and the wider economic and social environment

Structural Projects: => Impact Systems

- modernisation of policies, governance and management of higher education systems
- Links between HE **systems** and the wider economic and social environment

EACEA standard presentation, Call 2019, Available at: https://eacea.ec.europa.eu/sites/eacea-site/files/2019_cbhe_standard_presentation.pptx

Priorities & Types of projects

National Projects

Defined by the **Ministries of Education** in close consultation with the EU Delegations

Must address

National priorities when available

Regional priorities in other regions

Multi-Country Pro

Defined by the **Commissio** on EU's external policy

Must addres

a **regional priority** regions (regional pr

or

common to differen (cross-regional pr

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CBHE Budget and Duration per project

- Duration 24 or 36 Months
- Min. 500,000 - Max. 1,000,000 €
- Real Costs and Unit Costs
- 5 Budget Headings

EACEA standard presentation, Call 2019, Available at: https://eacea.ec.europa.eu/sites/eacea-site/files/2019_cbhe_standard_presentation.pptx

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2. How to develop a CBHE project

What is the Project?

proposal?

- has a specific objective to be completed within certain specifications
- has defined **start** and **end** dates
- has funding limits
- consumes resources (i.e., money, people, equipment)

Consider those before developing a project proposal

and NOTE!

Project proposal is

a complex, risky job

- composed of different parts
- usually is based on a contract, where the delivery of results is requested
- aimed at obtaining funding on a competitive basis
- also, requires commitment of resources

The project proposal should answer the following questions

What will be accomplished?

Why is it worth to be accomplishing?

How will the accomplishments be measured?

Who has done similar work before?

How are you going to achieve the results?

How long will it take to be accomplished?

Why is it worth to be implemented now?

Why it should be accomplished by the proposed consortium?

Your project proposal is going to reviewers, who will determine its fate

Think about what the reviewers want to see!

Write in a simple manner to communicate the message in a clear and straightforward manner

Show enthusiasm

Reviewers are also people – do not fatigue them!

Make your proposal interesting to read

Principal elements that make a CBHE project proposal 1.

- Project title & acronym
- Applicant/ Grant holder
- Consortium/Project team
- Project management
- Cooperation and communication arrangements
- Relevance of theProject
- National and/or Regional Priorities
- Background/Introduction
- Needs analysis
- Value added

Principal elements that make a CBHE project proposal 2.

- Aims and objectives
- Outputs and outcomes
- Project activities and inputs
- Assumptions and Risks
- Project work plan, LFM
- Description of work packages
- Quality plan and monitoring
- Impact, dissemination and exploitation
- Sustainability
- Budget and resources
- Previous experience, complementarity
- Annexes – detailed project description, Mandate letters, Declaration of Honour

What should be remembered about each part of the proposal?

Target groups

- **Identify (and quantify) clearly the <u>target groups</u>/ <u>beneficiaries</u> in the Partner Country/ies**

Weaknesses of the proposal: target groups identified vaguely and/or not at all

- **Identify <u>the priority to be addressed</u> and link them with the Partner Country national or institutional strategy/ies**

Weaknesses: Projects which DO NOT CLEARLY ADDRESS the priorities are NOT FUNDED. Make sure your proposal shows how objectives and results address the chosen priorities.

1. Presentation of the consortium

Presentation of **each consortium member and each individual expert**

- **Specific capacity (people and infrastructure)**
- **Previous experience in the field**
- **Existing cooperation**

Provide justification for the consortium – Why specifically this consortium? The expertise of the consortium should be **complementary** to allow the achievement of the project outcomes.

Weak points NOT to commit!

- **Lack of concrete information** about the consortium members, specific expertise and experience – each partner should provide the input
- Insufficient information **to demonstrate that the partners have capacities (time, people, expertise)** to contribute to the achievement of the project's objectives

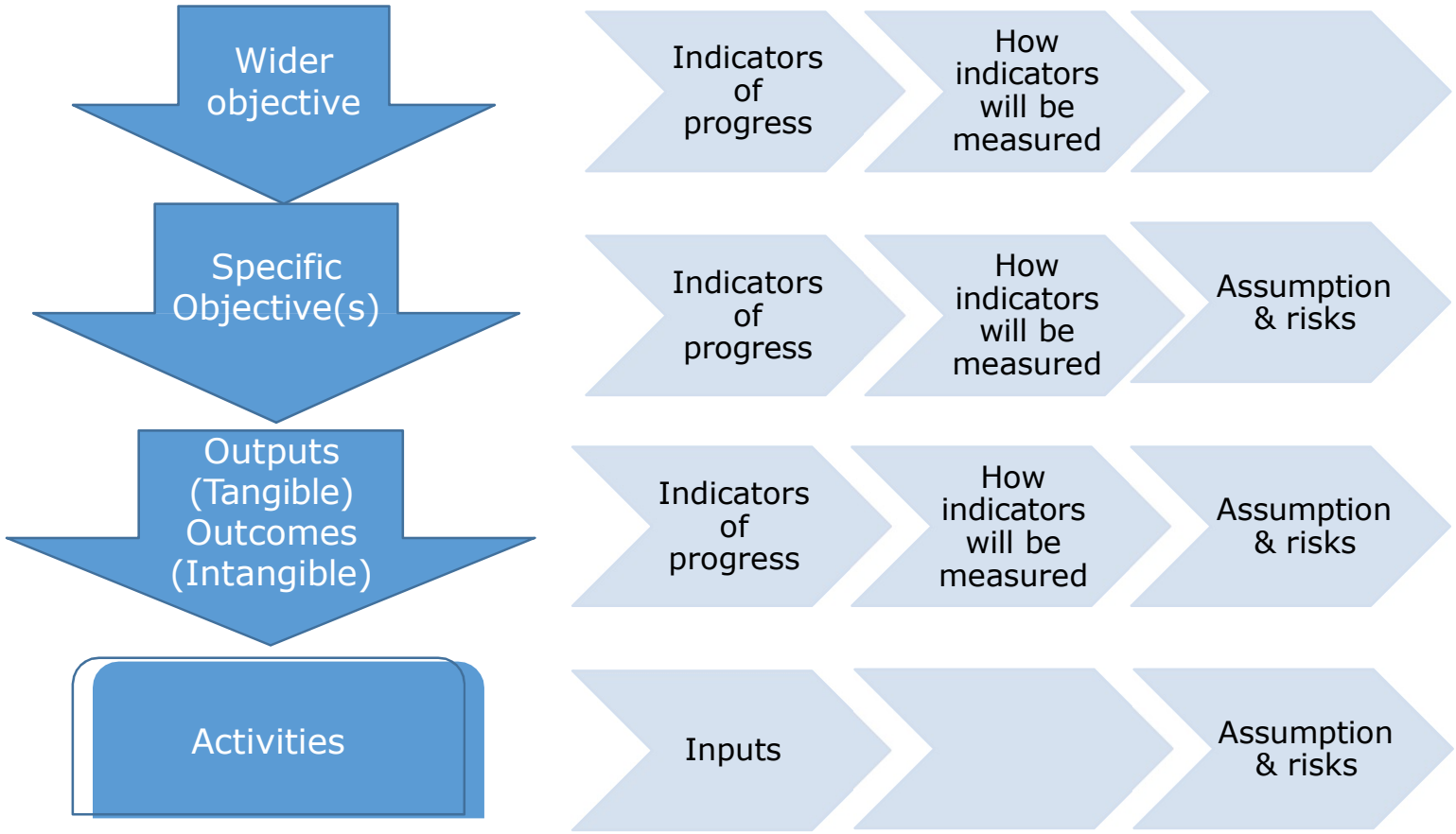
2. Needs Analysis

Describe:
Actual situation
Desired situation
Gap specification
How the project will facilitate mitigating the gap
Note:
✓The picture you paint should not be so ugly that the solution appears unrealistic
✓The reviewer will ask, whether an investment in a solution is worthwhile
✓Consider other projects in similar fields (esp. those funded by the same donor – CBHE)
✓Your work should complement (if at all) and NOT duplicate others
✓Avoid criticizing others (they can be your reviewers)

2. Goals and Objectives of the Project

- Goal: Conceptual – more abstract
- Objective: Measurable outcomes of the project

- Goals should be SMART



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Logical Framework Matrix (LFM)

FRAMEWORK MATRIX – LFM			
Wider Objective: *What is the overall broader objective, to which the project will contribute?* •	***Indicators of progress:*** *What are the key indicators related to the wider objective?* •	***How indicators will be measured:*** *What are the sources of information on these indicators?* •	
Specific Project Objective/s: *What are the specific objectives, which the project shall achieve?* •	**Indicators of progress:** *What are the quantitative and qualitative indicators showing whether and to what extent the project's specific objectives are achieved?* •	**How indicators will be measured:** *What are the sources of information that exist and can be collected? What are the methods required to get this information?* •	**Assumptions & risks:** *What are the factors and conditions not under the direct control of the project, which are necessary to achieve these objectives? What risks have to be considered?* •
Outputs (tangible) and Outcomes (intangible): •*Please provide the list of concrete DELIVERABLES - outputs/outcomes (**grouped in Workpackages**), leading to the specific objective/s.:* •	**Indicators of progress:** *What are the indicators to measure whether and to what extent the project achieves the envisaged results and effects?* •	**How indicators will be measured:** *What are the sources of information on these indicators?* •	**Assumptions & risks:** *What external factors and conditions must be realised to obtain the expected outcomes and results on schedule?* •
Activities: *What are the key activities to be carried out (**grouped in Workpackages**) and in what sequence in order to produce the expected results?* •	***Inputs:*** *What inputs are required to implement these activities, e.g. staff time, equipment, mobilities, publications etc.?* •		**Assumptions, risks and pre- conditions:** *What pre-conditions are required before the project starts? What conditions outside the project's direct control have to be present for the implementation of the planned activities?*

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Wider objective(s)

- Expected results of the project expressed **in terms of consequences**
- **Longer term impact** of the project
- To which wider objective will the project contribute?

- Example: To reform the computer sciences' higher education in Malaysia through the establishment of a new interdisciplinary master program in computer sciences, that is benchmarked to high quality similar programs in Europe and responsive to national and regional needs.

The LFM :

- Should provide a good and concise overview of the project
- It should provide consistent overview of the project well aligned with other sections

Specific objectives

Expected outcomes of the project expressed in terms of its results which will:

Contribute to the achievement of the overall/ wider objective

•Initial - **short term impact** of the project

ASK yourself!

- Are the wider objective and specific objective(s) logically interconnected?
- Are the project specific objectives measurable and realistic?
- An example of specific objectives - To improve the quality of higher education in computer sciences through the establishment of an interdisciplinary master program in computer sciences

Assumptions and risks

Assumptions = Desired situation
an assumption -formulated in a negative way

Risks = External factors outside the control of the project, but that are critical for the achievement of its objective

Assumptions and risks analysis = elaboration of hypotheses about factors affecting the project which could affect the progress or success of the project
The assumptions and risks analysis - to identify, the risks that could be faced and to prepare the mitigation measures as early as possible

ASK!

- What are the assumptions required for the achievement of the project?
- What are the risks that should be taken into account?
- What are the possible measures to limit or prevent these risks?
- Have these measures been translated in project activities whenever possible?

Assumptions & risks

Example:

Assumptions: - The political instability does NOT undermine the implementation plan of the project

Risks:

- **Specific objective**: To improve the quality of higher education in computer sciences through the establishment of an interdisciplinary master program

Risks:

- Delay in establishment of program curriculum
- Disagreement on program curricular design and/or professional tracks.

- **Specific objective:** To build the computer sciences teaching capacity at the local consortium members

- Delay in the procurement of classroom equipment
- Delay in launching the program
- Reluctance of consortium partners to participate in all project activities and all proposed activities as set out in the original project proposal

Outputs and outcomes

Outputs = the products, capital goods and services which result from a project – ***tangible***

Outcomes = the likely or achieved short-term and medium-term effects of project's outputs – ***intangible***

Outcomes vs. outputs – Do not promise, what you cannot achieve!

- **Behavioral**: A human action is anticipated.
  - Example: 15 of the 20 participating students will learn how to do programming.

- **Performance**: A specific time frame within which a behavior will occur, at an expected proficiency level, is expected.
  - Example: 15 of the 20 students will learn how to use Excel in one month and will pass the test administered by the International Computer Driving License (ICDL).

- **Process:** The manner in which something occurs is an end in itself.
  - Example: We will document the teaching methods utilized, identifying those with the greatest success.

- **Output - Product**: A tangible item results.
  - Example: A manual will be created to be used in teaching Excel to students in the future.

Preparing the work plan

The work plan should answer the following questions:
What?
When?
Where?

Be realistic – do not underestimate how long the project implementation will take

WORKPLAN

Please use the model provided. Applicants are expected to complete a one-page work plan for each project year.
For each year of your project proposal, please complete a work plan indicating the deadlines for each outcome and the period and location in which your activities will take place. Please create additional work plan tables if further space is needed.

The same reference and sub-reference numbers as used in the logical framework matrix must be assigned to each outcome and related activities.

Activity carried out in the Programme Country: **x** (E.g. activity in France for two weeks in the first month of the project 2x under M1)
Activity carried out in the Partner Country (ies): **X**(E.g., activity in Tunisia for three weeks in the second month of the project: 3X under M2)

WORKPLAN for project year

Activities		Total duration (number of weeks)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Ref.nr/ Sub-ref nr	Title													

Preparation of the budget

Budget items:

- Staff cost (national unit cost)
- Travel Cost and Subsistance Cost
- Subcontracting cost:
- Equipment cost (only partner countries)
-Printing and publishing cost
- Quality assurance cost (external review)
-Other subcontracting cost (e.g. Project website)

Practical hint: Input the data into the Excel sheet and the sums will be calculated automatically, the ceilings will be controlled for

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Key Action 2: Cooperation for innovation and the exchange of good practices Capacity Building in the field of higher education

Before completing this table please read carefully the instructions available on the EAC

CALL FOR PROPOSALS 2018 – EAC/A05/2017 - Erasmus+ Programme (2017/

Programme guide and instructions for applicants

Action		Please select Action Type
Duration number of months		Please select duration
Project Acronym		Please fill in Project Acronym
Project Title		

EU GRANT REQUESTED FROM THE EUROPEAN UNION (in EUR)		
1. Staff Costs	0.00	Cannot exceed 40% of total Grant requested
2. Travel Costs + Exceptional Travel Costs	0.00	
3. Costs of Stay	0.00	
4. Equipment Costs	0.00	Cannot exceed 30% of Total Grant requested
5. Subcontracting Costs	0.00	Cannot exceed 10% of Total Grant requested

DISTRIBUTION OF THE GRANT BY ORGANISATION (in EUR)

Partner N°	Name of Partner	Country	PR/PA	1. Staff Costs	2. Travel Costs
P 1				-	-
P 2				-	-
P 3				-	-
P 4				-	-
P 5				-	-
P 6				-	-
P 7				-	-
P 8				-	-
P 9				-	-
P 10				-	-
P 11				-	-
P 12				-	-
P 13				-	-
P 14				-	-
P 15				-	-
P 16				-	-
P 17				-	-
P 18				-	-
P 19				-	-
P 20				-	-
P 21				-	-
P 22				-	-
P 23				-	-

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Dissemination strategy

- **Dissemination strategy –** should include outputs to be disseminated, target groups, dissemination tools & activities
- **Evidence of the impact of the project achieved by the dissemination strategy:** to measure impact at institutional/ national level in the Partner Countries – formulate impact indicators

Sustainability

- **Funding agencies do not commit to funding forever**
- **Education enhancement projects do not have finite time period**
- **Thus, the need to elaborate the sustainability plan – can include such aspects as:**
  - Capacity building (Young Staff Training)
  - Institutional commitment (Cost sharing – Approval of courses/curricula)
  - Look for commitment of other sources of funding (Industry)

Sustainability strategy

- **specifies the project results** to be maintained and **activities** to be continued after the end of project funding
- envisages **specific measures** to ensure **sustainability at 3 levels**: institutional, financial and policy levels
- plans such activities **as early as possible** in the project
- involves **faculty/institutional and/or national authorities** (if they are not represented in the project) to ensure their support for project results (e.g. through regular update meetings or consultations)

Impact

- the effect of the project on its wider environment and its contribution to the achievement of the project's overall objective as well as to changes, positive, negative or neutral, at different levels:

- ✓ Impact at individual level
- ✓ Impact at institutional level
- ✓ Impact on the HE sector
- ✓ Impact on the society as a whole

Impact and dissemiantion strategy

- **Dissemination strategy** including outputs to be disseminated, target groups, dissemination tools & activities
- **Evidence of impact:** how to measure impact at institutional/ national level in the Partner Countries

Consortium and Key Staff

Partners to be chosen on the basis of their **specific and complementary expertise**

More than 1 key staff member at each Partner Organization to avoid the risk of unavailability

Complementarity of key staff at the Partner organisations covering expertise in **both academic/content-related aspects** of the project and **project management**

Presentation of the Partners and their key staff:

- focus on the activities of the Partner Organisations and the expertise of staff which are **specifically related to the project**
- **complementarity between the Partners** and their expertise to be highlighted

Project management

The organization of the implementation of the project, the division of tasks between the partners.
Explanation of the allocation of resources for each activity.
How **the tasks are distributed** amongst the partners and how the project ownership will be ensured.

Project management

- **Management arrangements** at all relevant levels: international/project level, national/Partner Country level and institutional/local level (each Partner Organisation)
- **Decision-making process:** who will take decisions on what matters, and how (e.g. consensus or majority voting)
- **Bodies** to be established at each relevant level: composition and specific responsibilities of each body and relationships between them
- **Mechanisms for resolving conflicts among the Partners**

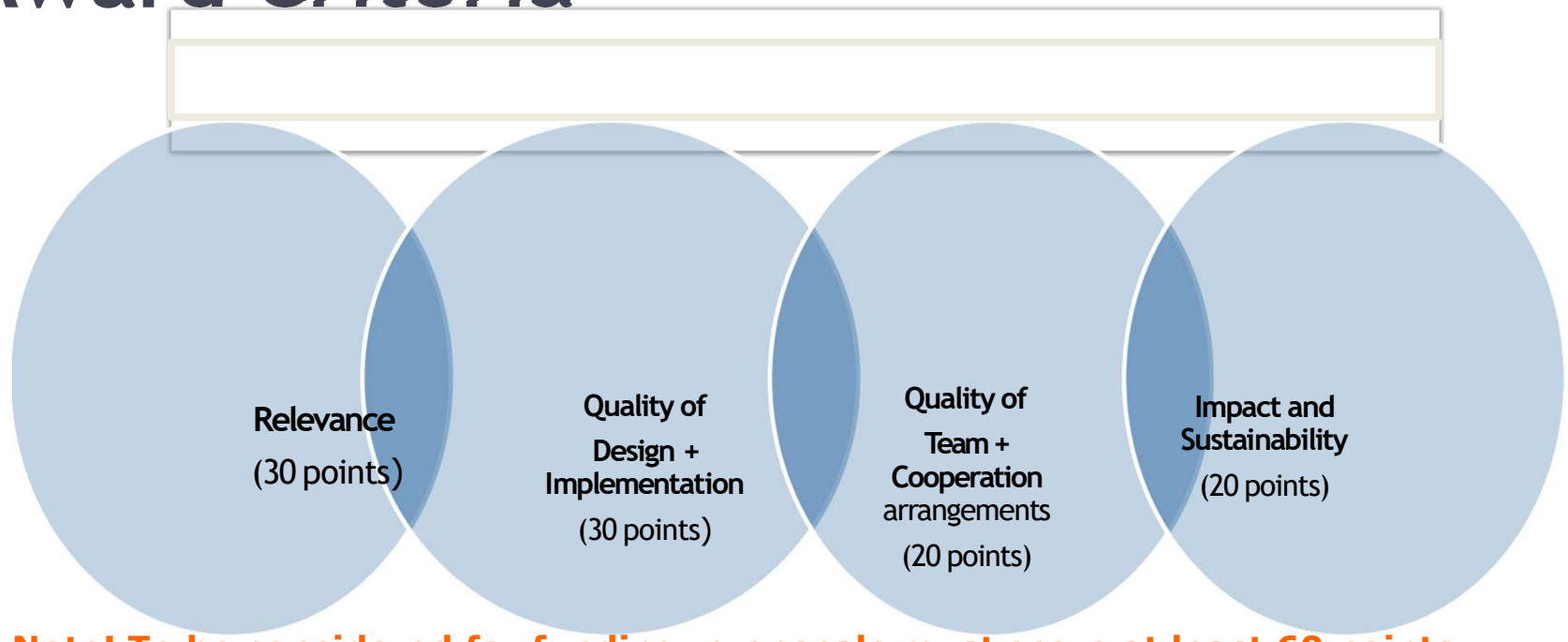
Quality assurance

External QA plan: external evaluation program by experts/bodies outside of the consortium
Internal QA plan: on-going monitoring; approval of a program by a faculty / department body; internal review of outputs by a Project Quality Assurrance Committee; a satisfaction survey among project participants, etc

QA mechanisms

- academic and administrative/management aspects of the project
- results (e.g. a newly developed/modernized program/ course), and processes (e.g. project management)

Award Criteria



Note! To be considered for funding, proposals must score at least 60 points in total and out of these points at least 15 points for "Relevance"

EACEA standard presentation, Call 2019, Available at: https://eacea.ec.europa.eu/sites/eacea-site/files/2019_cbhe_standard_presentation.pptx

General suggestions for the smooth preparation of the proposal!

- ✓ Start as early as possible
- ✓ Set a realistic time-frame for project preparation (including reception of Mandates from partners)
- ✓ Get information on technical requirements for on-line submission as early as possible
- ✓ Establish methodology: who will develop what part (narrative, financial, attachments, etc.)
- ✓ Decide on the communication strategy
- ✓ Decide WHO will write the draft;
- ✓ Complete the eForm; submit the eForm and attachments….

References

EACEA standard presentation, Call 2019, Available at: https://eacea.ec.europa.eu/sites/eacea-site/files/2019_cbhe_standard_presentation.pptx

How to prepare competitive CBHE proposal, Jordan National Erasmus1 office, Amman, 26 November 2018 Available at: http://erasmus-plus.org.jo/Portals/0/Seminars/How%20to%20prepare%20competitive%20proposals%20Nov_%202018%20-%20Amman.pdf?ver=2018-11-27-122333-420

Erasmus+ website – EACEA http://ec.europa.eu/programmes/erasmus-plus/opportunities/organisations_en

CBHE application package
https://eacea.ec.europa.eu/erasmus-plus/funding/capacity-building-higher-education-2019_en

International E+ International Contact Points (ICPs) in Programme Countries
https://eacea.ec.europa.eu/erasmus-plus/contacts/international-erasmus-plus-contact-points_e

National Erasmus+ Offices (NEOs) in certain Partner Countries (PCs)
https://eacea.ec.europa.eu/erasmus-plus/contacts/national-erasmus-plus-offices_en

Hands on: Curriculum development project proposal preparation - in groups develop the respective part of the proposal

Developing curriculum in the field – pls, suggest the field
Group exercise- develop a related part of the proposal for this Curriculum development project. Please, consider only your own home institution
D 1. Why does the consortium undertake this project?
D 2. Aims and objectives
D 3. Innovative character
E 1. Project activities and methodology – only for year 1 of the project
E 2. Quality control and monitoring
G 2. Dissemiantion and exploitation strategy
G 3. Sustainability

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How to Write an Effective Literature Review

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

29. 07. -02. 08. 2019, Universiti Teknologi MARA, Campus Bandaraya, Melaka, Malaysia

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Training Contents

1. Introduction
2. Definition, Purpose and Types of Literature Review
3. Planning a Literature Search
4. Searching Strategy
5. Literature Analysis (Processing Data, Argumentation Analysis)
6. Organising and Expressing Ideas
7. Mapping and Analysing Ideas, Synthesis of the Literature
8. Writing the Review

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1. Introduction

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- literature review is not only reading
- often consider as the dull but necessary prelude to the research work
- literature review vs. bibliographies
- good review brings new ideas from „other´s work“
- first step into the publishing
- necessary to understand the topic of a research (understood theories that were developed, know the criticism…)
- information vs. knowledge

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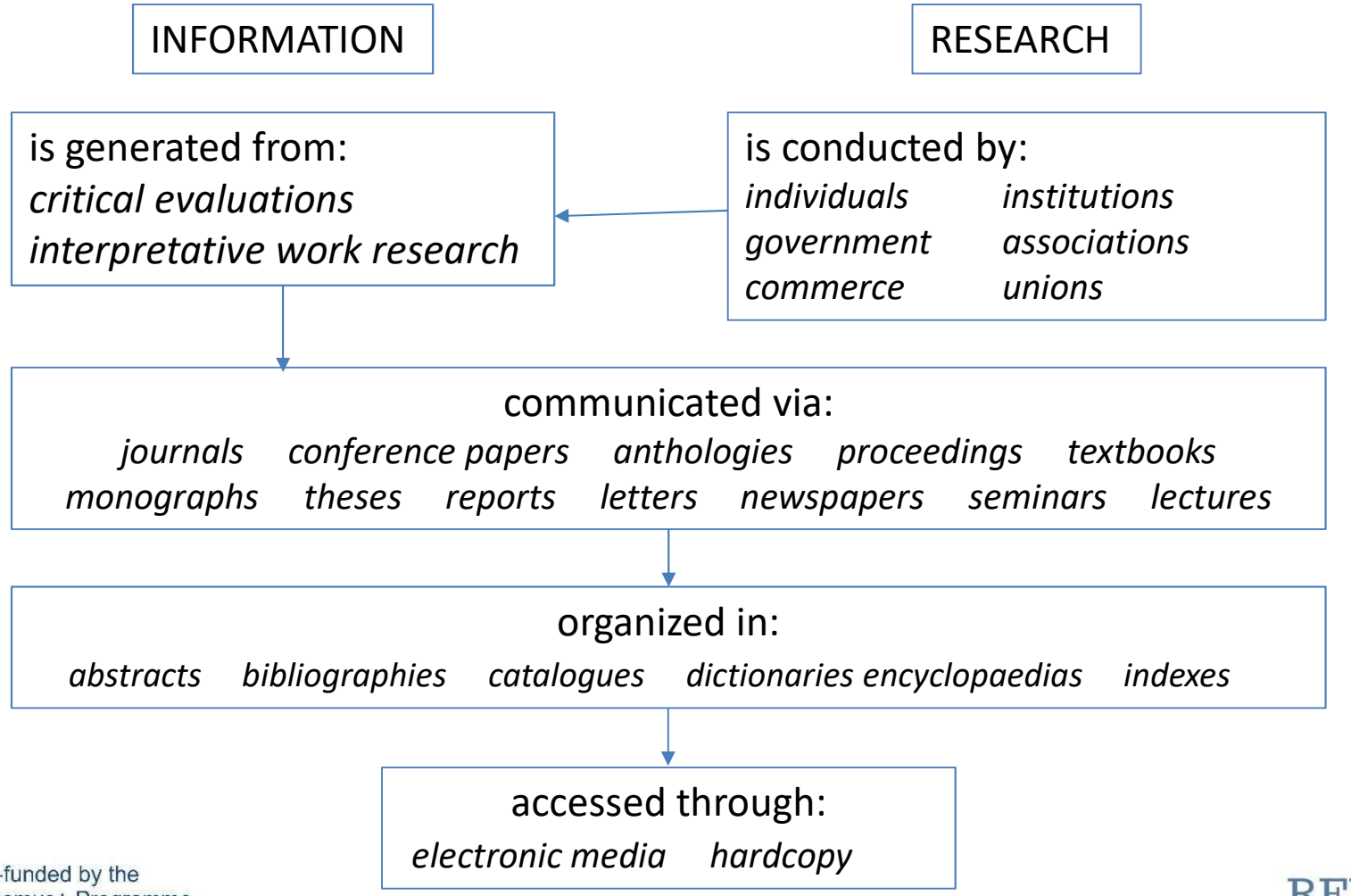
Research Knowledge and Information (Hart, 1998, p. 4)



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Skills and abilities in literature review:

- Literature search and evaluation

(library/on-line searching, database(s) browsing, record keeping, refereeing, reviewing ideas)

- Research design and strategy

(formulation of researchable problems, drawing practical research designs, identifying relevant works, identifying topics and focus of work, organization of data and materials, understanding methodological aspects)

- Writing and presenting

(planning writing, preparing and submitting paper for publication, use of references and citations, use of copyrights, construction and defence of arguments, create logical and clear expressions, understanding difference between conclusion and recommendations)

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Assignment 1:

Formulate a research problem you are planning to examine and identify at least one author dealing with the phenomenon you have chosen
(Please, focus on your research area)

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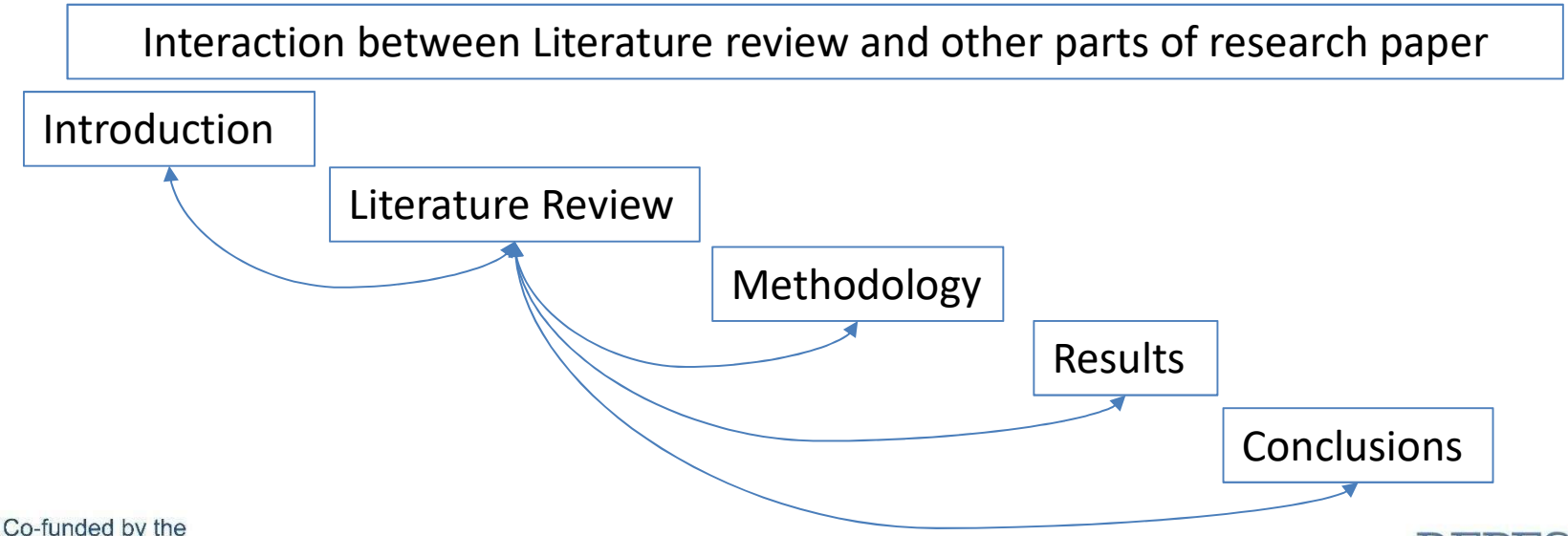
Literature review linkages to other parts of a paper

literature review:

- is a part of a integral component and essential part of the research process
- means searching for existing knowledge and its use
- its objective is to identify, analyse and synthesise major studies, papers and other contributions
- has to demonstrate skills in searching, show understanding of the subject area and the problems, justify the research topic and methodology



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2. Definition, Purpose, Types of Literature Review

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Definition

„the use of ideas in the literature to justify the particular approach to the topic, the selection of methods, and demonstration that this research contributes something new“ (Hart, 1998, p. 1)

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Characteristics of an effective literature review (Levy & Ellis, 2006, p. 2)

- methodologically analyse and synthesize quality literature
- provide a firm foundation to a research topic
- provide a firm foundation to the selection of research methodology
- demonstrates that proposed research contributes something new to the overall body of knowledge and advances the research field's knowledge-base

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What makes the literature review effective?

Effective
Literature
Review

$\neq$

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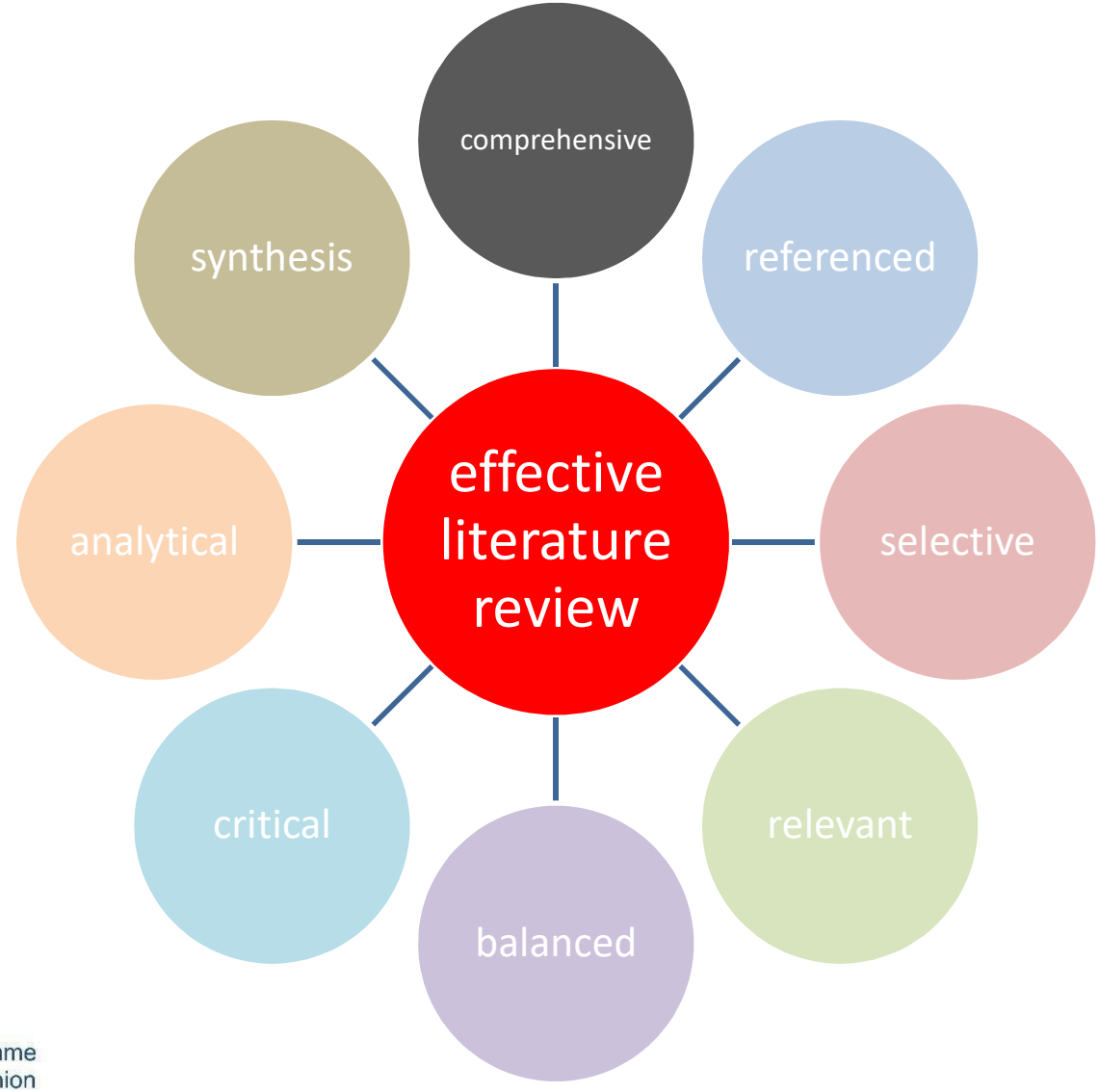
Features of quality (effective) literature review (Steward, 2004):



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What is the difference between excellent and deficient literature review?

Significantly deficient work	Excellent and distinctive work
- no review of the literature - annotation of only some items - no attempt at a critical evaluation - no arguments or key variables identified relevant to the topic - no bibliography at all or too large bibliography used	- thorough review of the literature - systematically analysed - all main variables and arguments identified - critical evaluation firmly linked to justification and methodology

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Purpose of literature review

- authors must know about the contribution to the knowledge of other authors in the field of their topic (key concepts, methodological assumptions, data collection, etc.)
- researcher shall understand the history of the subject, current state of art and current debates on the research questions

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Purpose of the review in research (Hart, 1998, p. 27):

- distinguish what have been done and what needs to be done
- discovering important variables relevant to the topic
- synthesizing and gaining a new perspective
- identifying relationship between ideas and practice
- establishing the context of the topic or problem

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Purpose of the review in research (Hart, 1998, p. 27):

- rationalizing the significance of the problem
- enhancing and acquiring the subject vocabulary
- relating ideas and theory to applications
- identifying the main methodologies and research techniques that were used
- placing the research in a historical context to show familiarity with the state of the art development

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Role of the review in research:

- prevents unwarranted excess duplication of what was already done
- helps to identify frontiers of the filed and add the knowledge to the particular field
- provides idea, how to handle and solve encountered problems, how to use techniques, methodologies, statistical and econometrical tools, what data to use and how to adjust them
- helps develop design of the research by showing which approaches were successful in enriching the knowledge and which were not
- may bring new conceptual insights into the problem and provides hypothesis for own further studies or encourages other authors to deal with the topic

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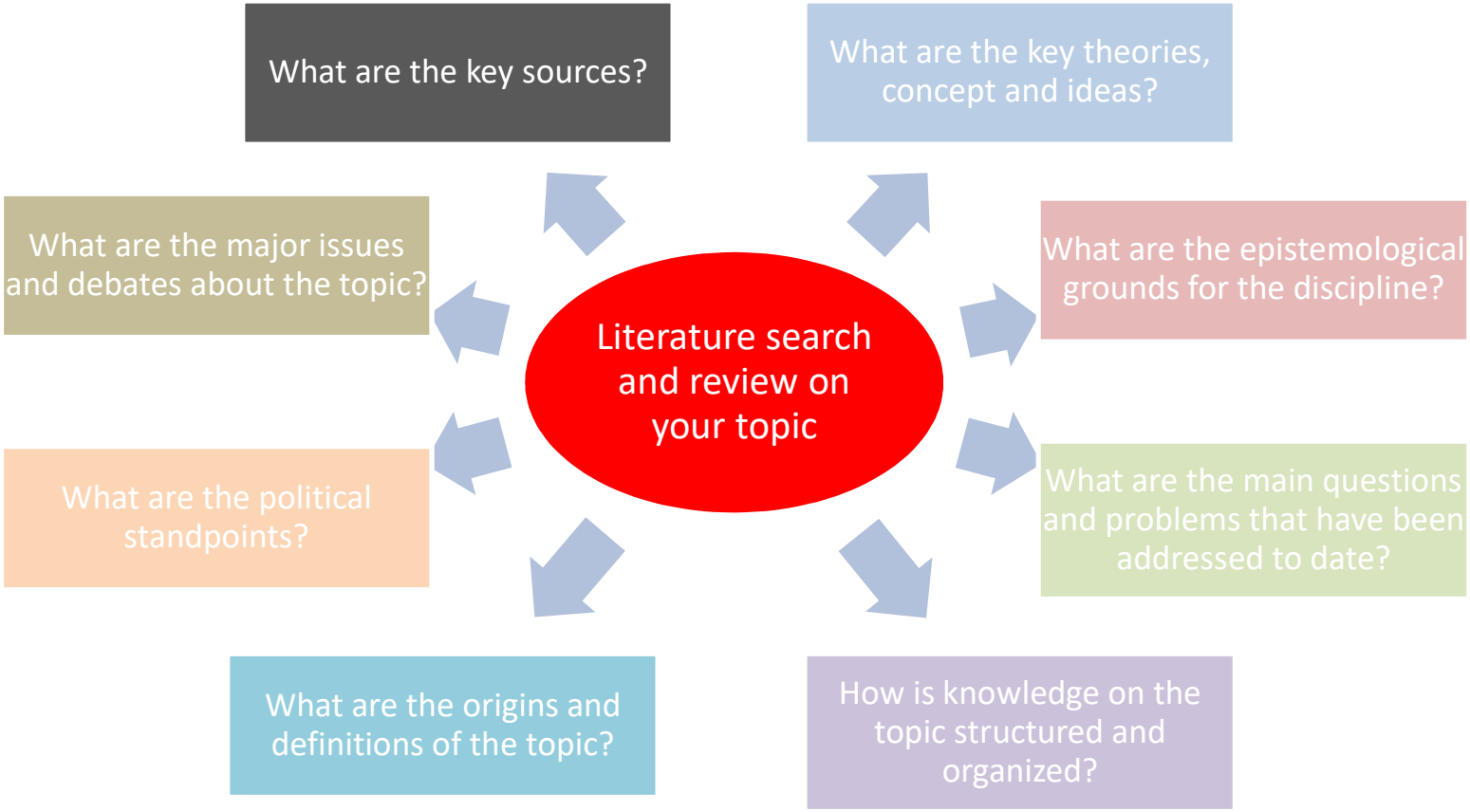
Some of the questions the review of the literature can answer (Hart, 1998, p.14)



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Types of literature review

- chronological – description of the state of art on the historical basis, development of the topic since the first pioneering study/paper/book until present days

- how are assumptions on topic rooted in historical view
- how has the original definition of the topic been developed and changed
- which other factors were included to the topic over the time
- what components have been singled out for stand-alone research
- have these components change the knowledge on the topic

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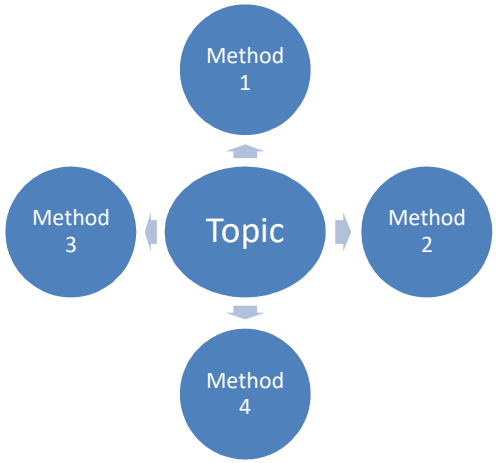
Types of literature review

- thematic – discuss existing literature based on themes or theoretical concepts, analysis of existing knowledge with regard to particular research issues

- what is the structure of the knowledge on the topic
- what and who are the key works and theorists/academicians
- what methodological assumptions have been deemed necessary to study the topic
- how the different studies relates together



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Assignment 2:

Do you know what was the pioneering work in your research area or in the research your are currently working on?
Have the research question developed significantly or is it almost the same?
(Please, focus on your research area)

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3. Planning a Literature Search

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- the task of the literature review is to answer many questions
- our role is to use a search of literature to constructs parameters that make up the paradigm of a topic

- the main topics to grasp and to plan are:
  - construction of a map of a literature
  - demonstration of familiarity with a subject area
  - acquisition of knowledge from previous research
  - objective criticism of previous research
  - justification of new approaches
  - development of various skills (information technologies, drafting, etc.)
  - methodological indifferences

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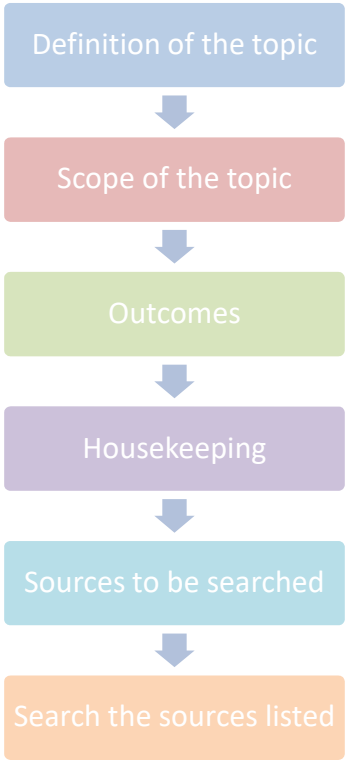
Planning a literature search

- there are 6 points that needs to be planned before the literature review (Hart, 1998, p. 32):



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Definition of the topic

- general reading to familiarize with the topic
- consultations and discussing subject specific terminology
- taking notes on the concepts used
- taking notes on authors cited
- preparation a terms for further searching
- sketch of the topic to map out the later stage of work

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Scope of the topic

- which languages it is necessary to search (extend of search)
- time frame of searched topic – how far is search necessary
- extend of subject areas relevant to the topic
- making list of terms and phrases use for search
- search vocabulary

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Outcomes

- proposal of the aim
- stated aim pertinent to the search and literature review
- thinking of what is the purpose of the research
- define what is expected from the search – what we look for
- concepts, methodologies, results, recommendations
- questions that have not been examined

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Housekeeping

- design a means by which findings will be recorded
- style of cross-reference in materials/documents
- keeping consistent records, not only what documents were found, but the way how they were found
- writing up the method and methodology
- systematization of documents found
- „clean up“ documents that were found not significant for the research topic

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Sources to be searched

- preparation of list of likely relevant sources
- visiting libraries and on-line databases
- identification of topic relevant sources

Search the sources listed

- necessary being systematic and thorough
- making consistent references
- making notes on possible further leads and ideas to be followed up

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Assignment 3:

Shortly describe, the method of „housekeeping“ that you prefer and explain why?

(Please, focus on your research area)

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4. Searching Strategy

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- finding the relevant and quality papers is not an easy task
- „digging“ into the literature

- scholarly publications – scientific resources, usually peer-reviewed or reviewed prior the publication (papers in journals, books, monographs, thesis, reports, etc.)
- popular publications – focused on general public, easier to read and understand (articles in newspapers or magazines, text in encyclopaedias, etc.)

- electronic databases – wide range of scholarly sources through large search platforms (WoS, Scopus, ProQuest, JSTOR, Google Scholar)

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Browsing approach

- is a tool for manually examination of a document
- enables a researcher to follow the field of interest and to focus on the content related topic
- leads to widening of the literature review and helps to focus on other relevant sources
- significant drawback in browsing databases – lags of availability of articles
- is very time consuming

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Keyword searching

- querying of quality databases by the use of specific word or phrase
- possibility to examine larger number of documents in extensive databases
- identification of applicable keywords for an unknown domain
- matching many search results, but not always matching to the topic of the paper
- the issue of broadly or narrowly formulated keywords (trade off between made searching more time consuming and causing the omission of some important references
- being broader at the beginning of the and to narrow down the search at the next stages

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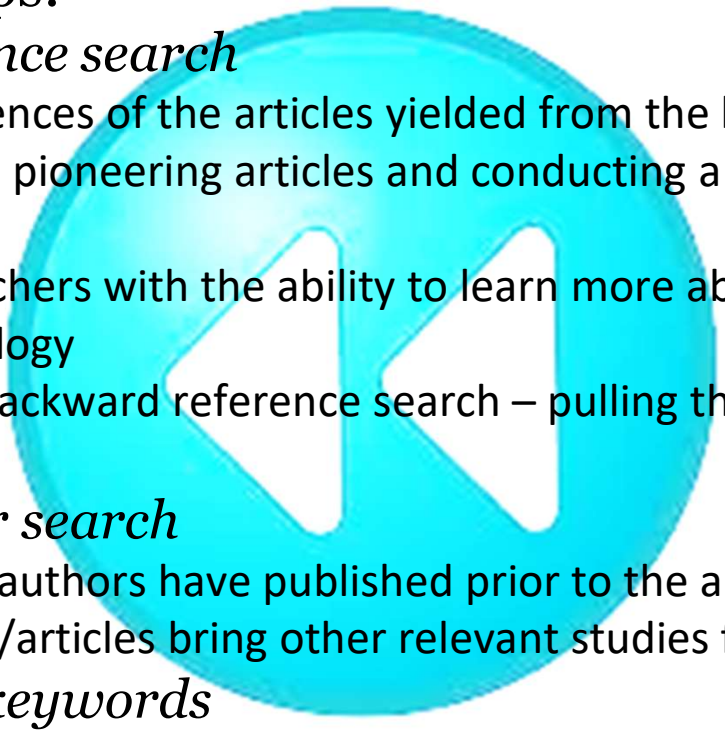
Backward search

- the process of going back in the literature consisting of 3 specific sub-steps:
- *backward reference search*
  - reviewing references of the articles yielded from the keyword search
  - dealing with the pioneering articles and conducting a backward references in those articles
  - provides researchers with the ability to learn more about the origins of the study, methodology
  - a second level backward reference search – pulling the references from references
- *backward author search*
  - reviewing what authors have published prior to the article
  - previous papers/articles bring other relevant studies for the research topic
- *previously used keywords*
  - reviewing keywords noted in the articles yielded from the keyword search
  - finding the important keyword and relating results that were not found using first level keywords



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- Forward search

- the process of going forward in the literature consisting of 2 specific sub-steps:
- *forward reference search*
  - reviewing additional articles that have cited the article
  - searching for all articles that have cited the firstly found article (articles that have this article in references)
  - doing this method, researchers are enable to extend the knowledge about the topic
  - the way to access newer or follow-up articles
- *forward author search*
  - reviewing what authors have published following the article
  - conducting search for articles that were written by author or by one of authors
  - doing this method, researcher are enable to extend the knowledge about authors

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When am I done with the literature review? (or How much searching is enough?)

- the overall literature is NEVER captured, but we have to find the most relevant articles
- NO single database or source with all references is available – necessity to repeat process of searching several times

- at what point should the process of gathering additional relevant literature end?
- search is near completion when one discovers that new articles only introduce familiar arguments, methodologies, findings authors and studies (Leedy & Ormrod, 2005, p. 82)

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Assignment 4:

Go the Google Scholar database and try to type „Research Impact“. Then, try it again by typing „Assessment of Research Impact“. Has the search results changed? Please choose randomly one paper from each searching (from the first page of the search results) and in few sentences describe the goal of the paper, methodology and results obtained (for this purpose, read only abstract, introduction and if necessary conclusion). Have papers really deals with the topic typed if it was broader and also when it was more specific?

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5. Literature Analysis (Processing Data, Argumentation Analysis)

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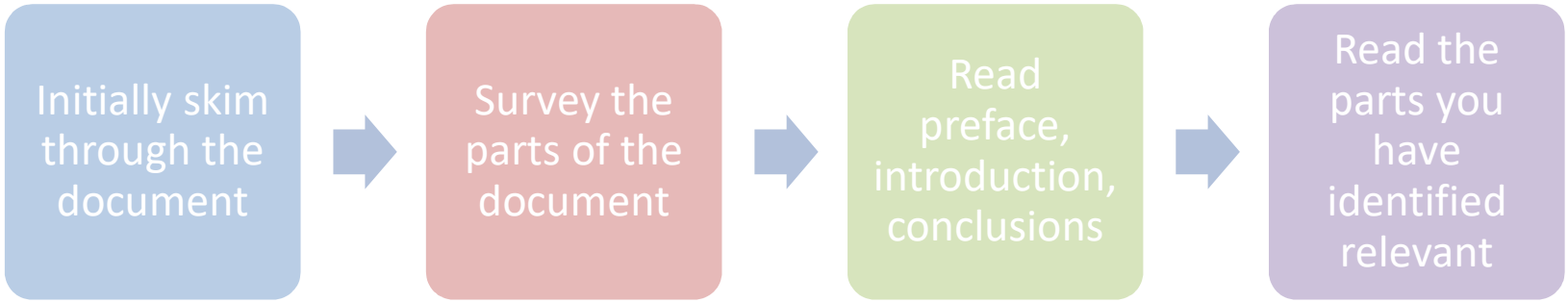
Reading the Research

- reading analytically is process that progress from the general to the particular
- skimming reading is the most appropriate
- mistake is to read detail of each sentence – firstly, reader must be familiarized with the layout of the book/paper/article
- the task is to „unpack“ the relevant documents and find the logic of the prior research
- suggested scheme for reading:



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- analysing of the literature = reading and finding the relevant and quality papers
- „digging“ into the literature
- you don’t need to read everything – you can’t!
  - you don’t need to read every text
  - you don’t need to read every word
- generally, it is sufficient to start with reading abstract of the papers
- if doubts to omit relevant article, it is recommended to skim through the article
- the consideration should be given to following issues:
  - the provenance of analysed literature
  - how objectivity is ensured
  - how persuasive are the achieved results
  - what is the value of author(s) contribution

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Processing data

- the data found in the sources by literature search must be processed into information that can serve as a foundation upon which new research can be built (Bem, 1995)
- there is several steps that researcher shall do in developing skill to transform the raw data of numerous literature sources into an effective literature review (Levy & Ellis, 2006, p. 192-201):
  - know the literature
  - comprehend the literature
  - apply the literature
  - analyse the literature
  - synthesize the literature
  - evaluate the literature

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Know the literature

- demonstrates reading of an article and extraction of meaningful information
- listing
- defining
- describing
- identifying

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Comprehend the literature

- researcher demonstrates not only repeating what an article deals with, but also knows the meaning and significance of the reported information
- summarizing
- differentiating
- interpreting
- contrasting

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Apply the literature

- demonstrating
- illustrating
- solving
- relating
- classifying
- usually, application a two steps process is used – identifying major concept relevant to the study; and setting and placing each study to particular concept (sorting the literature)

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Analyse the literature

- separating
- connecting
- comparing
- selecting
- explaining
- analysis means, why the information being extracted from an article is important for the research being conducted

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Synthesize the literature

- combining
- modifying
- rearranging
- designing
- composing
- generalizing
- synthesize is to sorted articles with the same concept to the different groups then acting as a whole, it means that group of several articles presents the same information together and information is not presented by each article individually

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Evaluate the literature

- assessing
- deciding
- recommending
- selecting
- judging
- explaining
- supporting
- concluding
- the role of evaluation is to distinguish between theories, opinions, facts, and results of empirical studies

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Argumentation analysis

- means analyse an argument

- what is an argument?
- putting forward reasons to influence someone´s other belief that what is proposed is a case
- consisting on giving reasons for some conclusions, the reasons are put forward in order to stablish/support/justify/prove/demonstrate the conclusion (Fisher, 1993, p. 140)

- two components of an argument:
  - making a point (statement)
  - providing sufficient reason (evidence) to be accepted by others

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Types of Arguments

- for social sciences, the most commonly found types of arguments (Hart, 1998, p. 80):
- inference – an assertion made on the basis of something else observed or taken as knowledge
- assertion – a declaration made on the existence of cause of something with or without use of evidence
- supposition – an assumption made about what is or is not a case or state of affairs

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Assignment 5:

Please, find examples of inference, assertion and supposition.

(If possible, use examples from your research area)

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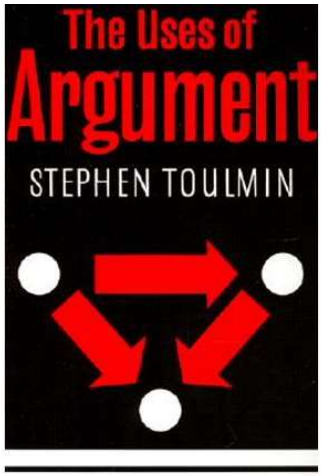
Analysing Arguments

- to analyse arguments, any method used needs to be clear, consistent and systematic (three ground rules of analysis)

- Two approaches to analysing arguments
- Toulmin (Toulmin, 1958) – focus on practice rather than theory
- Fisher (1993) – systematic reading of text



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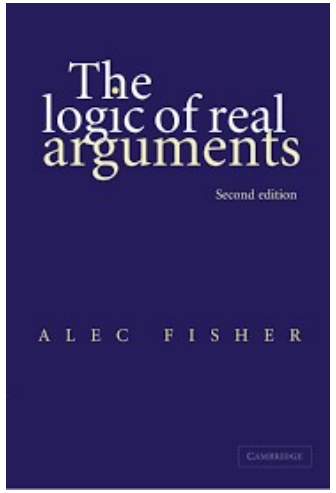

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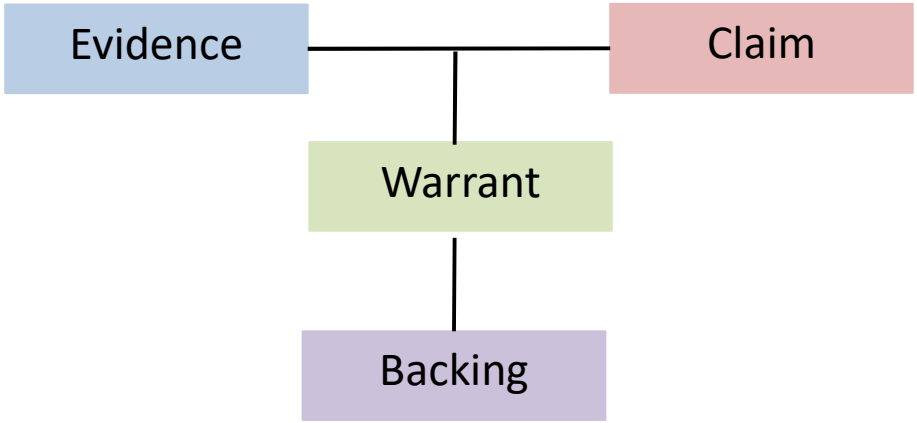
Toulmin´s method of argumentation analysis

- logic: an argument can be broken up into a number of basic elements
- there is relationship between elements such they form an argument



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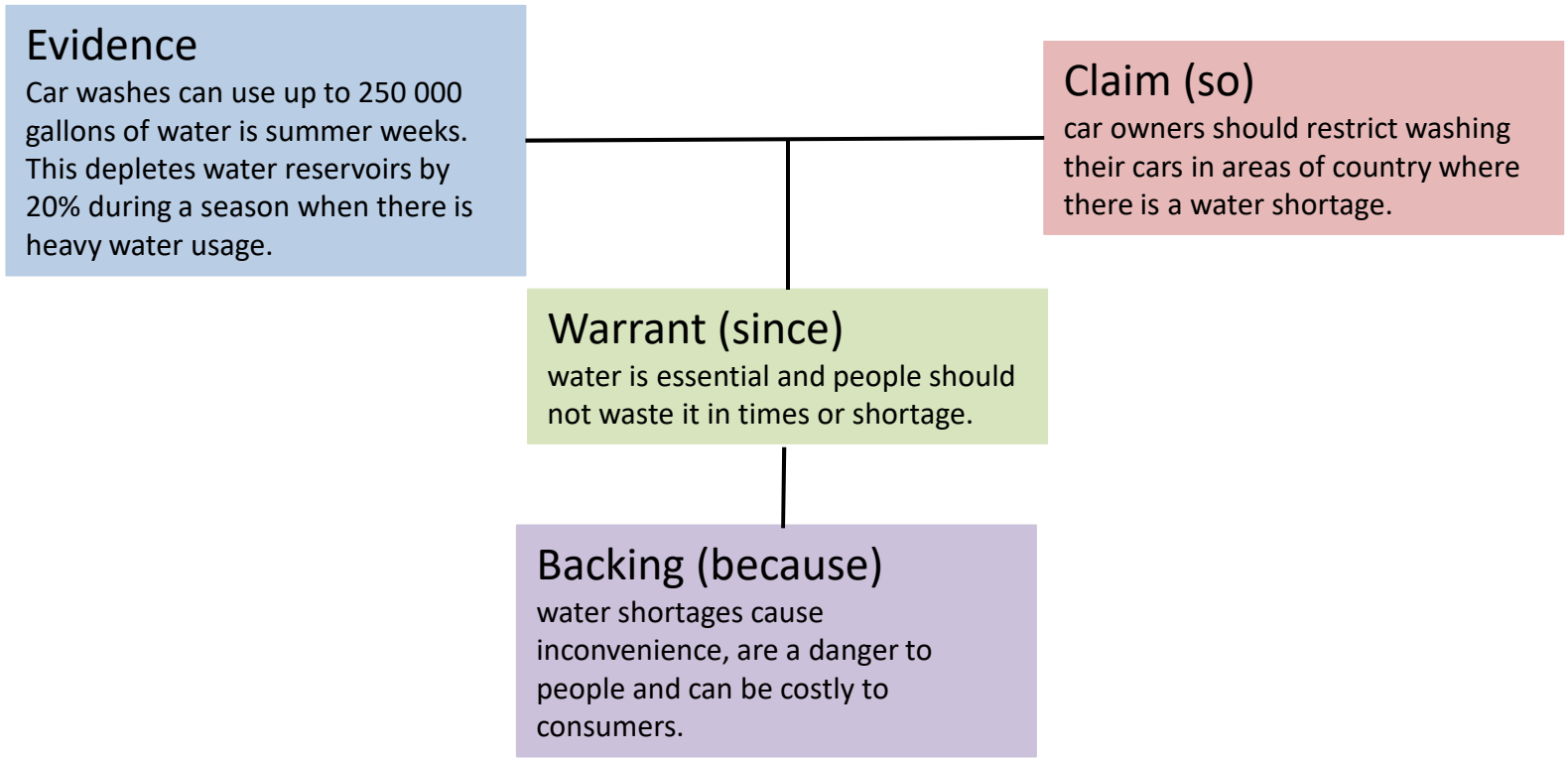
Toulmin´s method of argumentation analysis: Example



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Assignment 6:

Please, find example for Toulmin´s method.

(If possible, use examples from your research area)

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Types of Claims

Claims of fact

- statements that can be proven to be true or false

Claims of value

- judgements about the worth of something

Claims of policy

- normative statements about what ought to be done rather than what is done

Claims of concept

- definition and recognisability of the language used, the way how the claims is worded

Claims of interpretation

- proposals on how some data or evidence are to be understood, facts without proper interpretation are useless

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Assignment 7:

Let´s think about the different type of claims.

(If possible, use examples from your research area)

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Types of Warrants

- bridge between claim and what is presented as support (backing) for the claim
- basic assumptions underlying claims
- qualifiers – restrictions to some warrants

Stated warrants

- fundamental premises about something from which a person makes and statement

Unstated warrants

- basic beliefs about something from which a person makes and statement

Backing

- often has the form of additional information
- might be based on personal experience
- might represents hypothetical scenario

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Fisher´s method of critical reading

- provides a systematic technique for reading analytically
- enables the evaluation of any argument to be done by analysis of its formal structure (words used)
- effective method – allows to think through the arguments that is analysed
- difference to Toulmin´s method – provides a systematic set of procedures for the analysis and subsequent evaluation of an argument
- allows systematically extract an argument from the text

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Fisher´s procedure

1. Look quickly through the text
2. Read the text again
3. Look for conclusions and any stated reasons for these
4. Summarize author´s arguments
5. Identify what you take to be conclusions (main and interim conclusions)
6. What reasons are presented in text for believing or accept conclusions
7. Construction of argument diagram

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Argument diagram

R1 + R2 = (therefore) C (for joint reasons)

R1 or R2 = (therefore) C (for independent reasons)

variations on these structures are common, a main conclusion might be supported by an interim conclusion and several reasons

R1 + R2 = (therefore) C1 (interim conclusion)

C1 + R3 = (therefore) C2 (main conclusion)

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Assignment 8:

Find examples for the Fisher diagram (reasons and conclusions).

(If possible, use examples from your research area)

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Assertability question

- method involving questioning both – premises and conclusions
- what arguments or evidence would justify the acceptance of conclusion
- assertability question assumes that most of people can apply an appropriate standard and this standard will need justification and will be open to critical scrutiny
- for a conclusion to be acceptable, the following conditions must be satisfactory established by the analysis:
  - conclusion must follow from its premises
  - the premises must be either true, or if suppositions, justifiable
- applicable for different cultures/disciplines

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Fallacies in arguments

- suppose that fallacies are not normal for academic authors

- fallacies other people make in their arguments
- fallacies we make when evaluating other people´s arguments

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Fallacy	Description	How to avoid
Implied definition	Referring without clearly defining it	Always define what is referred and define concepts
Illegitimate definition	Giving restrictive definition and avoiding alternatives	Use entire and complete definition
Changing meanings	Different definition and use it in the text	Use the real meaning of the text/words
Emotional language	Using value or ethically loaded terms	Never use it in academic works
Using all variables rather than some important	Using globalization to incorporate all variables and thus minimize contradictory examples	Use only variables linked to the topic of the paper
Ignoring alternatives	Interpret an example as all others could be categorized in the same way	Notice all alternatives and the difference among them
Selected instances	Picking up unusual or unrepresentative examples	Pick up the most representatives examples and cases
Forced analogy	Using analogy without recognizing applicability of other contradictory analogies	Use analogy that relates to the topic of your work and refer to other applicable

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Fallacy	Description	How to avoid
Similarity	Referring that there is no difference between two things, even it is	Show differences if you have found them
Mere analogy	Using analogy with no racecourse in real examples	Refer to „real world“ analogies
Technical language	Deliberate use words in effort to impressed readers or hide the lack of foundation for argument	Use the language appropriate to scientific work you are submitting
Playing on the reader	Telling readers what they want to hear rather than challenging their thinking and assumptions	Be impartial focused on arguments and evidence on the topic
False context	Giving examples out of context and using hypothetical scenarios	Examples must be linked to the context scenarios must be clearly explained
Extremities	Ignoring centre ground positions and focusing on the extreme ends or extreme alternatives	Try to be unbiased and open-minded through the whole spectrum of ideas
Tautology	Repetition of the same idea from other authors in more assertive way to get acceptance of it from others	Not repeat of other´s ideas and focus on own findings, results and conclusions

Thonles and Thonles, 1990

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6. Organising and Expressing Ideas

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Organising and expressing ideas

- after comprehensive literature search was taken, the analysis of the content is necessary
- look at techniques of analysis allowing to arrange and structure arguments and map ideas in literature

- aim of organisation and expression of ideas:
  - mapping out the main issues
  - examination of the use of concepts
  - finding how comparison can be made
  - how complex ideas might be described
  - understanding the role of methodological assumptions (influencing the presentation of ideas and arguments)
  - ability to make connections between ideas (not only understand them)
  - find a gap in literature (potentially new topic for the author)
  - production of a new synthesis

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Analysis

- systematically breaking down something into its constituent parts and describing how they relate to each other
- it is not random dissection but methodological examination
- three rules for analysing literature
  - systematic
  - rigorous
  - consistent
- if arguments analysed, claim, data, warrant and backing must be explicated
- identification of individual and similar elements in a range of items that might be compared or contrasted
- literature review – data is information that others have proposed as a plausible story in order to they want to accept arguments

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Synthesis

- the act of making connections between the parts identified in analysis
- it is not reassembling the parts into original order, but finding the new order

- requires to have comprehensive knowledge of the subject and capacity to think in broader terms (many viewpoints, methodologies and stances requires connecting)
- keeping control of a large amount of information
- considering ludicrous suggestions, generalization, dealing with eccentric ideas, etc.

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Analogy

- compares one thing with another, comparison of two things to show their similarities
- things being compared might be quite similar, but even very different, however analogy explains one thing in terms of another to highlight the ways in which they are alike
- analogies help us to understand the meaning of the text

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Homology

- is used to look at one phenomenon in terms of the structure of another, very different phenomenon
- refers to two things that have an equivalent role or relationship, but are different
- not often use in social sciences, goal of the use of homology in arguments is to give our beliefs to be a scientific explanation of the social issues, thus use of homology is starting point of analysis

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Assignment 9:

Find examples for analogy and homology.

(If possible, use examples from your research area)

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Analysis, synthesis, comprehension, knowledge

Analysis	• select, differentiate, dissect, break up • unpacking issue to into its constituent parts in order to determine the relationship • isolating the main variables
Synthesis	• integrate, combine, recast, formulate, reorganize • rearranging elements derived from analysis to identify the relationship or show main organizational principles
Comprehension	• understand, be able to explain, distinguish, interpret • interpreting and distinguish between different types of data, theory and argument • being able to describe, discuss and explain in various ways
Knowledge	• define, classify, name, use, recognize, understand, problem solve • perceiving the principles, use and function of rules, methods and events, classify and analyse the structure of, learn from the meaning of text, concepts and their applications

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Constructing meaning: Defining

- to express ideas clearly and systematically, appropriate way of using words and concepts in necessary
- defining subject-specific matters
- understand words and concept of argument and follow its development
- awareness of the use of words to avoid sloppy and avoidable misuse, equivocal meaning and misinterpretation
- defining – placing boundaries around the meaning of a term

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Focal nodes of a definition

Focus	Nodes
on the phenomenon itself, isolated for scrutiny	formal definition, reflection on the word itself, comparison, division
on the „career“ of the phenomenon	examples, account of variation, associations
on the phenomenon´s situation in a broader context	role in system, cause and effects, frequency

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Types of definition

Definition by example and counter-example	• explaining the everyday use of a word
Listing attributes	• listing the things to be associated with a word
Lexical or reportive definition	• stating how you intend a word to be understood
Stipulative definition	• eliminating particular meaning of word or showing inaccurate uses of a word in order to emphasize more precise or different use
Defining by negation	• using words to give an emotive slant (either positive or negative meaning) to something
Definition by elimination	• excluding particular events, items or explanations from a definition to emphasize a specific argument

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Constructing meaning: Comparing and Contrasting

- common practice in social sciences it to make comparison
- involves finding common points
- useful for identifying common areas of interest and differing positions on similar topic
- not all phenomenon can be compared to each other – selectivity
- requirements for selectivity: clear, explicit, justified (selection might affect the result of comparative analysis)
- when comparing, consider the level of knowledge of readers or participants

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Assignment 10:

Are there major theories / concepts / methodologies that you might compare in your research field?
Provide a brief comparison of them.

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7. Mapping and Analysing Ideas

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Mapping ideas

- information contained in literature is made up of specific theories made about methodological assumptions
- aim of the review – extract these methodological assumptions
- necessity to elicit ways how ideas, concepts and methodologies are used in arguments
- essential is to properly identified core ideas and concepts from individual research works
- to create/produce a map of knowledge on a phenomenon, topic or problem

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Mapping ideas

- main use of mapping a topic is to acquire sufficient knowledge of the subject to:
  - develop necessary understanding of methodology and research techniques
  - comprehend the history and diffusion of interest in the topic
  - undertake an analytical evaluation of main arguments, concepts and theories relevant to the topic (find uniqueness)
- enables analysis and synthesis to be undertaken
- task of construction or putting together different strands and elements of work that make up the body of knowledge on the topic
- different researchers map out topic in different ways
- map we are producing is never definitive, always have potential for further developing

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Mapping ideas

- essential is to organize the amount of information found by literature search
- organizing the content of the literature (sections, subsections) enables make connections between ideas

- classification
  - provides a descriptive foundation – map for future evaluation (large amount of information could not be processed)
  - mapping ideas from a literature can be done in different ways (necessity to be methodical in spelling out how the maps were produced)
- routine vs. technical classification
- reducing information into a manageable amount
- argumentation element in classification
- types of maps

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Features maps

- content of articles is systematically analysed and recorded in standardized format
- this method entails recording of key features or predetermined aspects of articles

No.	Theory/questions/ concern	Materials/ evidence	Argument(s)	Concept(s)/form of analysis	Main sources/citations
1.					
2.					
3.					
etc.					

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Tree constructions

- some author deals with the general issue, others with specific aspects of problem or issue
- to solve this, different kinds of subject related trees might be constructed
- aim: show the different ways in which major topic has developed sub-themes and related questions
- shows how the topic was branched out
- bottom-up design (bottom = general ideas and concepts, top = specific topics

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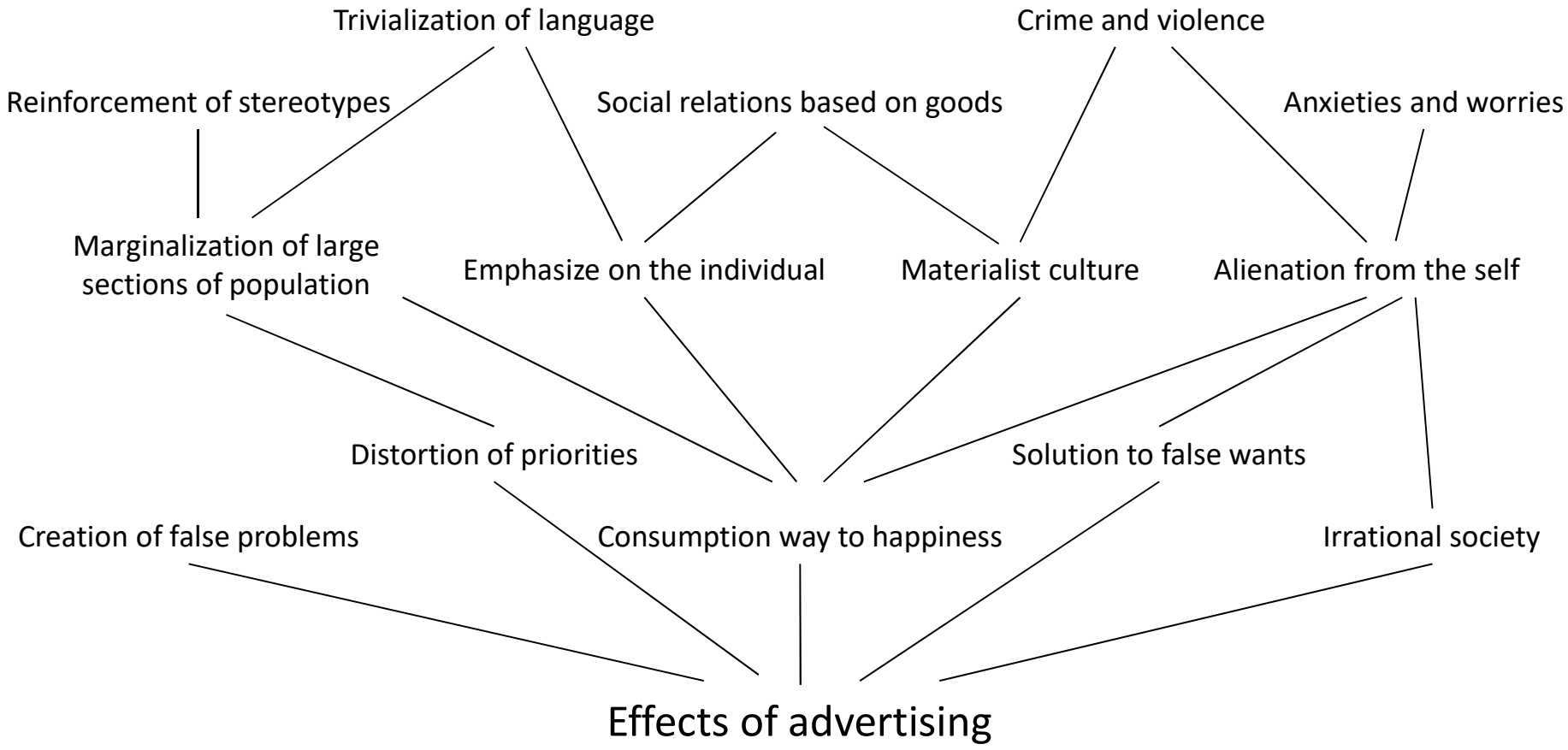
Example of subject relevance tree (Hart, 1998, p. 152)



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Content maps

- all areas of knowledge are composed of a content structured according some classification scheme
- content is organized in a hierarchical arrangements
- top-to-bottom structure (starting with conceptual elements)
- suitable method to structure important elements in literature
- necessity to select attributes to characteristics from literature and place them on the content map

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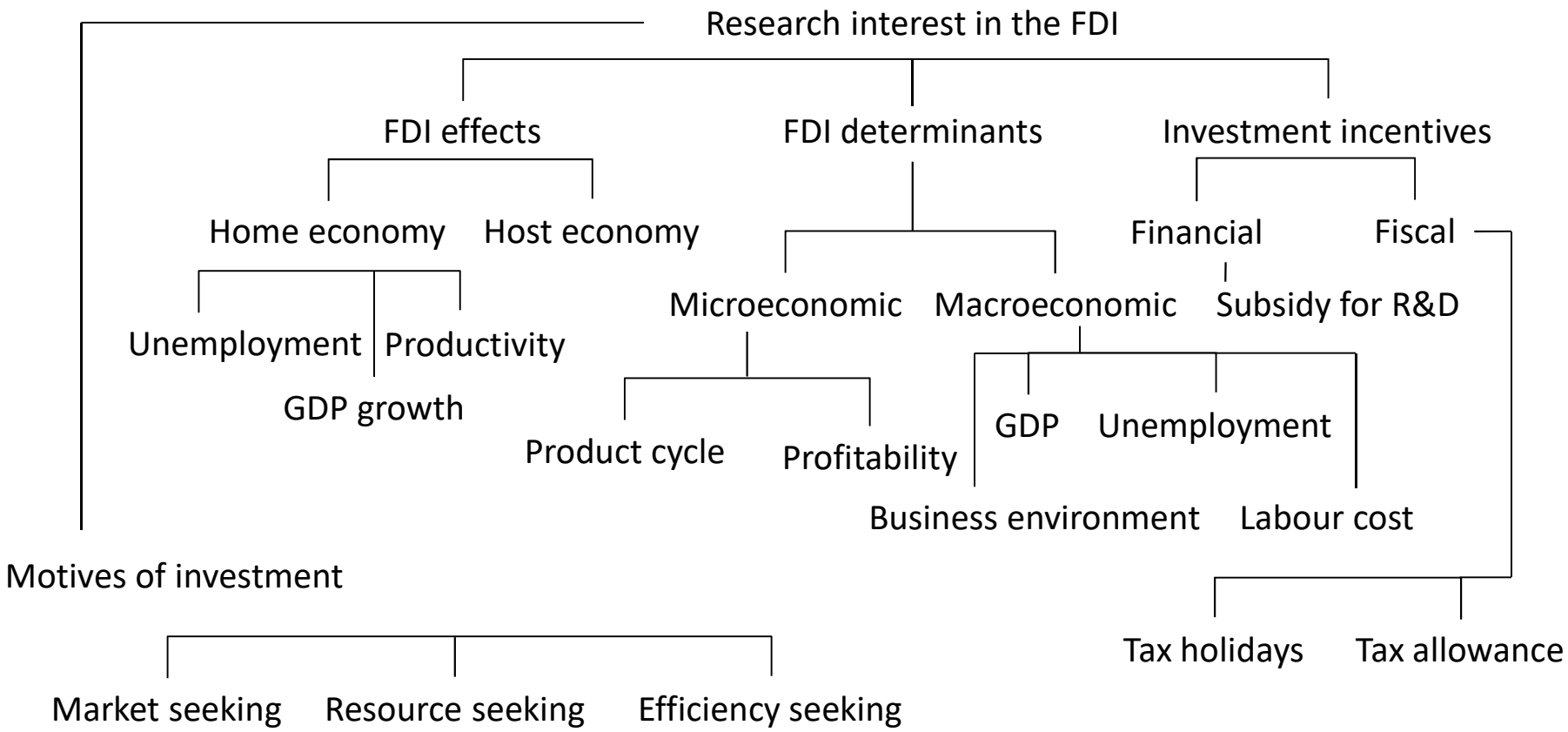
Example of content map



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Taxonomic maps (elaborated maps)

- closely related to content maps
- aim: to show how a range of things can be placed into a general class
- show differences between objects within the general class
- problem – what is to count as an example of the general class or subsection?

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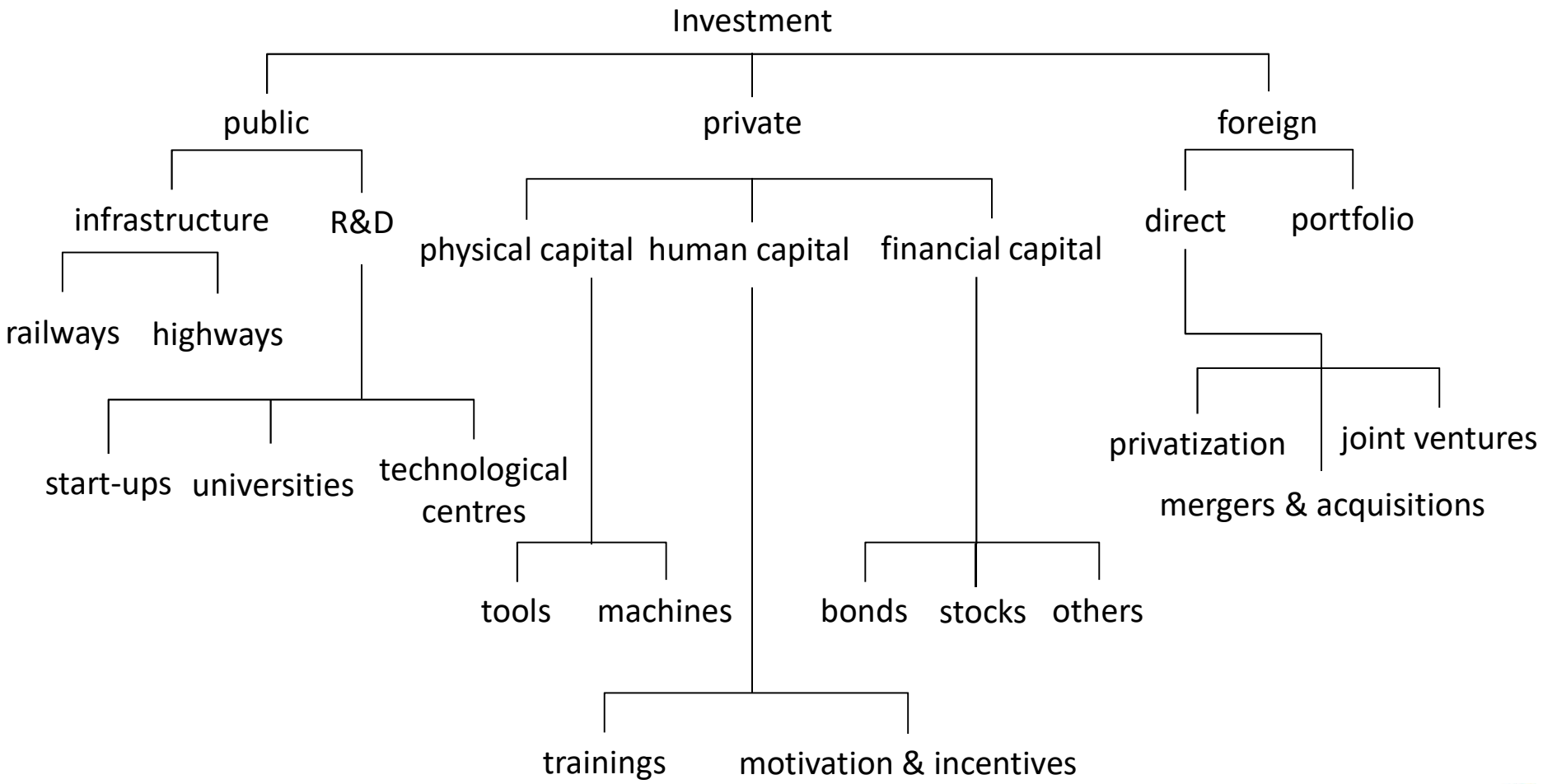
Example of taxonomy map



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Concept maps

- can constructed to show the relationship between ideas and practise
- note how different concepts can be linked in multiple ways and how emphasis can be given to some links
- also note the cause and effect or problem and solution structure that is an implicit assumption underlying all concepts maps

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Assignment 11:

Create any type of the maps we have discussed. Use the knowledge from your research area. Please, describe each part of the map.

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Analysis as a method of mapping

- analysis can be used to produce maps of literature
- rhetorical analysis
- element of persuasion
- rhetoric – the art of communicating to influence and persuade, the use of style in language
- rhetorical analysis is the study of how language has been used to make an argument appear plausible

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Rhetorical devices

- ethos
- point of view
- style
- gnomic present
- story

- tropes
  - metaphor
  - synecdoche
  - metonymy
  - irony

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Assignment 12:

Find examples for at least two tropes we have discussed.

(If possible, use examples from your research area)

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8. Writing the Review

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Literature review …

- as a piece of academic writing must be clear and have logical structure
- shows that author acquired a sufficient range of skills and capabilities at the appropriate level
- is our evidence of capabilities as researchers
- is about asking ourselves – How we adequately, appropriately and interestingly describe, explain and justify what we have done and found out?
- should show that all relevant documents have been identified and analysed
- means demonstrating that all main concepts, theories, theorist and methodologies and approaches relevant to the topic have been identified, understood and critically evaluated

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From the review to the research proposal

- main reason for writing the review is to make proposal for the research we intend to do
- review provides methodological rationalization for further research

- demonstration of understanding of history of the topic – story how topic was defined, established and developed (story needs to be adapted for academic writing style)

- each review needs to be a structured argument that contains:
  - knowledge-based elements
  - argumentational elements

- is important to have sufficient amount of materials for the review and understand them
- three types of resources, researcher has to employ:
  - relevant vocabulary with alternative definitions and concepts
  - summaries of the methodological arguments found in key texts
  - assessment of how key definitions and methodological assumptions have been operationalized

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Criticism: critical view on literature

- criticism of literature is necessary to assess ideas, arguments, methodologies of other authors found in by literature search
- critical attitude shall be applied to each research work
- effective criticism:
  - agreeing with position or its rejection on the basis of evaluation of strengths and weaknesses
  - conceding that given approach has some merits, but point to its imperfection
  - focusing on ideas, theories, arguments and used methodological approach, not on the author of the text
  - being aware of own critical stance – being objective, identify the selection of the particular work and reason for the choice (thus finding weakness in own critique)
  - selecting elements and formation of new view on the topic – synthesis
  - identifying fallacies, faults, lack of evidence in arguments, ideas, methodologies
  - identifying errors in own criticism by reading other reviews on the selected document

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Criticism: fair and open

- never criticize by personal attack on the author – often fallacy of criticize argument but really criticize the motive of an author
- if we consider argument is bad/inadequate, it is not sufficient to provide counter-argument that is equally bad
- poorly constructed argument do not refute other equally fallacious argument
- when criticizing, have respect to other authors (treat the work of others as you want others will treat your work)
- if criticism would be legitimate, providing a structured explanations showing what was found wrong in argument is necessity

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Academic style

- when writing review, we are using ideas, concepts and theories of other people
- refers to issues as use of tense, use of words, word order, grammatical structure, use of passive or active voice
- responsibility to use others work in way that is balanced, fair and legal – ensuring to cite sources correctly
- keep ethical standards and values of academic work
- some actions that will devaluate the work:
  - falsification – misrepresenting of others work
  - fabrication – using speculations as they were facts
  - sloppiness – providing not correct citations
  - nepotism – citing of „preferred“ authors, whose works do not relate to the topic of the research
  - plagiarism – using ideas of other authors by acting is as own ideas

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Writing review

- it is opportunity to display what was learned and what was done
- helps other as we have extracted the most important points of the topic in literature by undertaking analysis and further how we have reorganize ideas by critical synthesis to find conclusions
- is description of current work and topics on the issue
- objective is to furnish necessary but sufficient information to demonstrate that we have thought carefully about the knowledge on the topic that is contained in the literature (Hart, 1998, p. 184)
- writing is not easy

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Some common problems in writing a review (Hart, 1998, p. 184)

Problem	Possible cause	Solutions
Lack of time	Other responsibilities, defining other priorities, teaching load	Time management of activities, writing considered as part of leisure activities
Unfamiliar with different styles, especially academic	Familiar only with style used in workplace, lack of academic background, lack of experience	Reading different styles, reading academic papers
Not used to writing at length	Used to face-to-face communication, rarely use writing for argument or persuasion	Reading and learning on writing. Writing shorter pieces of text. Dividing work into manageable sections

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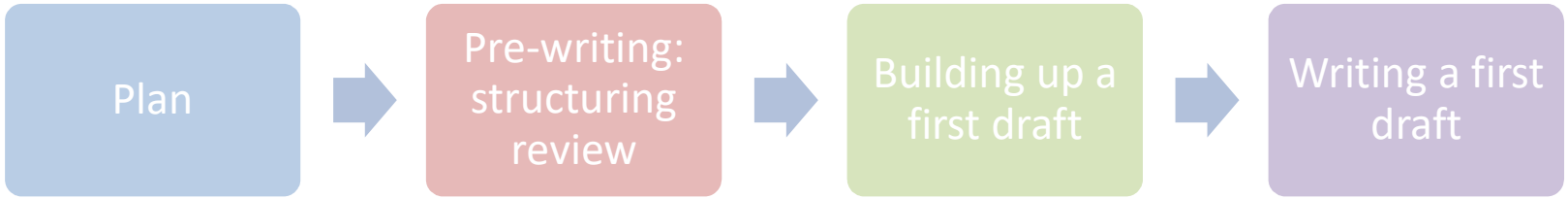
Having plan for review

- developing a pattern to guide efforts in writing
- delay – discoveries – crisis – opportunity
- making jottings and notes – provides indicative structure of ideas, helps in analytical process to systematically identify relationship between ideas
- suggested process of writing literature review (Hart, 1998, p. 186):



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Structuring review

- defining purpose
  - clarify purpose of the work in term of the aims of the paper
  - think about arrangements of the chapters
  - choosing materials respecting defined aims

- structure of arguments
  - several patterns of structure
  - description of what is wrong in research, what is the problem
  - making a proposal to solve the problem
  - examination of benefits that would result if proposal is adopted
  - acknowledging any possible objections of proposal

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Possible structures of an argument (Hart, 1998, p. 188):

Problem-awareness pattern (summative evaluation)	Cause and effect pattern (analytical evaluation)	Possible solution pattern (formative evaluation)

• Description of the problem,
  • giving examples of the problem showing its extend
  • offer evidence that problem exists
  • develop a definition of the problem
• Show the relevance of the problem to the reader
  • provide specific evidence or argument of negative effects
• Explain the consequence, if nothing is done with the current state continues
  • provide evidence of effect or current practise
  • summarize the problem situation
• Outline the parameters of the problem – definition, arguments
• Outline an approach (recommendations) for tackling the problem situation
	• Establish the existence of the problem (problem awareness)
	  • propose possible causes of the problem
	  • show the main factors underpinning the proposed causes
	• Clarify any confusing areas
	  • eliminate any improbable, irrelevant causes or definitions
	  • provide evidence for causes or definitions eliminated
	• Focus attention on proposed causes or definitions
	  • provide evidence for proposed causes or definition
	  • summarize the argument
	• Suggest course (recommendations) of action to deal with the problem
		• Consider definitions and solutions already tried
		  • give relevant examples of solutions tried
		  • show why they failed or were inadequate
		  • show factors causing failure
		  • provide evidence of factors
		• Consider possible alternatives
		  • distinguish between alternatives
		  • provide summary of possible effects or alternatives
		  • make a choice from alternatives by elimination
		  • provide evidence for elimination and choice
		• Summarize the problem, solutions tried and why they failed and give recommendations for alternative approach

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Building up and Writing a first draft

- allocation of time for literature review and its effective use
- development of habit and necessity of self-discipline
- using structure for present reasoning
- issues to be considered
  - needs of readers – what they look for and what are they expectations
  - parts of each chapter – organization and structure of literature review
  - introduction – parts relating to literature review

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Deducting writing structure (Hart, 1998, p. 192)

Deductive procedure for research	Deductive structure for writing
The researcher tests a theory	Introduction: theory and thesis statement.
Hypothesis or research questions are derived from the theory	Key questions from theory and thesis. Particular illustrations and examples given to show the reason for the questions.
Concepts and variables are operationalized	Definition of key concepts: discussion. Elimination of possible alternatives: discussion.
An instrument is used to measure the variables in the theory	Data-collection technique employed. Specifics of data: discussion.
Verification of the hypothesis	Findings related to hypothesis and theory: discussion.

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Inductive writing structure (Hart, 1998, p. 192)

Inductive procedure for research	Inductive structure for writing
Researcher gathers information and data	Introduction. Particular examples given.
Questions are asked about the phenomenon	Tentative interpretation on relationships between examples posed as questions.
The data is classified and placed into categories	More examples given and classified according to questions. Statements developed and reiterated.
Patterns are looked for in the data and potential theories are proposed	More examples given and classified to test degree of fit and usefulness of categories. Statements developed further and reiterated.
Theories are tested and developed. Patterns are compared with other patterns and theories	Main conclusions on patterns and suggestion of plausible theory to account for the relationship in the pattern.

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Re-working the draft

- first draft is tentative outline
- never attempt to do literature review all in one go – going through series of drafts gradually working on the topic
- ask ourselves, if the argument is logical and expressed in way that is clear and easy to follow
- check use of the evidence of arguments and use of rhetoric
- the issue of looking to own misinterpretations or mistakes

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- if you follow these tasks, the review will be clear, simple and consistent

Identify unclear or excessively long sentences and rewrite into shorter ones
Examine each paragraph to ensure it covers only one topic
See if any important paragraph can be rewritten to be more effective
List the topics for each paragraph to ensure that links between them are sequential
Replace jargon with either and everyday word or explain the meaning of the jargon
Check that the verbs are active and not passive
Look for unnecessary adjectives and delete vague qualifications such as „very“
Look at the analogies and metaphors that are used and check they are appropriate
Look for pompous and unnecessarily long words and replace them with simpler, more sensible words

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FINAL Assignment:

As you might suppose, your task is to write a short literature review on a particular topic. The choice of the topic is free and should follow your research interest.
The range of the review should be maximum of two pages. Please focus on including claim, evidence and warrant.

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Thank you for your attention!

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Finding and Presenting Appropriate Research Data

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

29. 07. -02. 08. 2019, Universiti Teknologi MARA, Campus Bandaraya, Melaka, Malaysia

Ján Huňady

Matej Bel University in Banska Bystrica, Slovakia

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The purpose of the training

To learn and discuss the opportunities for finding, presenting and analysing the research data as well as bibliometric data about your research.

2 main parts:

Part 1. Data for your research

Part 2. Bibliometric data about your research and its impact

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Classification of data according their nature:

Qualitative Data: represent some characteristics or attributes. They depict descriptions that may be observed but cannot be computed or calculated. For example, data on attributes such as intelligence, honesty, wisdom, cleanliness, and creativity collected using the students of your class a sample would be classified as qualitative. They are more exploratory than conclusive in nature.

Quantitative Data: can be measured and not simply observed. They can be numerically represented. Hence, calculations can be performed on them. For example, data on the number of students playing different sports from your class gives an estimate of how many of the total students play which sport. This information is numerical and can be classified as quantitative.

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Classification of data

Data types according to dimensions:

1. Cross sectional: This type of data consists of measurements for individual observations (persons, households, firms, counties, states, countries, or whatever) at a given point in time.
2. Time series: This type of data consists of measurements on one or more variables (such as gross domestic product, interest rates, or unemployment rates) over time in a given space (like a specific country or state).
3. Panel or longitudinal: This type of data consists of a time series for each cross-sectional unit in the sample. The data contains measurements for individual observations (persons, households, firms, counties, states, countries, and so on) over a period of time (days, months, quarters, or years).

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Classification of data

Data types according to level of aggregation:

1. **Micro-level data:** lower level of aggregation (individuals, households, firms, institutions).
2. **Macro-level data:** higher level of aggregation (city, country, industry, part of population).

Data types according to data collection/ collector:

1. **Primary data:** Data collected by the investigator himself/ herself for a specific purpose.
2. **Secondary data:** Data collected by someone else for some other purpose (but being utilized by the investigator for another purpose).

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What are the advantages and disadvantages of using the primary and secondary data in your research?

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I. SOURCES OF PRIMARY DATA

1. Questionnaire survey:
   - most commonly used method. Open ended or closed questions. It can be conducted face to face, via phone, mail or internet web application.

2. Interview:
 - face-face conversation with the respondent. Allow more in-depth questioning.

3. Observations:
 - can be done while letting the observing person know that he/she is being observed or without letting him/her know.

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1. Population and sample

Does the population that was eligible to be selected for the study include the entire population of interest? Or, is the eligible population a selective subgroup of the population of interest?

+ Eligible population includes entire population of interest or a substantial part

o Population represents a limited, atypical, or selective subgroup of the population of interest.

- No description of the population

[NA] Not applicable

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2. Randomized Selection of Participants

Randomized Selection of Participants. Were study participants randomly selected for the study? Or, did study participants volunteer (nonrandom)?

+ Random selection (probability sampling)

o Nonrandom selection (non-probability sampling)

- No description of the sample selection procedure

[NA] Not applicable

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3. Sample size

How many participants were selected for the study? Does the sample include enough participants from key subgroups to accurately assess subgroup differences? (Mostly by comparison to other studies).

\+ Sample size larger than similar studies

o Sample size the same as similar studies

\- Sample size smaller than similar study or sample size not given

[NA] Not applicable

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4. Response and Attrition Rate

What proportion of the selected sample completed the study? In longitudinal studies, what proportion of sample members participated in follow-up studies?

+ High response or participation rate (approximately over 65% response rate, over 90% participated in follow-up studies)

o Moderate to low response rate

- No information on response rate or participation rate

[NA] Not applicable

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5. Main Variables or Concepts

Full description of main variables or concepts of interest.
Can the main variables or concepts be matched to the variables in the tables?

\+ Accurately described and can be matched

o Vague definition or cannot be matched

\- No definition of main variables or concepts

[NA] Not applicable

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6. Operationalization of Concepts.

Did the authors choose variables that make sense?
Have these variables been used in previous studies or are they an improvement over previous studies?

+ Key concepts are measured with variables that make measures of the sense. Or, variables have either been previously used in research or are improvements over previous measures.

o Key concepts are measured with variables that do not make sense, and variables have not been used in previous research studies

- Variable operationalization is not discussed

[NA] Not applicable

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7. Numeric Tables (Descriptive statistics)

Are at least the means and standard deviations/standard errors for all the numeric variables presented?

\+ Means and standard deviations/standard errors presented

o Means, but no standard deviations/standard errors presented

\- Neither means nor standard deviations/standard errors presented

[NA] Not applicable

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8. Missing Data

Are the number of cases with missing data specified?
Is the statistical procedure(s) for handling missing data described?

\+ Number of cases with missing data are specified and the strategy for handling missing data is described

o Number of cases with missing data specified, but these cases are removed from the analysis

\- Missing data issues not discussed

[NA] Not applicable

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Probability sampling

- (pseudo)random selection of respondents,

1. **Simple random sampling:** select *n* units out of *N* such that each has an equal chance of being selected. Use a table of random numbers, a computer random number generator, or other device.
2. **Stratified Random Sampling:** also called proportional random sampling, involves dividing your population into homogeneous subgroups and then taking a simple random sample in each subgroup.
3. **Systematic Random Sampling:** method in which sample members from a larger population are selected according to a random starting point but with a fixed, periodic interval. This interval, called the sampling interval, is calculated by dividing the population size by the desired sample size.
4. **Cluster or Area Random Sampling:** In cluster we divide population into clusters (usually along geographic boundaries), randomly sample clusters and measure all units within sampled clusters

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Non-probability sampling

Unequal chance of being included in he sample (non-random).
The sample is not a proportion of population, but there is a system of selection with pre-determined purpose.

1. Judgment or deliberate sampling:

- selection is based on the judgment of the researcher.
- lack of information about population and its characteristics.

2. Quota sampling:

- the sample size is determined first and then quota is set as fixed for different segment of population.

(Example: We want to select 100 firms from each region and in every region the quota will be 70% of small firms, 20% of medium size firms and 10% of big firms).

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II. SOURCES OF SECONDARY DATA

Selected international databases:
World Bank database:
Macro-level data: https://datacatalog.worldbank.org/
Firm-level data: (World bank enterprise survey): registration needed
https://www.enterprisesurveys.org/data

IMF database:
https://www.imf.org/en/Data

UN database:
http://data.un.org/

Human development report (UN):
http://hdr.undp.org/en/data

Global competitiveness report (World Economic Forum):
http://reports.weforum.org/global-competitiveness-report-2018/downloads/

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Selected databases for OECD and EU countries:

OECD database:
https://stats.oecd.org/

Eurostat database:
https://ec.europa.eu/eurostat/data/database

Eurobarometer (ZACAT/GESIS): registration needed
https://zacat.gesis.org/webview/

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III. SHARING DATA

There are various ways to share research data, including:

• depositing them with a specialist data center, data archive or data bank
• submitting them to a journal to support a publication
• depositing them in an institutional repository
• making them available online via a project or institutional website
• making them available informally between researchers on a peer-to-peer basis

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JH3

Each of these ways of sharing data has advantages and disadvantages: data centres may not be able to accept all data submitted to them; institutional repositories may not be able to afford long-term maintenance of data or support for more complex research data; and websites are often ephemeral with little sustainability.

Jan Hunady; 19. 7. 2019

Key issues for data management planning in research:

• know your legal, ethical and other obligations regarding research data, towards research participants, colleagues, research funders and institutions
• assign roles and responsibilities to relevant parties in the research
• design data management according to the needs and purpose of research
• incorporate data management measures as an integral part of your research cycle
• implement and review data management throughout research as part of research progression and review

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IV. PRESENTATION AND INTERPRETATION OF DATA

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Why a picture is still worth a thousand words

Readers can easily understand visual presentations. Charts and maps have an impact on nearly everybody through newspapers, television, the Internet and books.

It is much easier to understand statistics presented as a chart or a map, rather than long lists of numbers - assuming, of course, that the visual presentations are produced correctly.

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Problems with graphs and schemes

- There are many ways to provide misleading information, whether deliberately or, as is more often the case, unintentionally.
- There must be a balance between design and function. Complicated visualizations often fail to communicate.
- As interpreting charts can be demanding, don't force your readers to have to "dig out" the message.
- Misunderstandings and misinterpretations also can result from different cultural traditions (colours, for example, may have different symbolic meanings in different parts of the world).

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The effect of the surroundings.

Which end of the horizontal bar is darker?

Source: Helmholtz, H. (1821-1894), "Simultaneous Contrast Illusion", In *Wikipedia, The Free Encyclopedia*, retrieved in July 2009 from http://en.wikipedia.org/wiki/Optical_illusion.

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Which circle in the inside is larger?

Source: Ebbinghaus, H. (1850-1909), "The Ebbinghaus Illusion", In *Wikipedia, The Free Encyclopedia*, retrieved in July 2009 from http://en.wikipedia.org/wiki/Hermann_Ebbinghaus.

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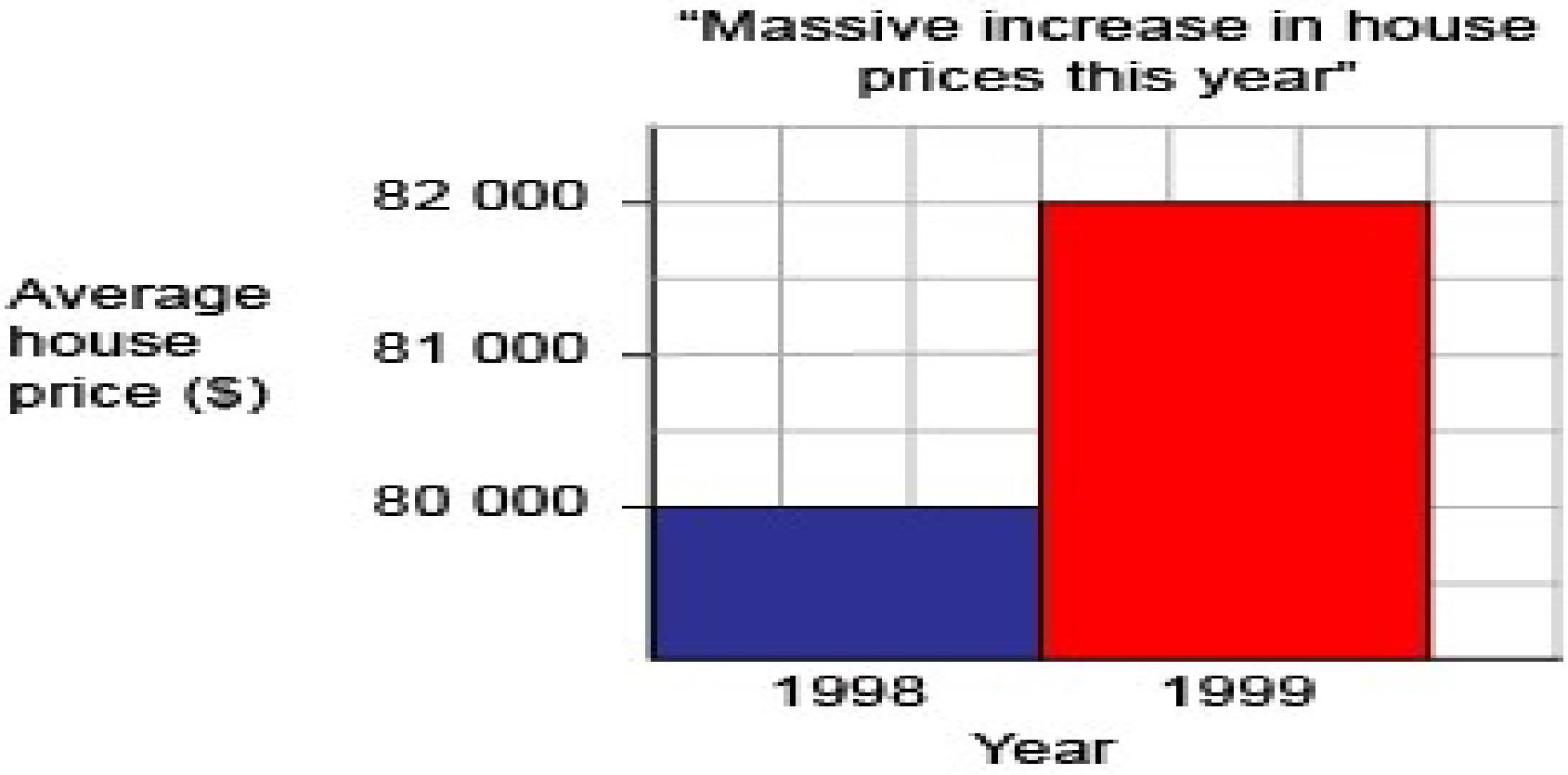
What is wrong here?

Omitting the baseline



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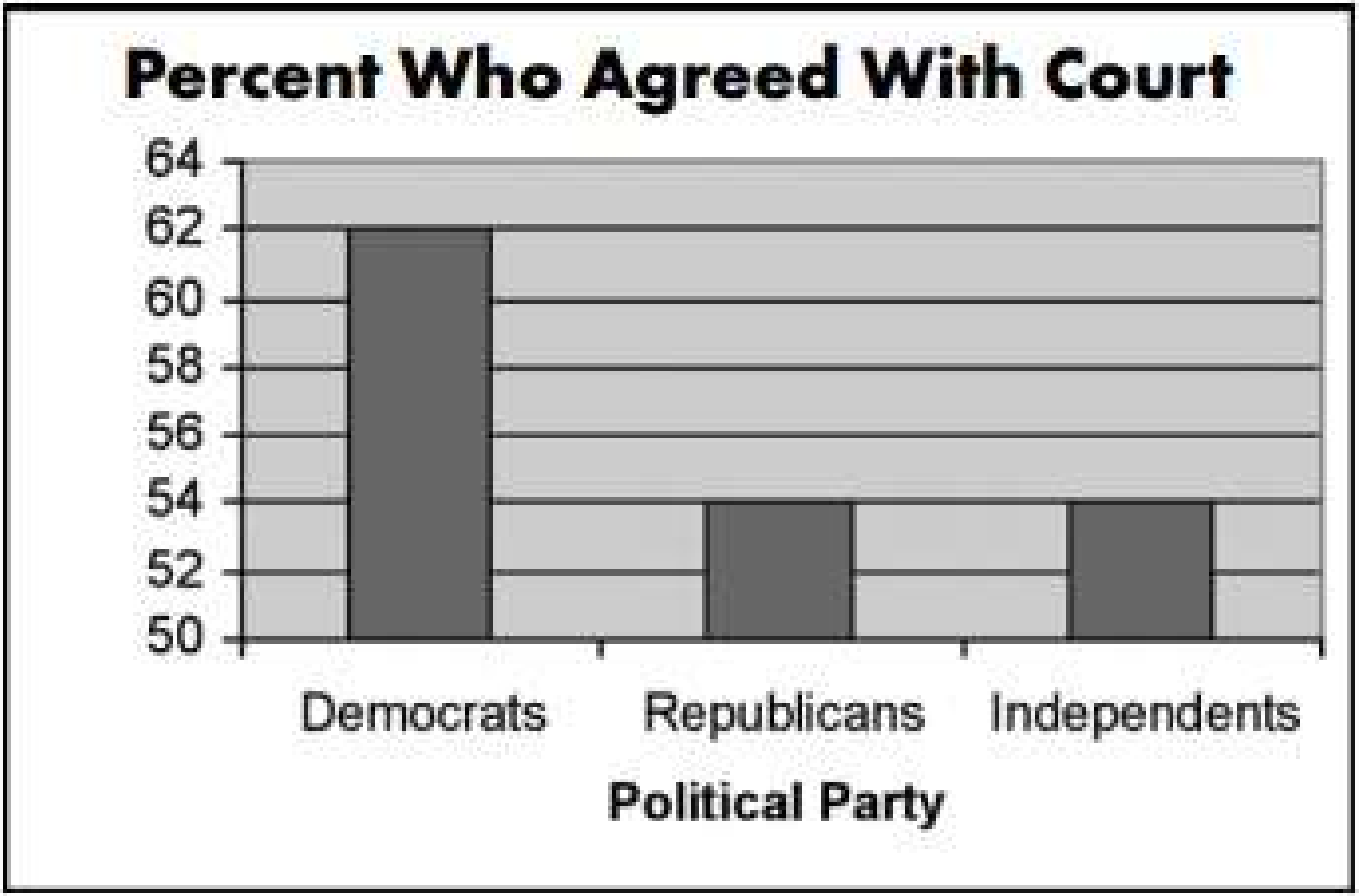

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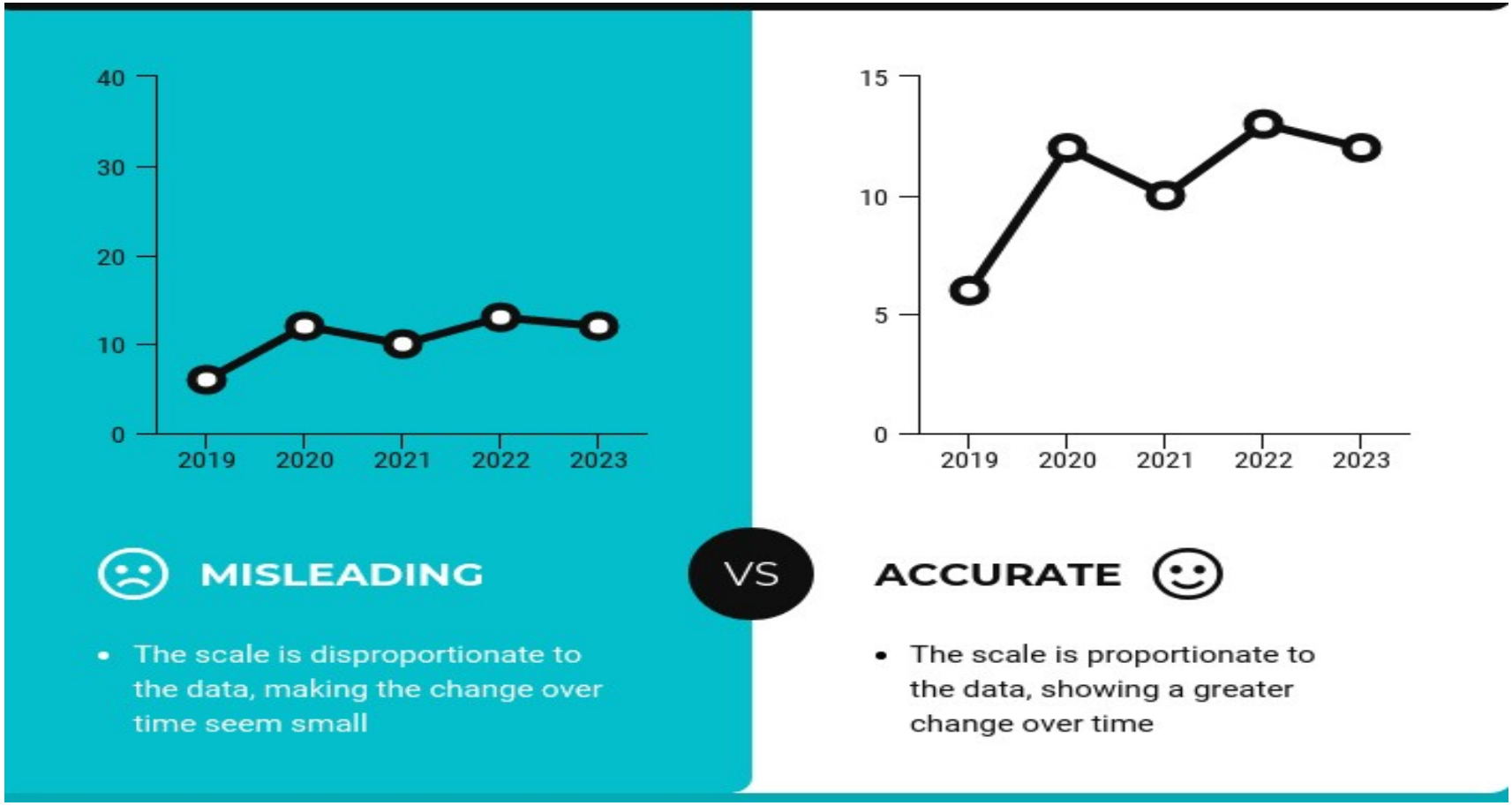
What is wrong here?

Disproportional Scale of Y axis



Source: venngage.com

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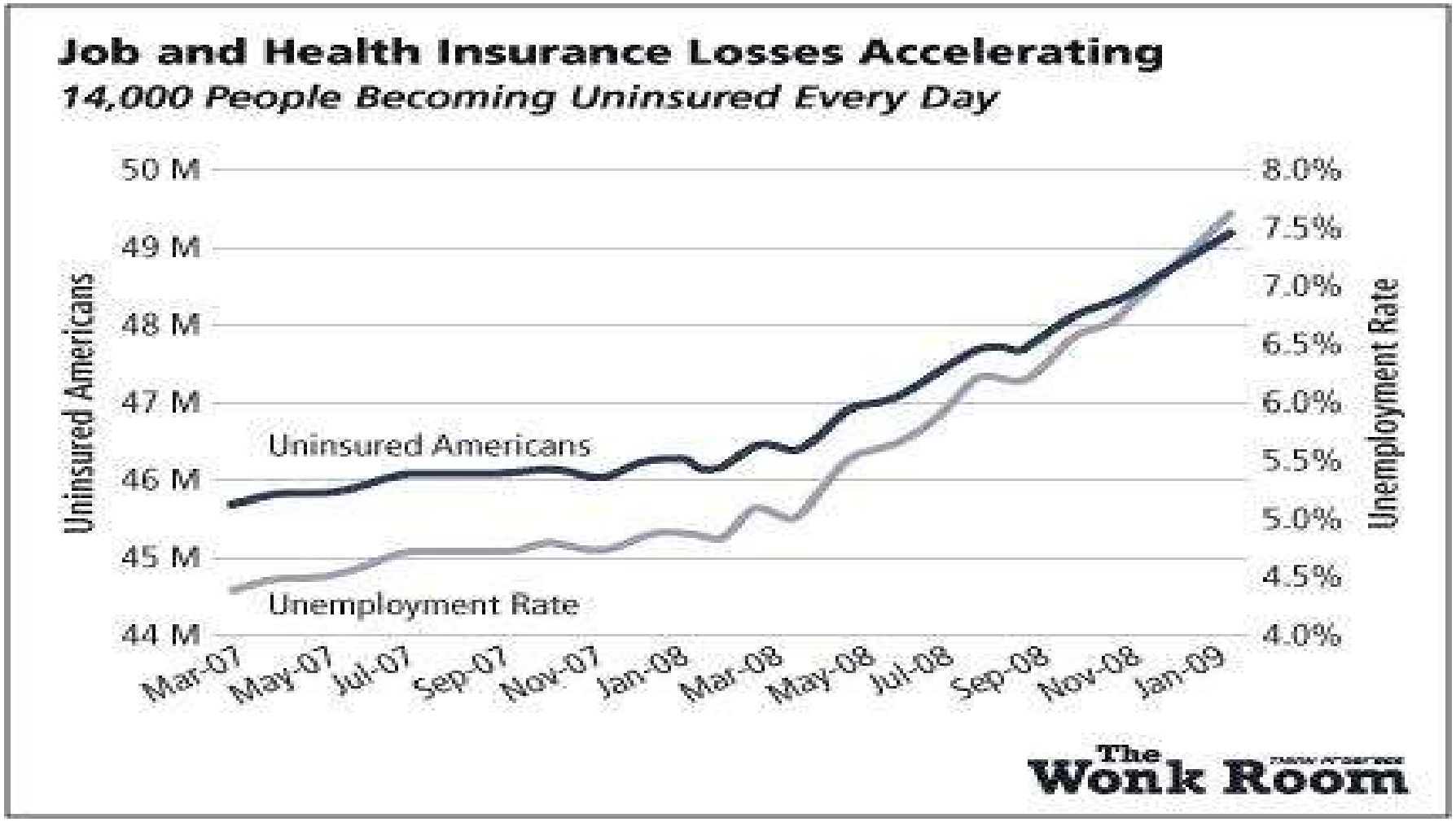
What is wrong here?
Different scales of two Y axis



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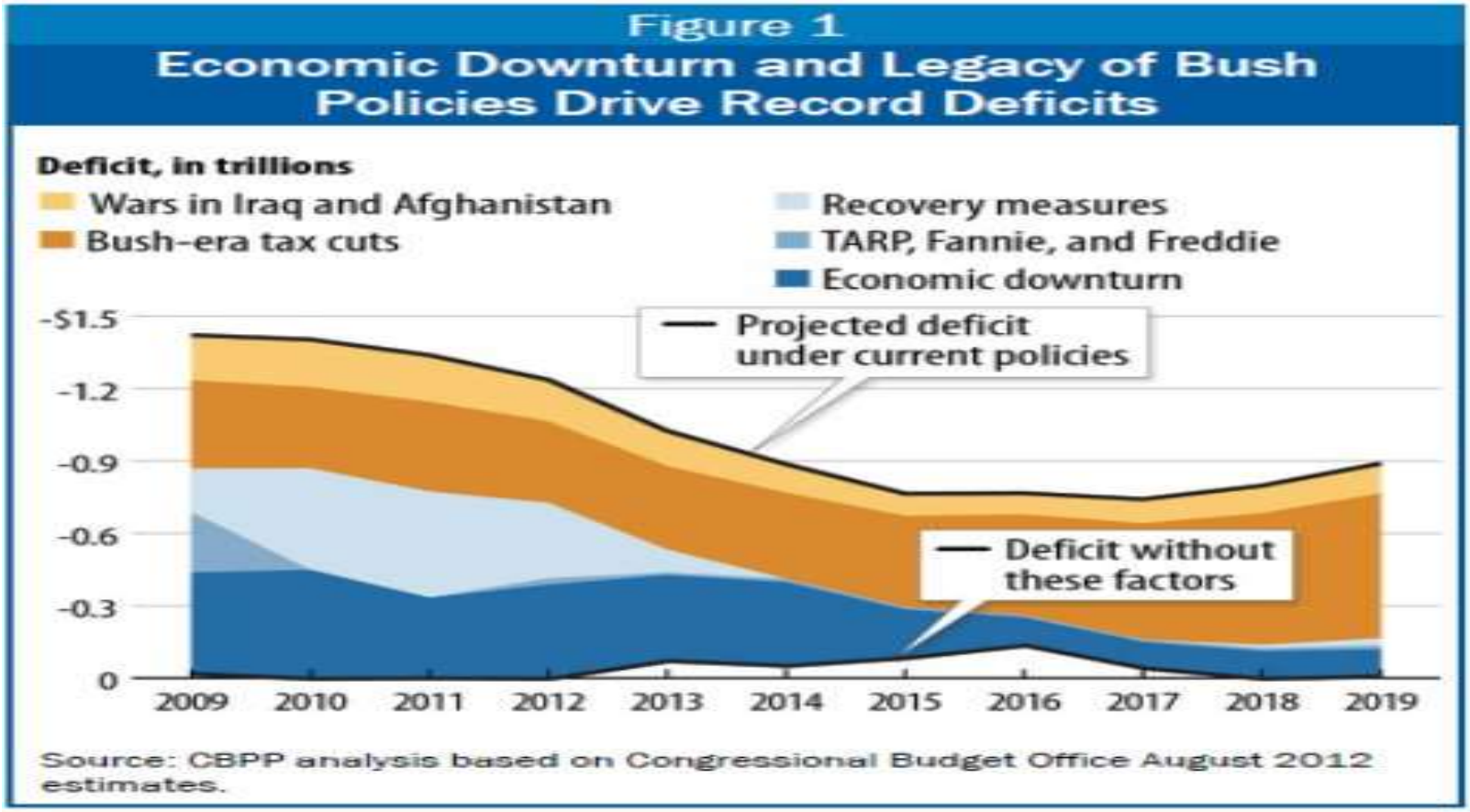
Selection of the period and its length



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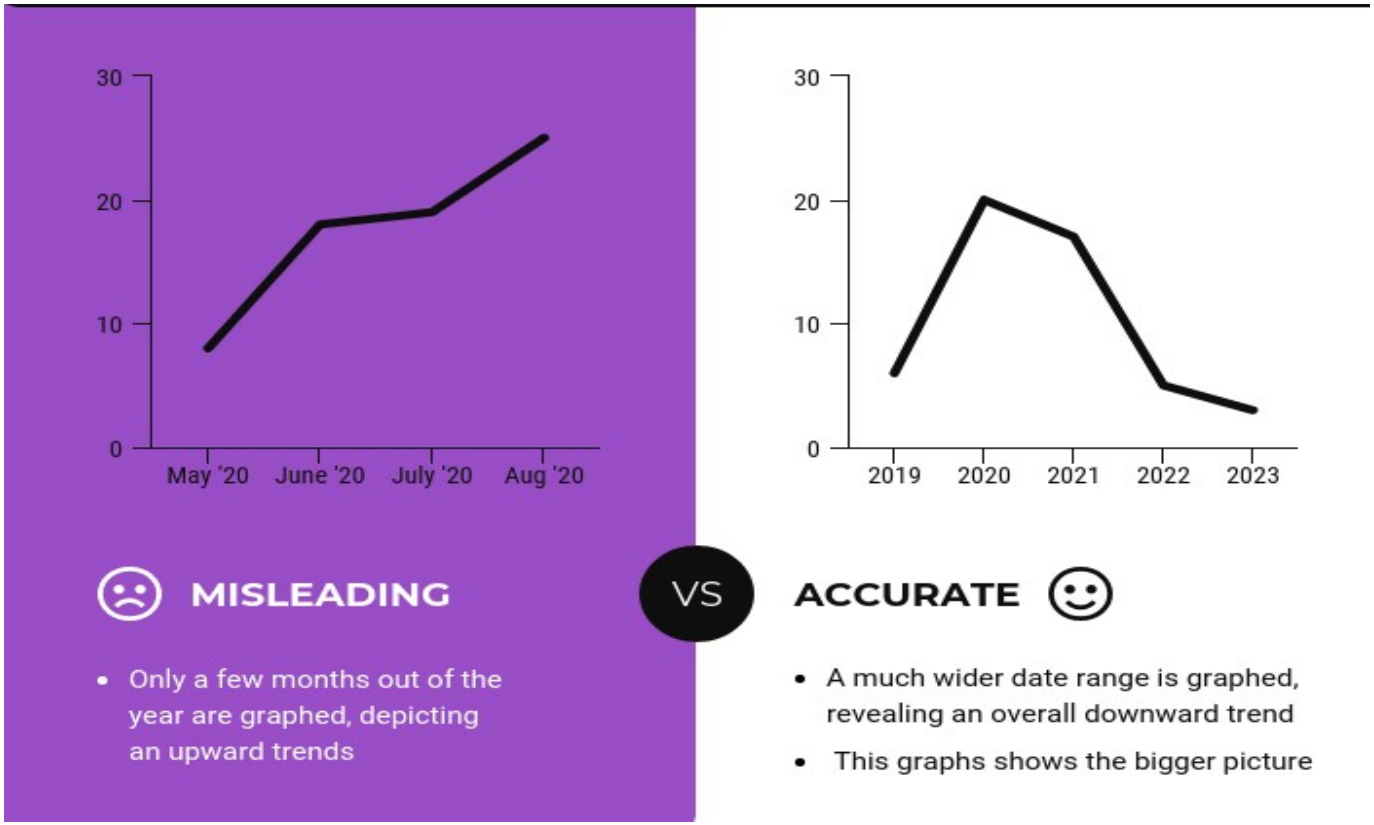
Cherry picking (including only certain data points to reinforce narratives)



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Source: venngage.com

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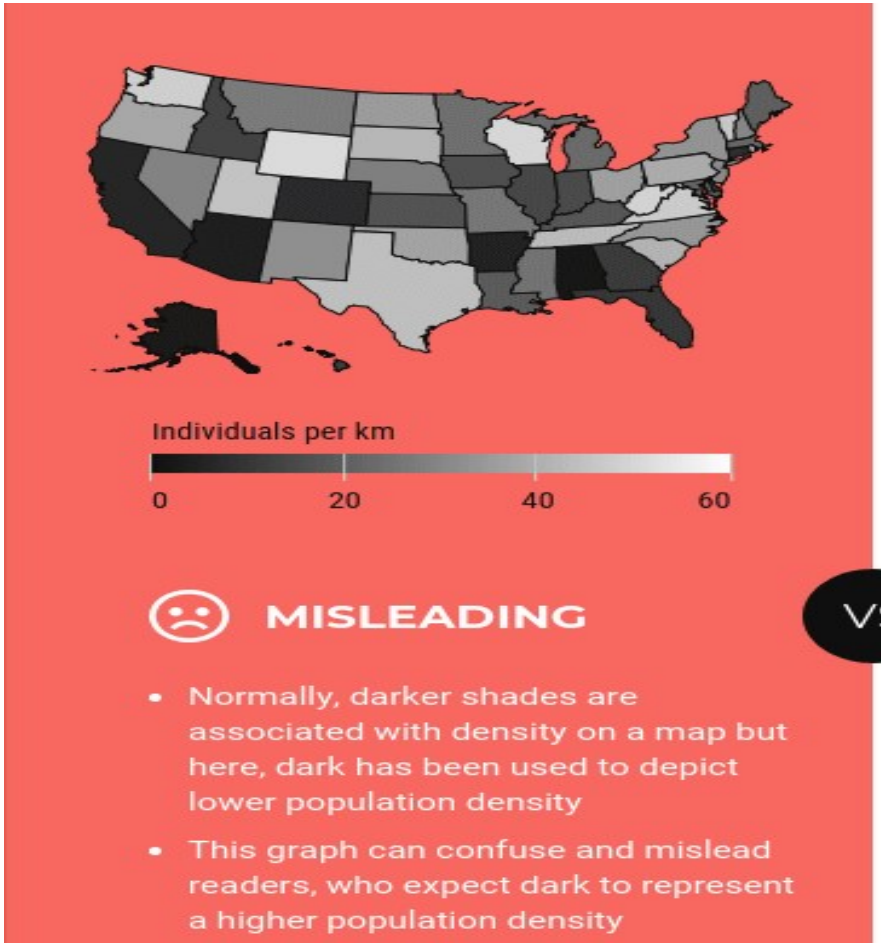
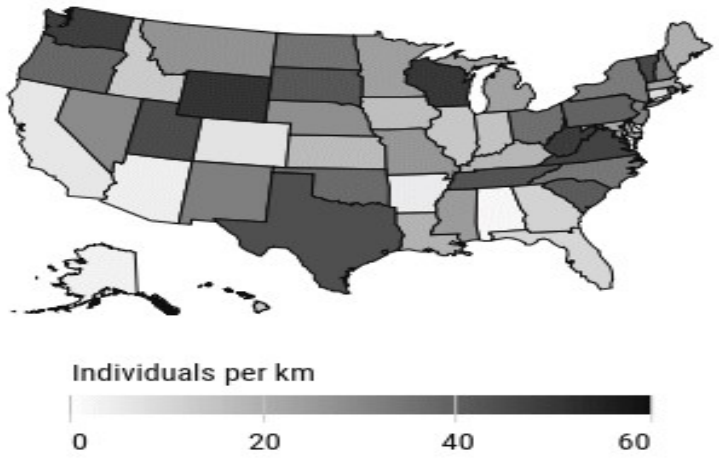
What is wrong here?

Going against conventions – some standards of graph visualization should be followed



VS



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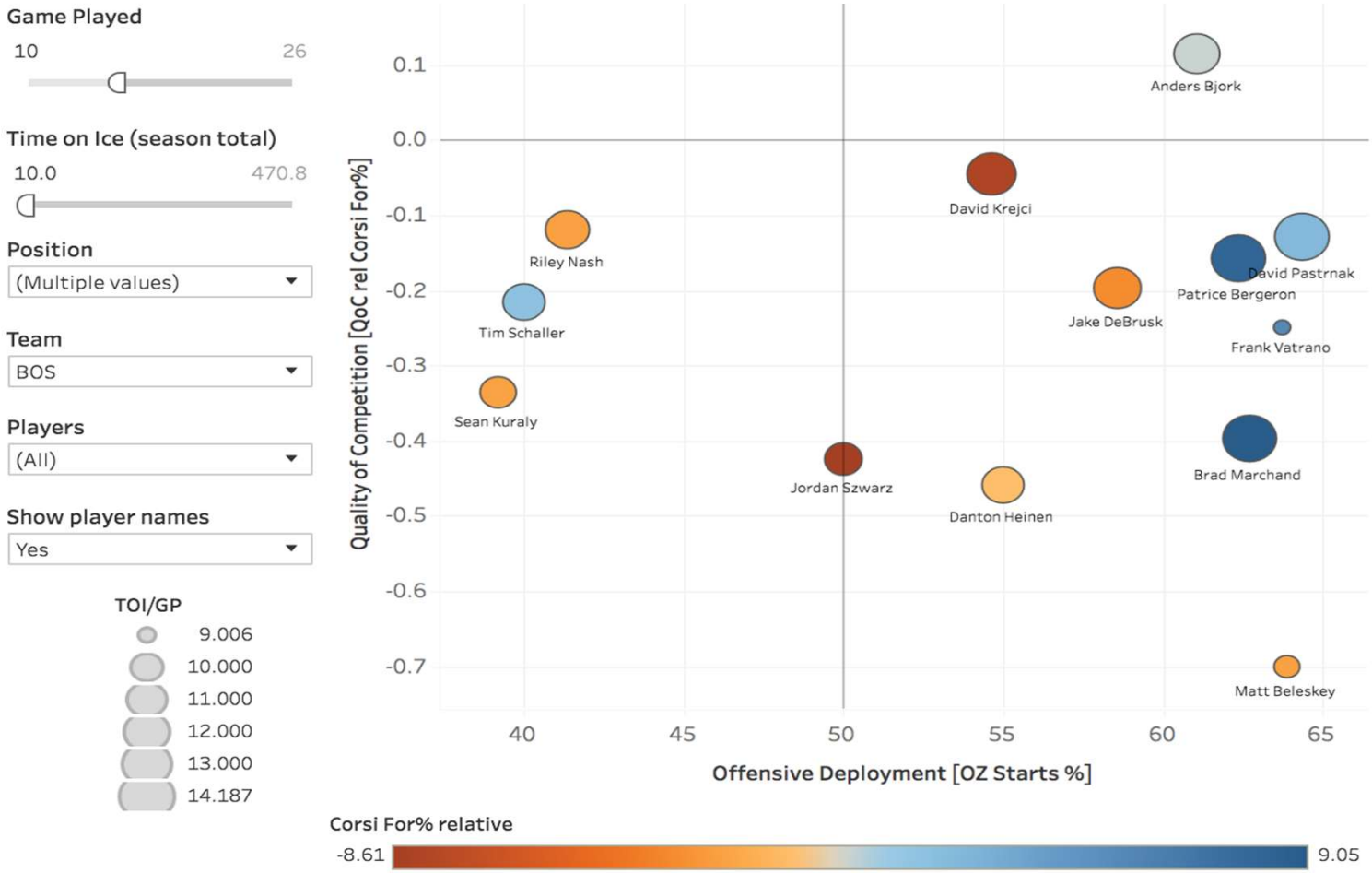
Source: venngage.com

What is wrong here?

Want to show too complex information at once



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Tables

1.The table title should give a clear and accurate description of the data. It should answer the three questions “what”, “where” and “when”. Be short and concise (avoid using verbs).

EXAMPLE:
“Planned production of automotive industry in Slovakia in the year 2019”

2. Column headers, at the top of the table, should identify the data presented in each column of the table and provide any relevant metadata (e.g. unit of measurement, time period or geographic area).

3. Row stubs, in the first column of the table, should identify the data presented in each row of the table.

4. Footnotes, at the bottom of the table, may provide any additional information needed to understand and use the data correctly (e.g. definitions).

5. Source line, at the bottom of the table, should provide the source of the data, i.e. the organization that produced the data and the data collection method (e.g. population census or labour force survey).

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What is wrong with the Table ??

Table 1 Development of R&D expenditures

	1990	1995	2000	2005	2010	2011	2012	2013	2014
Industry (mil. Euro)	270	340	400	-	440	443	445	448	452
Industry (% of GDP)	0.5	0.7	1	1.2	1.15	1.21	1.19	1.23	1.25
Services (% of GDP)	0.2	0.3		0.4	0.44		0.433	0.42	0.391

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To ensure that your tables are easy to understand, you should consider the following guidelines:

• Avoid unnecessary text.

• Display your data either by chronological order for time series or by using some standard classification.

• Use a minimum of decimal places.

• Use thousand separators. Using a space instead of a symbol can avoid the problem of having to translate between languages.

• Align the numbers on the decimal point (or on the right in the absence of decimal places) so their relative value is clear. Do not centre the numbers in a column, unless they are all the same magnitude.

• Do not leave any data cell empty. Missing values should be identified as “not available” or “not applicable”. The abbreviation “NA” can apply to either, so it needs to be defined.

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V. DATA DOCUMENTATION AND DESCRIPTION

- Data documentation explains how data were created or digitised, what data mean, what their content and structure are and any data manipulations that may have taken place.

- Documenting data should be considered best practice when creating, organising and managing data and is important for data preservation.

- Sufficient contextual information is required to make sense of that data.

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Data documentation

Good data documentation includes information on:

• the context of data collection: project history, aim, objectives and hypotheses

• data collection methods: sampling, data collection process, instruments used, hardware and software used, scale and resolution, temporal and geographic coverage and secondary data sources used

• dataset structure of data files, study cases, relationships between files

• data validation, checking, proofing, cleaning and quality assurance procedures carried out

• changes made to data over time since their original creation and identification of different versions of data files

• information on access and use conditions or data confidentiality

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Documentation at the data-level

Data-level descriptions can be embedded within a data file itself.

Many data analysis software packages have facilities for data annotation and description, as variable attributes (labels, codes, data type, missing values), data type definitions, table relationships, etc.

Other documentation may be contained in publications, final reports, working papers and lab books or created as a data collection user guide.

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File formats currently recommended by the UK data archive for long-term preservation of research data:

TYPE OF DATA	RECOMMENDED FILE FORMATS FOR SHARING, RE-USE AND PRESERVATION
Quantitative tabular data with extensive metadata a dataset with variable labels, code labels, and defined missing values, in addition to the matrix of data	SPSS portable format (.por) delimited text and command ('setup') file (SPSS, Stata, SAS, etc.) containing metadata information some structured text or mark-up file containing metadata information, e.g. DDI XML file
Quantitative tabular data with minimal metadata a matrix of data with or without column headings or variable names, but no other metadata or labelling	comma-separated values (CSV) file (.csv) tab-delimited file (.tab) including delimited text of given character set with SQL data definition statements where appropriate
Geospatial data vector and raster data	ESRI Shapefile (essential: .shp, .shx, .dbf ; optional: .prj, .sbx, .sbn) geo-referenced TIFF (.tif, .tfw) CAD data (.dwg) tabular GIS attribute data
Qualitative data textual	eXtensible Mark-up Language (XML) text according to an appropriate Document Type Definition (DTD) or schema (.xml) Rich Text Format (.rtf) plain text data, ASCII (.txt)
Digital image data	TIFF version 6 uncompressed (.tif)
Digital audio data	Free Lossless Audio Codec (FLAC) (.flac)
Digital video data	MPEG-4 (.mp4) motion JPEG 2000 (.jp2)
Documentation	Rich Text Format (.rtf) PDF/A or PDF (.pdf) OpenDocument Text (.odt)

Source:Veerle Van den Eyden et al. (2011)

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Description of micro-level data from questionnaire: :

All data are retrieved from Eurobarometer 79.1 (2013)	
Name of the variable	Description of dependent variables and their coding
EXPERIENCED CORRUPTION	In the last 12 months, have you experienced any case of corruption? Yes = 1; No = 0
REPORTED CORRUPTION (exclusively victims)	Did your reported experienced corruption to anyone or not? Those that reported corruption = 1; Those that did not report a case of experienced corruption or did not experience corruption in the last 12 months = 0
KNOW WHERE TO REPORT	If you were to experience or witness a case of corruption, would you know where to report it to? Yes =1; No=0
EDUCATION	How old were you when you stopped full-time education? (exact age)
MARRIED	Married = 1; Unmarried = 0
GENDER	Male = 1; Female = 0
AGE	How old are you? (exact age)
RURAL/URBAN	Would you say you live in a ...? Rural area or village = 1; Small or middle sized town = 2; Large town = 3
UNEMPLOYED	Did you do any paid work in the past? What is your current occupation?... Unemployed or temporarily not working (yes=1, no=0)
CONTACT WITH AUTHORITIES	Over the last 12 months, have you had any contact with any of the following: police, customs, tax authorities, social security and welfare authorities, public prosecution service, politicians, political parties, officials awarding public tenders, officials issuing building or business permits, health-care system, the education sector and inspectors in your country (yes=1, no=0)

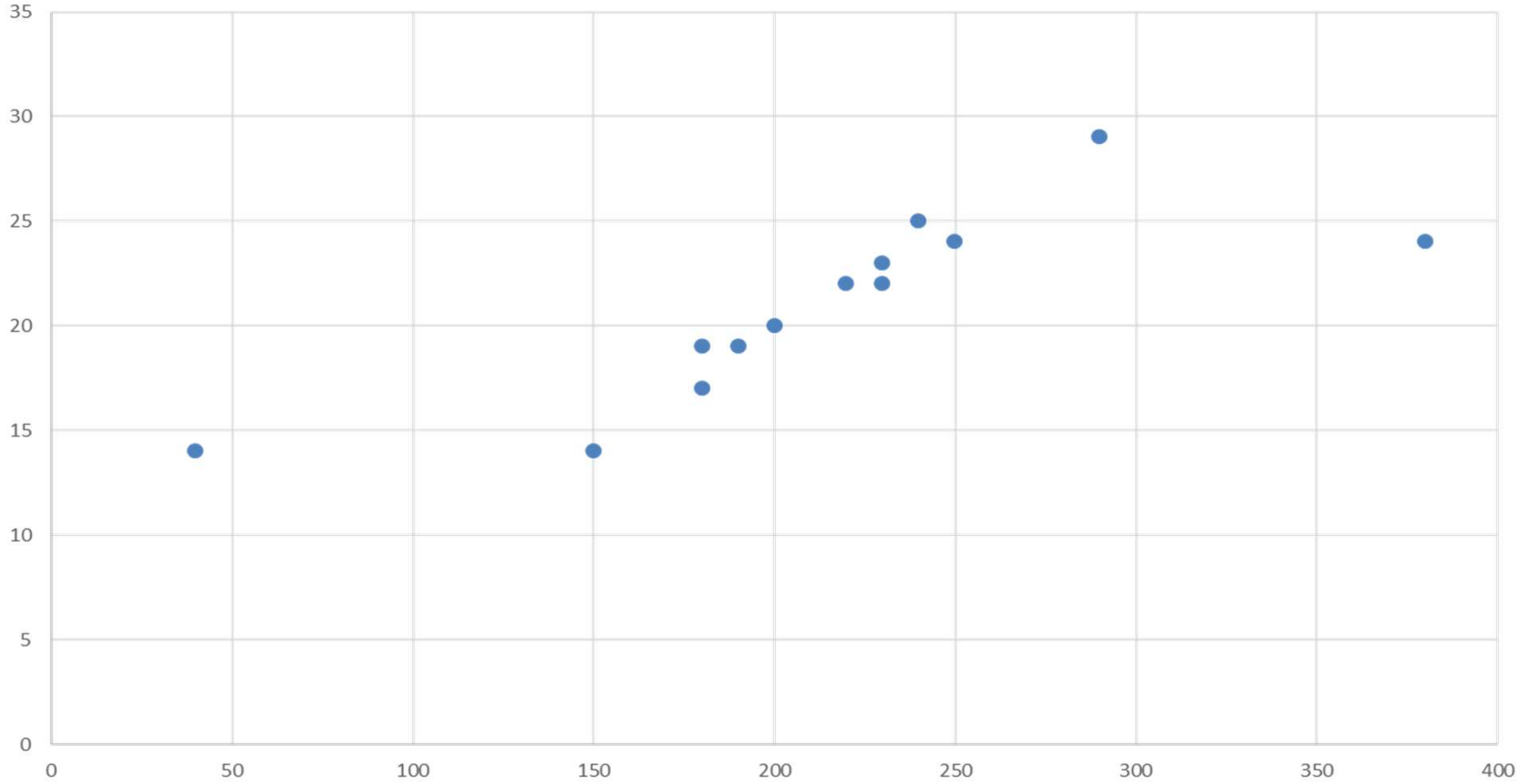
Description of secondary macro-level data:

Variable name	Description of dependent variables and the coding	Source
Corruption perception	How widespread do you think the problem of corruption is in your country? We calculated the country specific means of corruption as perceived by the respondents in each country.	Eurobarometer 79.1 (2013)
Internet interaction	Individuals using the internet for interaction with public authorities within 12 months before the survey (% of individuals aged 16 to 74)	Eurostat database. (code: tin00013)
Tertiary education	Population with tertiary educational attainment level (% of total population)	Eurostat database. (code: edat_lfse_07)
Rule of law	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution.	World bank database: Worldwide Governance Indicators. http://databank.worldbank.org/data/reports.aspx?source= worldwide-governance-indicators
Government effectiveness	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution.	

VI. DATA ANALYSIS

Some potential problems:

1. Outliers (visual inspection or tests)



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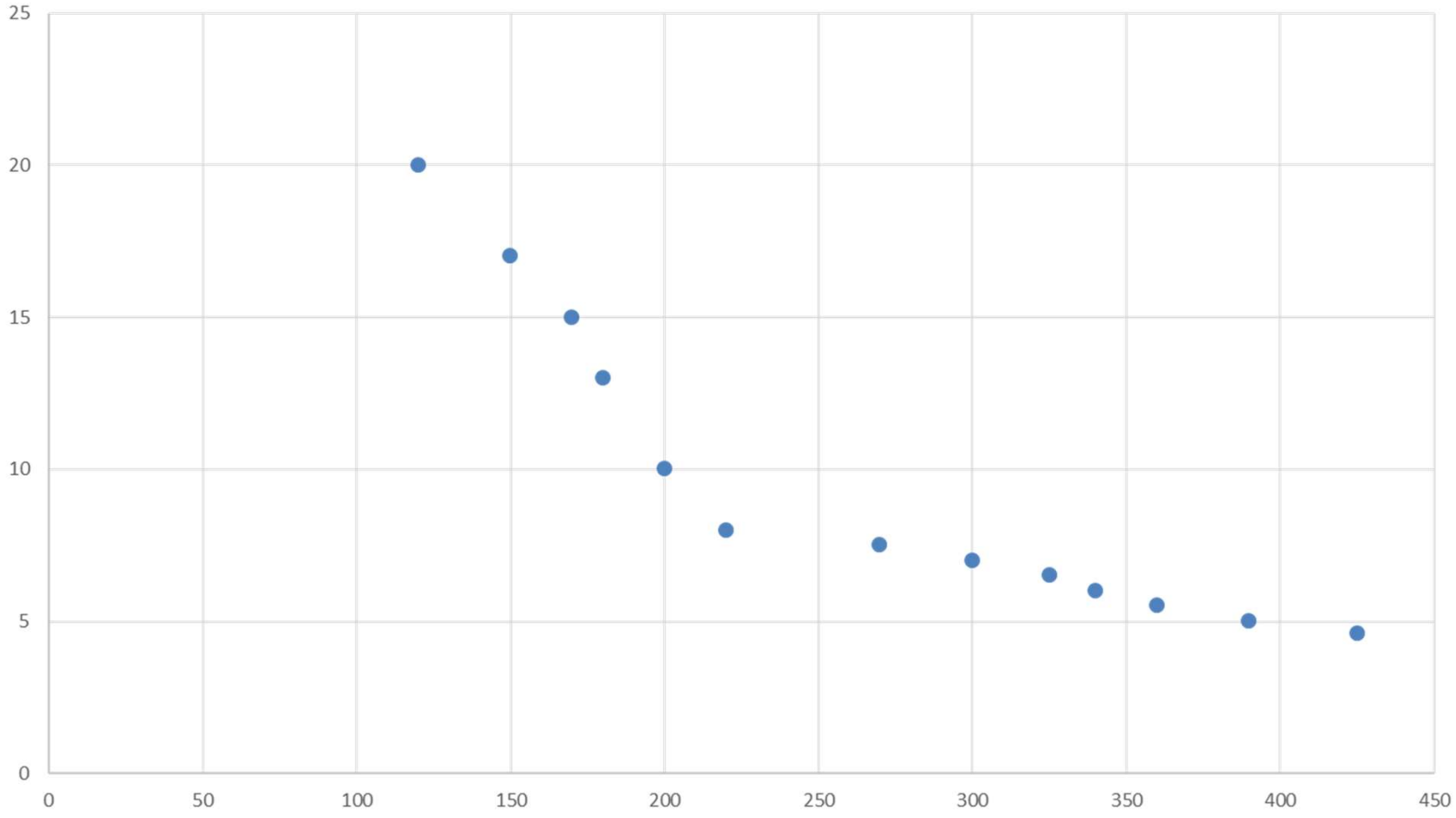
2. Structural breaks (use for example Chow breakpoint test)



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Metric and non-metric data

The data can be classified as metric data (ratio and interval types of data) and non-metric (nominal and ordinal types of data).

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Data analysis

Data analysis techniques	Data types	
	Dependent variable	Independent variables
OLS regression	(metric)	(metric, non-metric)
Logit/Probit/Tobit regressions	(non-metric)	(metric, non-metric)
Discriminant analysis	(non-metric)	(metric, non-metric)
ANOVA	(metric)	(non-metric)
Conjoint analysis	(metric, non-metric)	(non-metric)
MANOVA	(metric)	(non-metric)
Canonical correlation	(metric, non-metric)	(metric, non-metric)
Simultaneous equations	(metric)	(metric, non-metric)
Structural equation modelling	(metric, non-metric)	(metric, non-metric)

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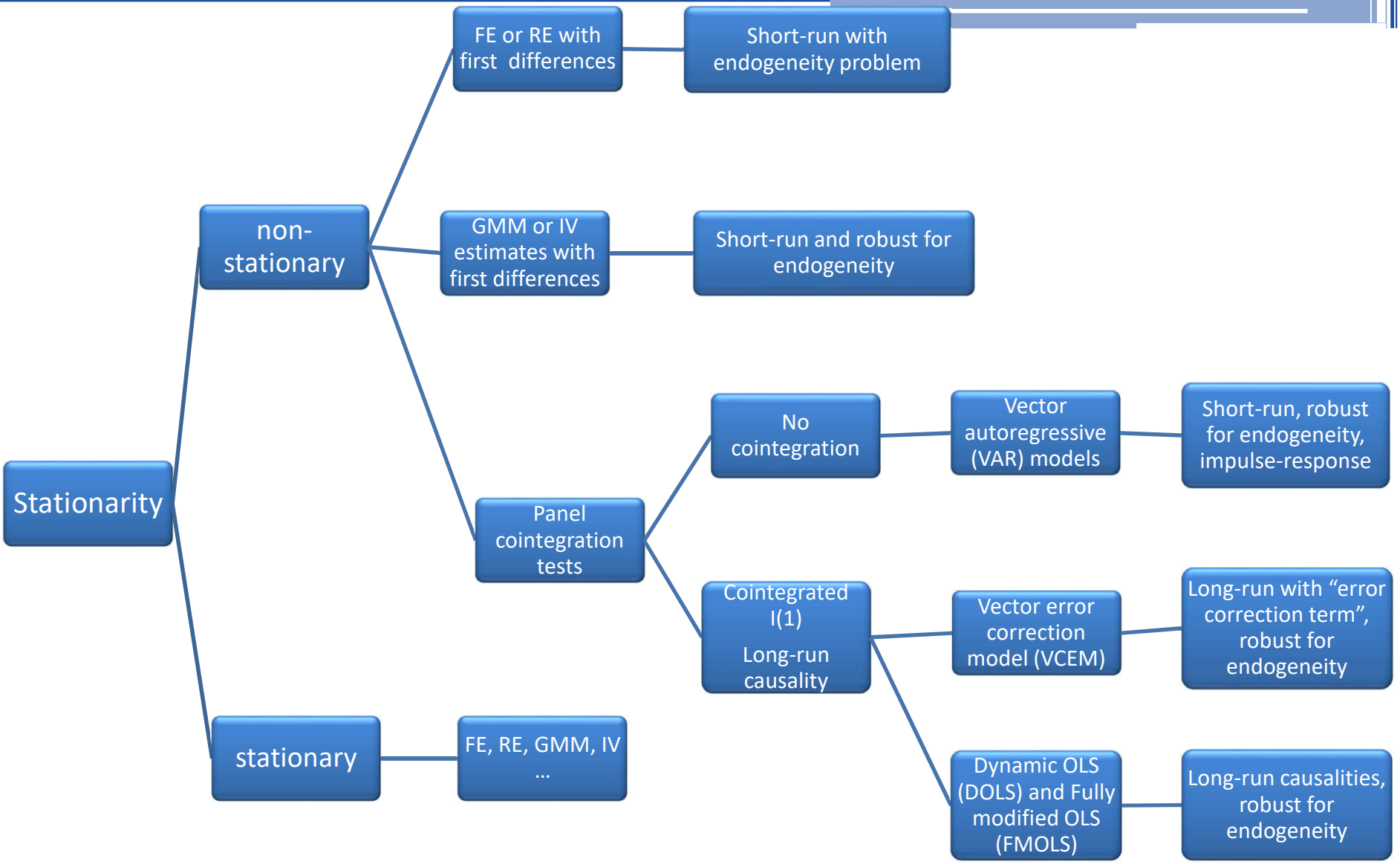
The most common basic techniques which I prefer to use in my research

Task :	Technique to solve the task:
Identification of two-way causality in Gragner sense	1. (Panel) Granger causality test
Short-run causality in panel panel data (without significant endogeneity problem)	1. Fixed-effects; 2. Random effects models (according to Housman test) 3. Mixed effects
Short-run causality in panel panel data (with significant endogeneity problem)	1. General methods of moments (GMM) 2. IV regression (instrumental variable)
Long-run causality of cointegrated non-stationary variables (and endogeneity)	1. Fully modified OLS (FMOLS) 2. Dynamic OLC (DMOLS) 3. Vector Error Correction Model (VCEM)
Short-run causality of non-cointegrated variables non-stationary variables without using first differences	1. Vector autoregressive model (VAR)
The causal effect of the treatment/policy/intervention. Using two groups of individuals.	1. Propensity score matching
Causality between metric or non-metric independent variables and non-metric dependent variable	1. Logit or Ordered logit regression 2. Probit or Ordered probit regression
Identifying unobserved factors in the data and or reducing dimensions	1. Factor analysis (rotated component) 2. Principal component analysis (PCA)
Classifying items (countries/individuals) into the more groups based on similarity in set of variables	1. Hierarchical cluster analysis 2. Non-hierarchical cluster analysis
Classifying items in two separate groups according to the differences in the set of variables	1. Discriminant analysis 2. Logit and Probit regression

Techniques for panel data analysis



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Example of interpreting a data in a bad way (less seriously :)

Is the bread dangerous? (What is wrong here?)

Fully half of all children who grow up in bread-consuming households score below average on standardized tests.

In the 18th century, when virtually all bread was baked in the home, the average life expectancy was less than 50 years; infant mortality rates were unacceptably high; many women died in childbirth; and diseases such as typhoid, yellow fever and influenza ravaged whole nations.

More than 90% of violent crimes are committed within 24 hours of eating bread.

Bread has been proven to be addictive. Subjects deprived of bread and given only water to eat begged for bread after only two days.

Bread is baked at temperatures as high as 200 degrees Celsius. That kind of heat can kill an adult in less than one minute.

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Assignments:

1. Work in groups (less than 6 members) and selected two most relevant research papers for the group written by someone from your institution. First paper should examine primary data and the second one secondary data

2. Identify what type of data are the Author using in the research and prepare brief presentation describing the **data** and/or **variables** used in the papers (use tables and graphs to characterize variables, basic descriptive statistics or distribution and trends) as well as the short description of **methodology** used to analyse them.

3. Every group should prepare the set of free or paid databases in your research filed which are useful for national research or international comparison of ASEAN countries (as recommendation to us).

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What the impact of the research means for you?

Where are you mostly searching for bibliometric data measuring the research impact?

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Major sources of data (databases) for impact assessment

In general there are three major databases:

1. **Google Scholar**
2. **Web of Science**
3. **Scopus**

In reality, Google Scholar is rather difficult to use in ranking journals if we want to use and compare several different metrics.

However, journals can easily be ranked on the other two (Web of Science and Scopus).

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Summary metrics for research field/ Category – Economics

Category Profile: Economics

Year	Edition	# Journals	Articles	Total Cites	Median Impact Factor	Aggregate Impact Factor	Aggregate Immediacy Index	Aggregate Cited Half-Life	Aggregate Citing Half-Life
2017	SSCI	353	19,570	905,730	1.112	1.766	0.435	>10.0	9.7
2016	SSCI	347	17,838	722,250	0.931	1.490	0.312	>10.0	>10.0
2015	SSCI	345	17,994	608,521	0.829	1.336	0.298	>10.0	9.9
2014	SSCI	333	17,305	549,769	0.860	1.283	0.274	>10.0	9.7
2013	SSCI	333	17,339	502,966	0.787	1.244	0.279	>10.0	9.7
2012	SSCI	333	16,402	450,167	0.795	1.193	0.258	>10.0	9.6
2011	SSCI	321	15,327	401,962	0.778	1.148	0.243	>10.0	9.3
2010	SSCI	305	14,403	380,146	0.750	1.188	0.244	>10.0	9.2
2009	SSCI	247	11,856	367,897	0.745	1.153	0.246	>10.0	9.0
2008	SSCI	209	10,724	274,274	0.739	1.059	0.215	>10.0	9.0
2007	SSCI	191	9,255	207,952	0.653	0.911	0.193	>10.0	8.8
2006	SSCI	175	8,278	183,801	0.655	0.898	0.165	>10.0	8.6
2005	SSCI	175	7,691	161,856	0.609	0.830	0.159	>10.0	8.6
2004	SSCI	172	7,490	148,130	0.546	0.782	0.139	>10.0	8.5
2003	SSCI	169	7,192	138,380	0.561	0.761	0.138	>10.0	8.5

https://esi.clarivate.com/IndicatorsAction.action

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Citation per document

This indicator counts the number of citations received by documents from a journal and divides them by the total number of documents published in that journal.

The chart shows the evolution of the average number of times documents published in a journal in the past two, three and four years have been cited in the current year.

The two years line is equivalent to journal impact factor metric.

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Impact factor - Web of Science (Clarivate Analytics.)

Impact factor =
number of citations to all items published in that journal in the past two years
(divided by)
# of articles and reviews published over those past two years referencing those citations.

A measure of the frequency with which the "average article" in a journal has been cited in a particular year or period.
Only journals in the sciences and social sciences that meet Clarivate Analytics' standards for inclusion in the Web of Science Core Collection are assigned impact factors. Impact factors are not computed for journals in humanities.

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Impact factor - Web of Science

Calculation for a journal's 2018 journal impact factor:

Number of citation received by the journal in 2018 to articles published in 2016 and 2017 divided by number of citable articles published by the journal in 2016-2017.

For example, if a journal has an impact factor of 2.2, this means in the indexed year each article published was cited on average 2.2 times in the previous two years in that journal.

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5-Year Journal Impact Factor

The 5-year journal Impact Factor is the average number of times articles from the journal published in the past five years have been cited in the JCR year.

It is calculated by dividing the number of citations in the JCR year by the total number of articles published in the five previous years.

The 5-Year Journal Impact Factor measurement is the same as the Journal, but with three more years added to both the numerator and the denominator.
Instead of a two-year window, it is a five-year window. In the 2019 JCR, the five-year window will include 2014, 2015, 2016, 2017 & 2018.

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5-Year Journal Impact Factor

The 5-Year Journal Impact Factor provides a broader view onto the citation data, but at the expense of granularity (which is reduced).

Like the the Journal Impact Factor, the 5-Year Journal impact Factor is a publication-level metric. It does not apply to individual papers or subgroups of papers that appeared in the publication.

Typical lag after publication of a paper until peak citation is variable (across papers, across time, across publications, and across domains). When the lag is greater than two years (which it often is), a publication's 5-year Journal Impact Factor will tend to be higher than its Journal Impact Factor

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CiteScore - Scopus

CiteScore is the number of citations received by a journal in one year to documents published in the three previous years, divided by the number of documents indexed in Scopus published in those same three years.

CiteScore is calculated for the current year on a monthly basis until it is fixed as a permanent value in May the following year, permitting a real-time view on how the metric builds as citations accrue.

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SJR - SCImago Journal Rank

The **SJR** is a size-independent prestige indicator that ranks journals by their 'average prestige per article.
It is based on the idea that all citations are not created equal.

SJR weights each incoming citation to a journal by the SJR of the citing journal, with a citation from a high-SJR source counting for more than a citation from a low-SJR source.

SJR is a measure of scientific influence of journals that accounts for both the number of citations received by a journal and the importance or prestige of the journals where such citations come from.

It measures the scientific influence of the average article in a journal, it expresses how central to the global scientific discussion an average article of the journal is.

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EigenFactor Score

• Into some aspect similar to SJR but take into account WOS articles and citations.

• The *Eigenfactor* Score calculation is based on the number of times articles from the journal published in the past five years have been cited in the JCR year, but it also considers which journals have contributed these citations so that highly cited journals will influence the network more than lesser cited journals.

• References from one article in a journal to another article from the same journal are removed, so that *Eigenfactor* Scores are not influenced by journal self-citation.

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Article Influence score of the journal

The *Article Influence* determines the average influence of a journal's articles over the first five years after publication.

It is calculated by multiplying the *Eigenfactor* by 0.01 and dividing by the number of articles in the journal, normalized as a fraction of all articles in all publications.

This measure is roughly analogous to the *5-Year Journal Impact Factor* - it is a ratio of a journal's citation influence to the size of the journal's article contribution over a period of five years.

Available in Web of Science database.

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Article Influence score of the journal

The equation is as follows:

$$\frac{0.01 * EigenFactor\ Score}{X}$$

where **X** = *5-year Journal Article Count divided by the 5-year Article Count from All Journals*.

The mean *Article Influence* for each article is 1.00.
A score greater than 1.00 indicates that each article in the journal has above-average influence.
A score less than 1.00 indicates that each article in the journal has below-average influence.

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Source Normalized Impact per Paper (SNIP)

SNIP was created by Professor Henk Moed at the Centre for Science and Technology Studies (CTWS), University of Leiden. It measures contextual citation impact by weighting citations based on the total number of citations in a subject field, using Scopus data.

SNIP corrects for differences in citation practices between scientific fields, thereby allowing for more accurate between-field comparisons of citation impact.

It does so by comparing each journal's citations per publication with the citation potential of its field, defined as the set of publications citing that journal.

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H-index – applied for Journals

• Originally conceived as an author-level metric, the h-index (and some of its numerous variants) have come to be applied to higher-order aggregations of research publications, including journals.

• A composite of productivity and citation impact, h-index is defined as the greatest number of publications *h* for which the count of lifetime citations is greater than or equal to *h*.

•Being bound at the upper limit only by total productivity, h-index favours older and more productive authors and journals.

•The ease of increasing h-index does not scale linearly.

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H5 index and H5 - median

Google scholar metrics:

h5-index is the h-index for articles published in the last 5 complete years. It is the largest number h such that h articles published in 2013-2017 have at least h citations each.

h5-median for a publication is the median number of citations for the articles that make up its h5-index.

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Immediacy Index

The Immediacy Index is the average number of times an article is cited in the year it is published.
The **journal Immediacy Index** indicates how quickly articles in a journal are cited.

The Immediacy Index is calculated by dividing the number of citations to articles published in a given year by the number of articles published in that year.

$$\text{Immediacy Index} = \frac{\text{Citations from JCR year to items in JCR year}}{\text{Citable Items in JCR year}}$$

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Immediacy Index

It is available in Web of Science databse.

It is usefull for comparing journals specializing in cutting-edge research.

The Immediacy Index is similar to Journal Impact Factor, except the window for both the numerator and the denominator is restricted to the JCR year.

This produces a same-year (one year only) variation on the Journal Impact Factor.

Peak citation usually takes several years, the Immediacy Index may not predict ultimate citation performance. Not very suitable for impact of individual arctiles (for items published very late in the year, it would be nearly impossible to earn any citations before the year is out.)

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Citing Half-Life

The Citing Half-Life is the median age of the citations produced by a journal during the JCR year (in the references).

A citation's age is equal to the publication year of the citing item (i.e., JCR year) minus the publication year of the cited item.

By definition, half of a journal's outbound citations are **to** items published before the Citing Half-Life, and half are to items published after the Citing Half-Life.

In the example histogram, a journal produced 10,500 citations during the JCR year (the JCR year is the period marked *0-1*; the year prior is the period marked *1-2*; and so on). The Citing Half-Life is 4.6, meaning the median age of the citations is 4.6 years old. Half of the citations are to items that are newer than 4.6 years old (orange zone), and half are to items that are older (blue zone).

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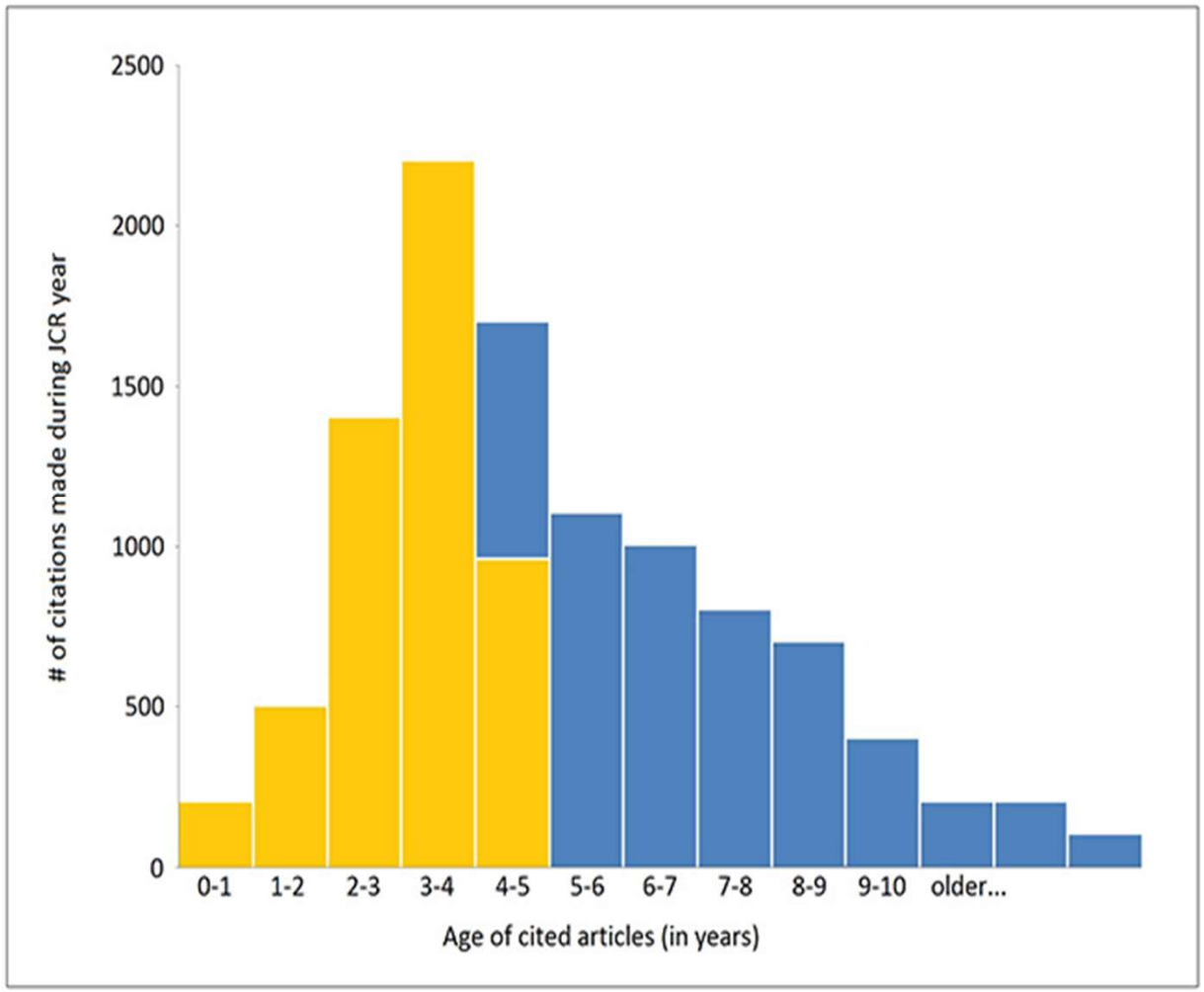
Citing Half-Life



The JCR year is the period marked *0-1*; the year prior is the period marked *1-2*; and so on.

The Citing Half-Life is 4.6, meaning the median age of the citations is 4.6 years old.

Half of the citations are to items that are newer than 4.6 years old (orange zone), and half are to items that are older (blue zone).

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Citing Half-Life

For all JCR data years prior to 2017,the maximum Citing Half-Life that is displayed in the Key Indicators table is 10 years.

Any value greater than is displayed as >10.0.

Citing half-life shows how each journal interacts with the published literature of its field.

Journals with a high Citing half-life are citing more of the deep, archival materials in their field in the current JCR year.

This indicates that older literature is still actively contributing to current scholarship.

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Cited Half-life

Median age of the articles that were cited in the JCR year.

Half of a journal's cited articles were published more recently than the cited half-life.

The Cited Half-life measures all of the cites earned by a publication (across all cited years) during the JCR year (i.e., citing year).

The cited half-life asks, if we take all those citations and sort them by publication year of citedm item—we can split that body of citations directly in half: cites to younger cited item years (more recently published); and cites to older cited item years (less recently published).

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Cited Half-life

If a publication's cited half-life is 4.6, this means that half the citations it earned (where citing year is JCR year) were to items published 4.6 or fewer years ago.

For example, there may be 60 cites to 2011 in the younger half, and 40 cites to 2011 in the older half. In the 2015 JCR this would result in a cited half-life of 4.6 years.

And half were to items published longer ago than that.

If a paper was published in year X and got 5 cites during the JCR year, then the tally for year X goes up by 5 (once for each cite) – it does not merely go up by 1 (for the paper).

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Cited Half-life

The Cited Half-life provides context for what can colloquially be thought of either as the “shelf life” of items published in a publication (for how long do they continue to be cited)…and simultaneously as the “timeliness” of those items (how soon after publication do they begin earning most of the cites that they will ever earn).

A low cited half-life suggests citation activity that peaks and drops off quickly. A high cited half-life suggests citation activity that peaks and drops off more slowly (or taken another way, that only peaks after a lag). Neither of these are “good” or “bad”.

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Web of Science metrics (AER)

https://apps.clarivate.com/jif/home/?journal=AM ECON REV&editions=SSCI&year=2017&pssid=H4

Hľadať

Home > Journal Profile

AMERICAN ECONOMIC REVIEW

ISSN: 0002-8282
eISSN: 1944-7981
AMER ECONOMIC ASSOC
2014 BROADWAY, STE 305, NASHVILLE, TN 37203
USA

Go to Journal Table of Contents Printable Version

TITLES
ISO: Am. Econ. Rev.
JCR Abbrev: AM ECON REV

CATEGORIES
ECONOMICS - SSCI

LANGUAGES
English

PUBLICATION FREQUENCY
12 issues/year

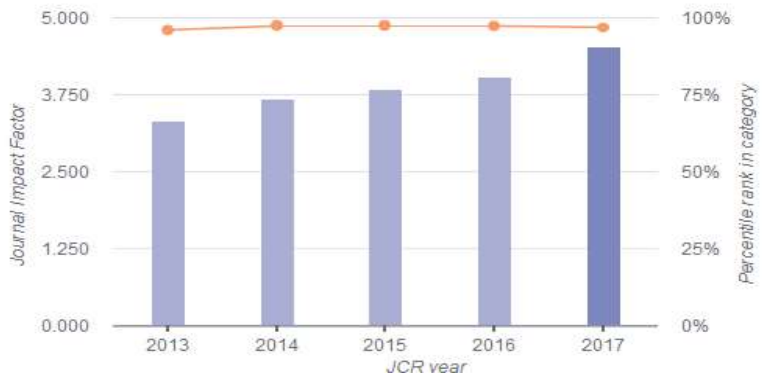
Current Year All years

The data in the two graphs below and in the Journal Impact Factor calculation panels represent citation activity in 2017 to items published in the journal in the prior two years. They detail the components of the Journal Impact Factor. Use the "All Years" tab to access key metrics and additional data for the current year and all prior years for this journal.

Journal Impact Factor Trend 2017

Printable Version

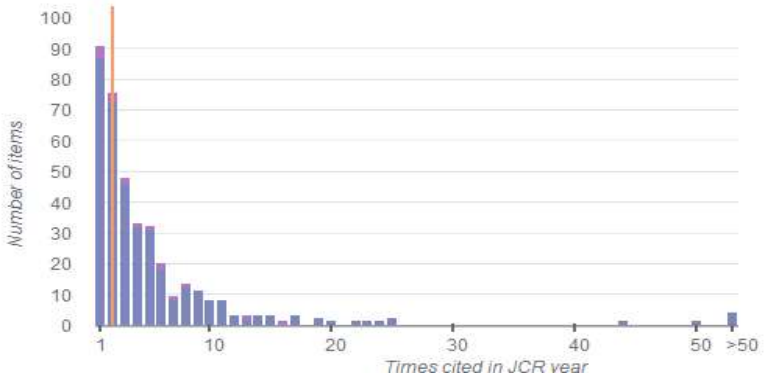
4.528
2017 Journal Impact Factor



Citation distribution 2017

Printable Version

2 Article citation median **n/a** Review citation median



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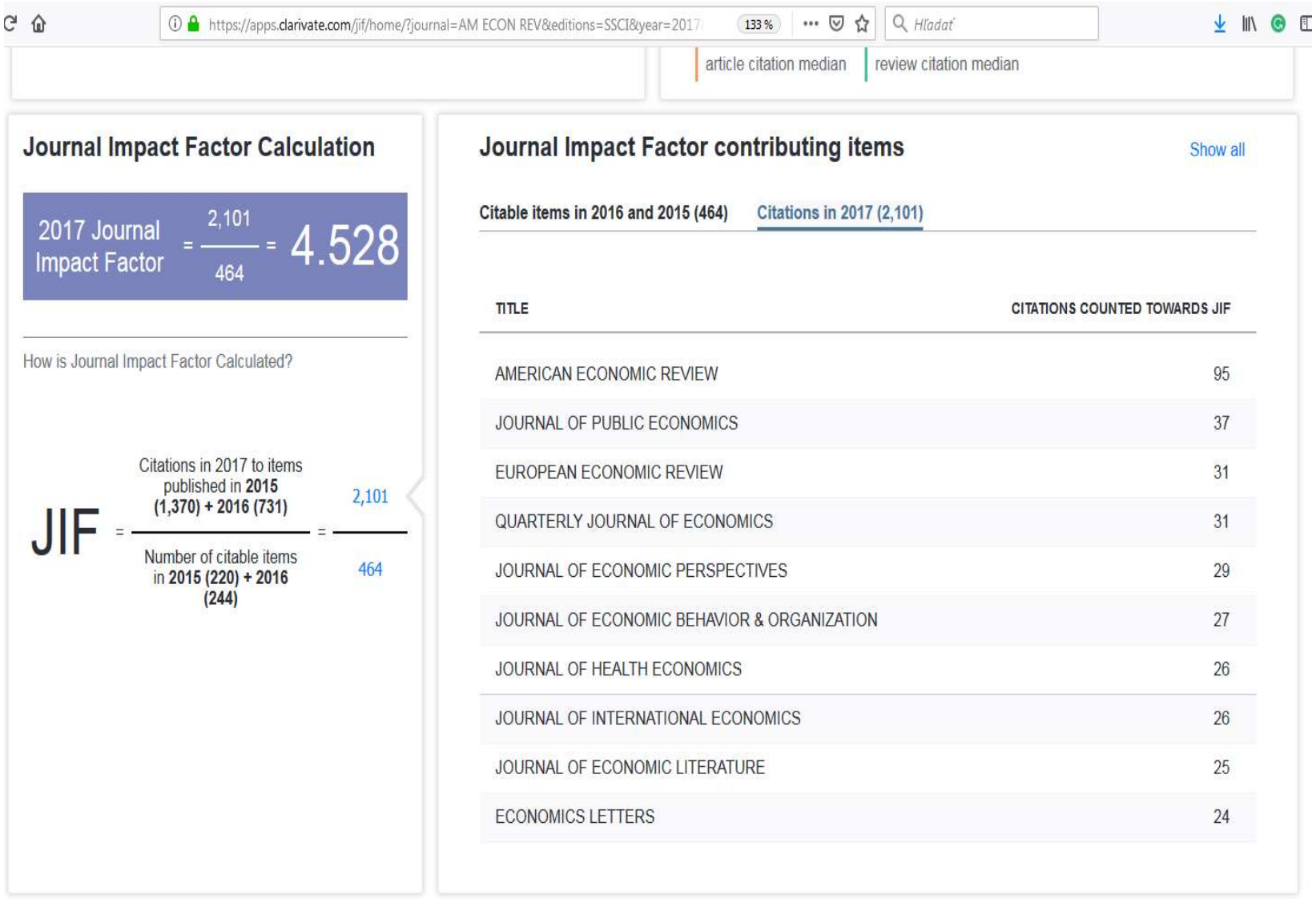
Web of Science metrics (AER)



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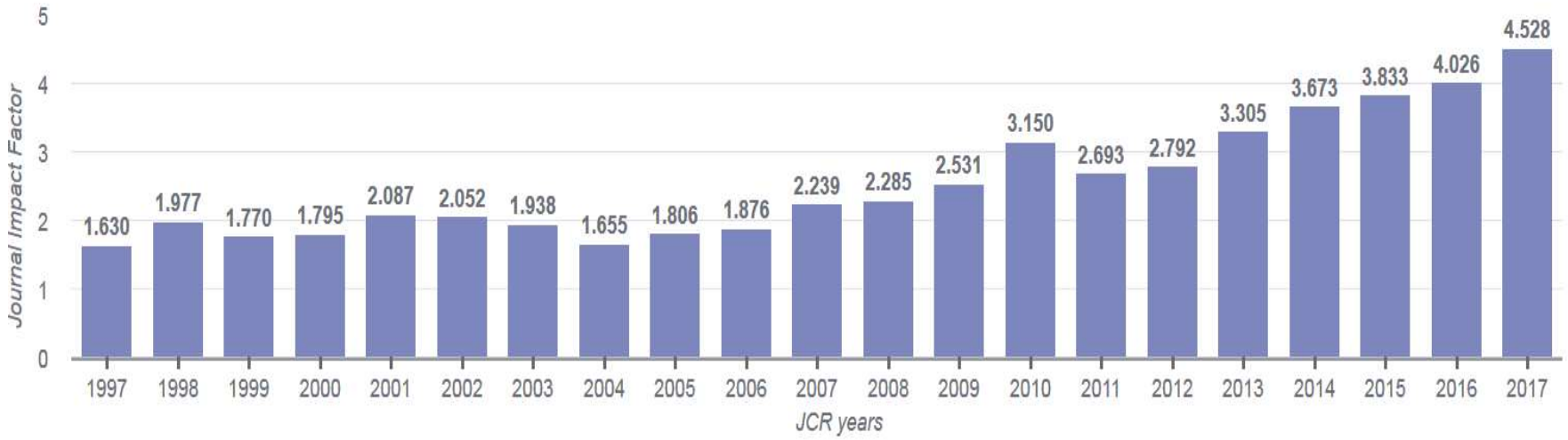
Impact factor development (AER)

rce data | Box plot | Rank | Cited Journal Data | Citing Journal Data | Metric trend | Click here to view Journal Relationships

Metric Trend

View Last 5 Years



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Web of Science metrics (AER)

Key Indicators 2017

IMPACT METRICS		
Total Cites	48,091	Graph
Journal Impact Factor	4.528	Graph
5 Year Impact Factor	6.498	Graph
Immediacy Index	0.983	Graph
Impact Factor Without Journal Self Cites	4.323	Graph

INFLUENCE METRICS		
Eigenfactor Score	0.13700	✓Graph
Article Influence Score	8.728	Graph
Normalized Eigenfactor	15.96600	Graph

SOURCE METRICS		
Citable Items	241	Graph
% Articles in Citable Items	100.00	Graph
Average JIF Percentile	97.025	Graph
Cited Half-Life	16.1	Graph
Citing Half-Life	8.6	Graph

Source data | Box plot | Rank | Cited Journal Data | Citing Journal Data | Metric trend | Click here to view Journal Relationships

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Web of Science metrics (AER)

Citing Journal Data

Customize columns

	Impact	Cited Journal	All Yrs	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
		ALL Journals	7,063	253	527	540	508	431	347	365	320	312	28
		ALL OTHERS (2024)	2,024	69	237	239	172	156	95	91	83	74	5
1	4.528	AM ECON REV	799	123	40	55	42	44	53	36	31	20	4
2	7.863	Q J ECON	347	3	19	11	34	23	19	9	18	21	1
3	3.750	ECONOMETRICA	343	1	15	8	23	22	13	15	11	20	
4	5.247	J POLIT ECON	284	2	15	8	11	9	7	11	7	4	
5	4.455	REV ECON STUD	207	4	2	11	8	13	12	7	5	10	1
6	1.204	J ECON THEORY	108	3	2	7	6	3	5	7	4	7	
7	5.607	J ECON PERSPECT	100	0	6	6	14	3	5	6	3	7	

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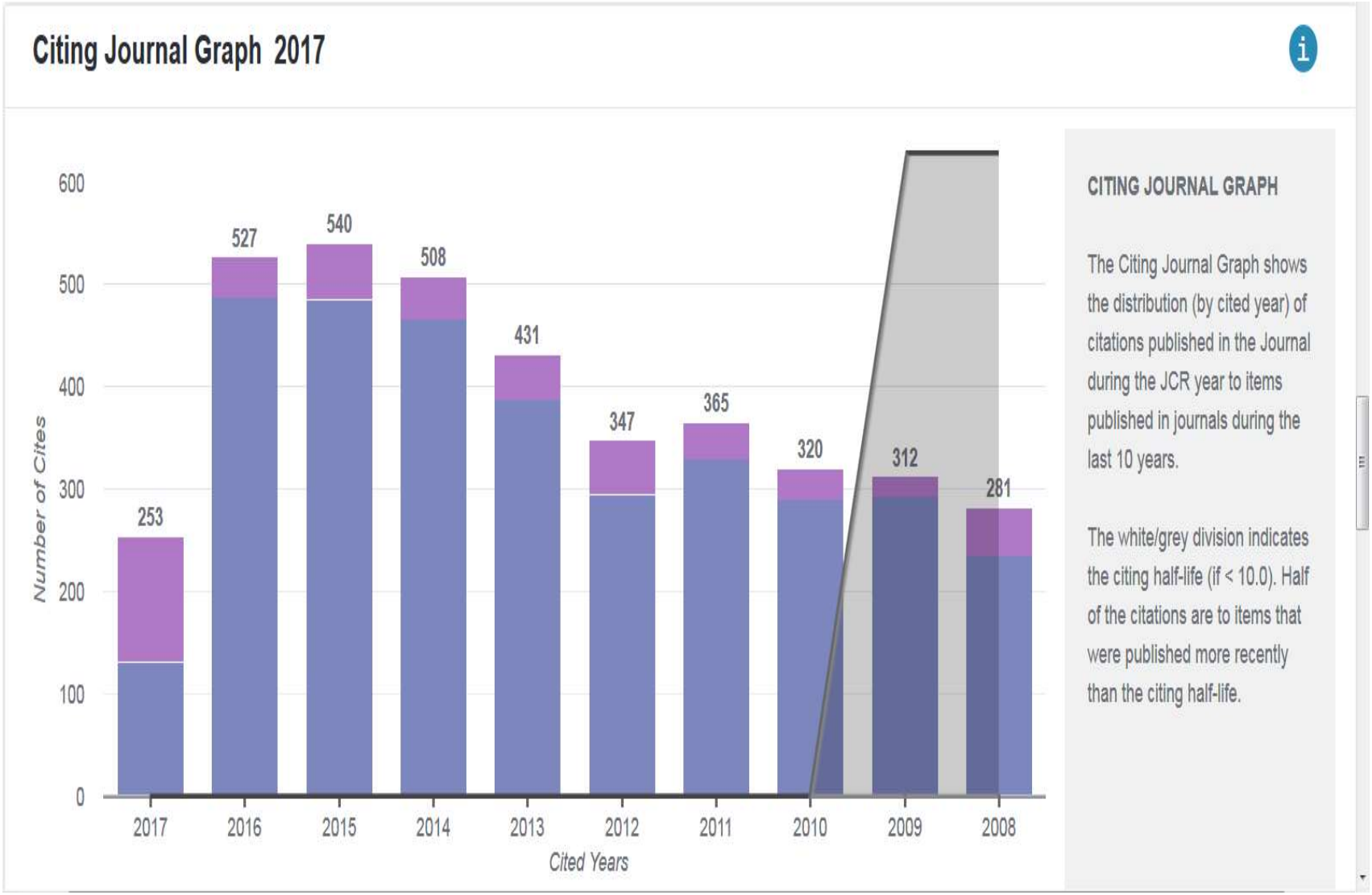
Web of Science metrics (AER)



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Web of Science metrics (AER)

Contributions by country/region

Export

	country	count
1.	USA	635
2.	England	102
3.	GERMANY (FED REP GER)	54
4.	Canada	36
5.	France	28
6.	Italy	23
7.	Spain	16
8.	Netherlands	15
-	Switzerland	15
10.	Sweden	14

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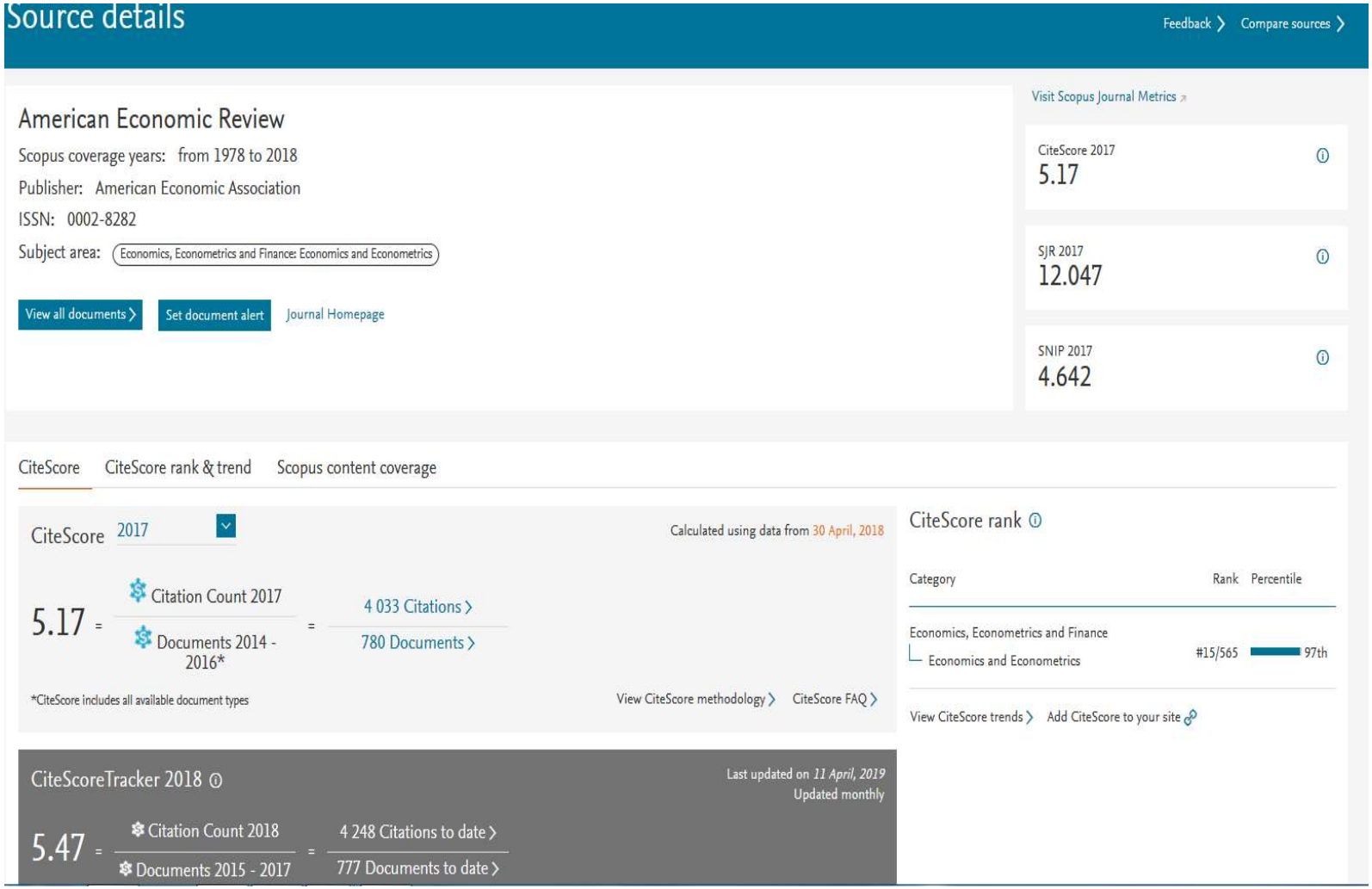
Scopus metrics (AER)



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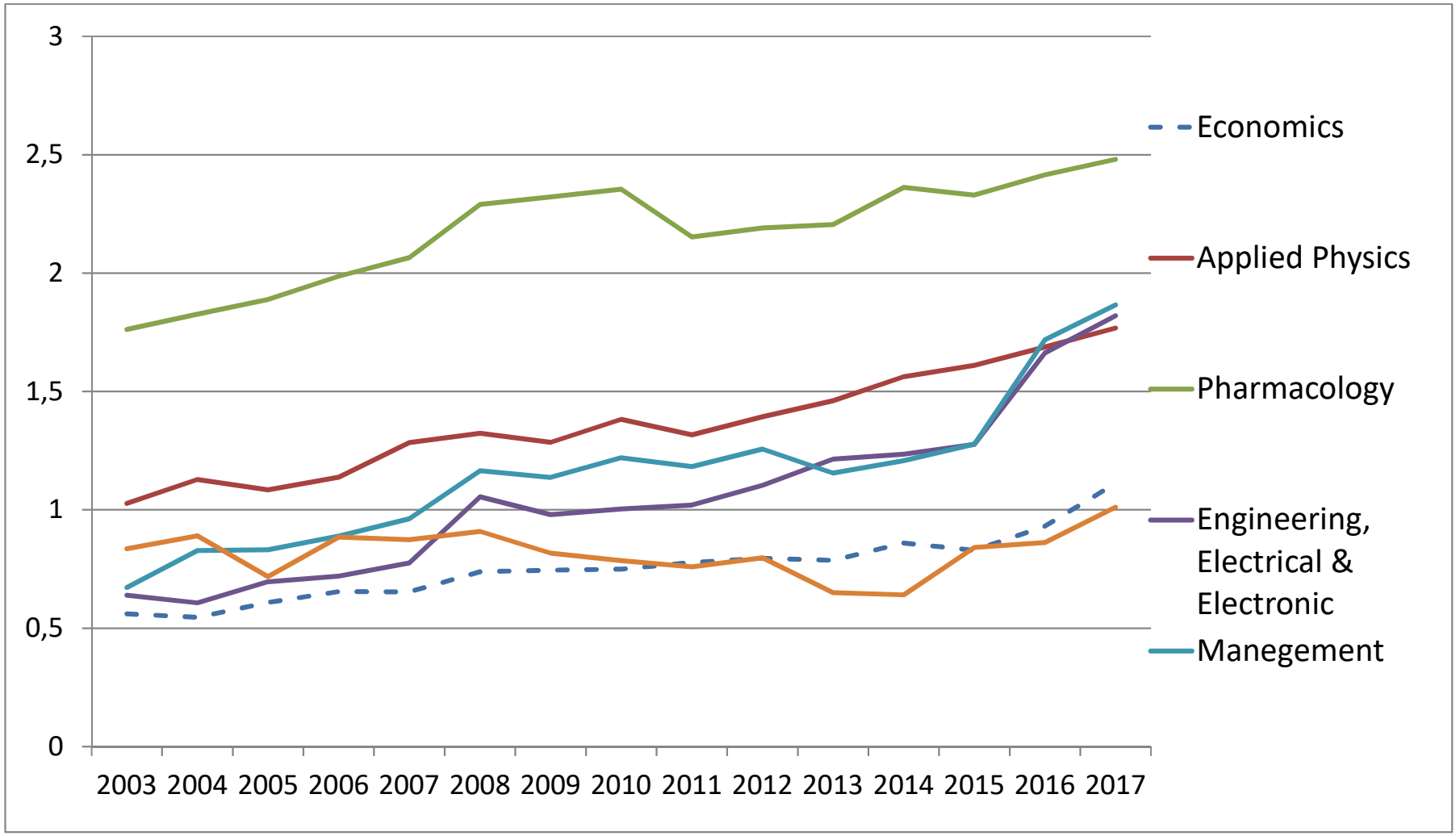
Differences among research fields/ categories - median IF



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	Research Fields	WOS Documents	Cites	Cites/Paper
1	MOLECULAR BIOLOGY & GENETICS	487001	12077584	24,8
2	IMMUNOLOGY	268584	5284089	19,67
3	NEUROSCIENCE & BEHAVIOR	535155	10078047	18,83
4	SPACE SCIENCE	155039	2900377	18,71
5	BIOLOGY & BIOCHEMISTRY	761434	13385252	17,58
6	MULTIDISCIPLINARY	22450	363783	16,2
7	MICROBIOLOGY	215563	3429612	15,91
8	CHEMISTRY	1783007	27005224	15,15
9	MATERIALS SCIENCE	891146	12832190	14,4
10	ENVIRONMENT/ECOLOGY	508009	6847513	13,48
11	CLINICAL MEDICINE	2851298	38255007	13,42
12	PHARMACOLOGY & TOXICOLOGY	418113	5561629	13,3
13	GEOSCIENCES	474007	6217617	13,12
14	PSYCHIATRY/PSYCHOLOGY	424204	5442943	12,83
15	PHYSICS	1146326	13122833	11,45
16	PLANT & ANIMAL SCIENCE	765612	7491653	9,79
17	AGRICULTURAL SCIENCES	437473	4065685	9,29
18	ECONOMICS & BUSINESS	286732	2553450	8,91
19	ENGINEERING	1335752	10925689	8,18
20	SOCIAL SCIENCES, GENERAL	960295	7011821	7,3
21	COMPUTER SCIENCE	375666	2683006	7,14
22	MATHEMATICS	443365	2038431	4,6

BASELINES-PERCENTILES

RESEARCH FIELDS	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	ALL YEARS
ALL FIELDS												
0.01%	2088	2129	1797	1520	1400	1066	863	613	408	198	58	1243
0.10%	705	650	608	521	447	364	302	220	147	76	23	404
1.00%	216	198	184	159	137	115	94	72	48	27	8	121
10.00%	56	53	49	43	38	32	27	21	14	8	3	30
20.00%	34	32	29	26	23	20	17	13	9	5	2	17
50.00%	12	11	11	10	9	8	7	5	4	2	1	5
ECONOMICS & BUSINESS												
0.01%	1091	938	1528	600	472	351	242	271	220	69	45	647
0.10%	571	437	366	293	229	175	149	96	62	34	11	265
1.00%	185	157	148	118	96	73	58	39	25	13	**5**	95
10.00%	48	44	39	34	28	23	18	13	8	5	2	22
20.00%	27	25	23	20	16	14	11	8	5	3	1	12
50.00%	8	8	7	6	5	5	4	3	2	1	1	3

2 in 2018 means that 90% of papers in economics published in 2018 gain less than 2 citations in WOS

5 in 2018 means that 99% of papers in economics published in 2018 gain less than 5 citations in WOS.

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Average number of citations received by a group of papers published in one research field in a given year

BASELINES-CITATION RATES

RESEARCH FIELDS	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	ALL
ALL FIELDS	25,18	23,57	21,84	19,27	16,92	14,46	12,01	9,22	6,13	3,16	0,71	12,84
ECONOMICS & BUSINESS	19,62	17,9	16,11	13,81	11,2	9,34	7,3	5,21	3,2	1,51	0,37	8,91

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Web of Science data

Use the checkboxes to remove individual items from this Citation Report

or restrict to items published between 2013 and 2019 Go

	2015 ◄	2016	2017	2018	2019 ►	Total	Average Citations per Year
	0	1	3	9	7	20	5.00
1. **People's Attitudes to Robots in Caring for the Elderly** By: Hudson, John; Orviska, Marta; Hunady, Jan INTERNATIONAL JOURNAL OF SOCIAL ROBOTICS Volume: 9 Issue: 2 Pages: 199-210 Published: APR 2017	0	0	2	5	2	9	3.00
2. **Determinants of Foreign Direct Investment in EU countries - Do Corporate Taxes Really Matter?** By: Hunady, Jan; Orviska, Marta Conference: 17th International Conference on Enterprise and the Competitive Environment (ECE) Location: Mendel Univ, Fac Business & Econ, Brno, CZECH REPUBLIC Date: MAR 06-07, 2014 17TH INTERNATIONAL CONFERENCE ENTERPRISE AND COMPETITIVE ENVIRONMENT 2014 Book Series: Procedia Economics and Finance Volume: 12 Pages: 243-250 Published: 2014	0	0	1	2	2	5	0.83
3. **The Effect of Higher Education on Entrepreneurial Activities and Starting Up Successful Businesses** By: Hunady, Jan; Orviska, Marta; Pisar, Peter INZINERINE EKONOMIKA-ENGINEERING ECONOMICS Volume: 29 Issue: 2 Pages: 226-235 Published: 2018	0	0	0	0	2	2	1.00
4. **Individual and institutional determinants of corruption in the EU countries: the problem of its tolerance** By: Hunady, Jan ECONOMIA POLITICA Volume: 34 Issue: 1 Pages: 139-157 Published: APR 2017	0	0	0	1	1	2	0.67
5. **Effect of Corruption on Tax Revenue in the OECD and Latin America Countries** By: Hunady, Jan; Orviska, Marta Conference: 20th International Conference on Theoretical and Practical Aspects of Public Finance Location: Praha, CZECH REPUBLIC Date: APR 17-18, 2015 Sponsor(s): Univ Econ, Fac Finance & Accounting, Dept Publ Finance PROCEEDINGS OF THE 20TH INTERNATIONAL CONFERENCE ON THEORETICAL AND PRACTICAL ASPECTS OF PUBLIC FINANCE 2015 Pages: 80-85 Published: 2015	0	0	0	1	0	1	0.20
6. **Selected Challenges of Tax Administration in the Context of Fiscal Consolidation in European Countries** By: Orviska, Marta; Hunady, Jan Conference: 8th International Conference on Currency, Banking and International Finance: The Role of Financial Sector in Supporting the Economic Recovery of CEE Countries Location: Univ Econ Bratislava,Dept Bank & Int Finance, Bratislava, SLOVAKIA Date: SEP 10-11, 2014 Sponsor(s): Univ Econ Bratislava, Fac Natl Econ; Univ Econ Bratislava, Dept Bank & Int Finance ROLE OF FINANCIAL SECTOR IN SUPPORTING THE ECONOMIC RECOVERY OF CEE COUNTRIES, 8TH INTERNATIONAL CONFERENCE ON CURRENCY, BANKING AND INTERNATIONAL FINANCE Pages: 287-301 Published: 2014	0	1	0	0	0	1	0.17

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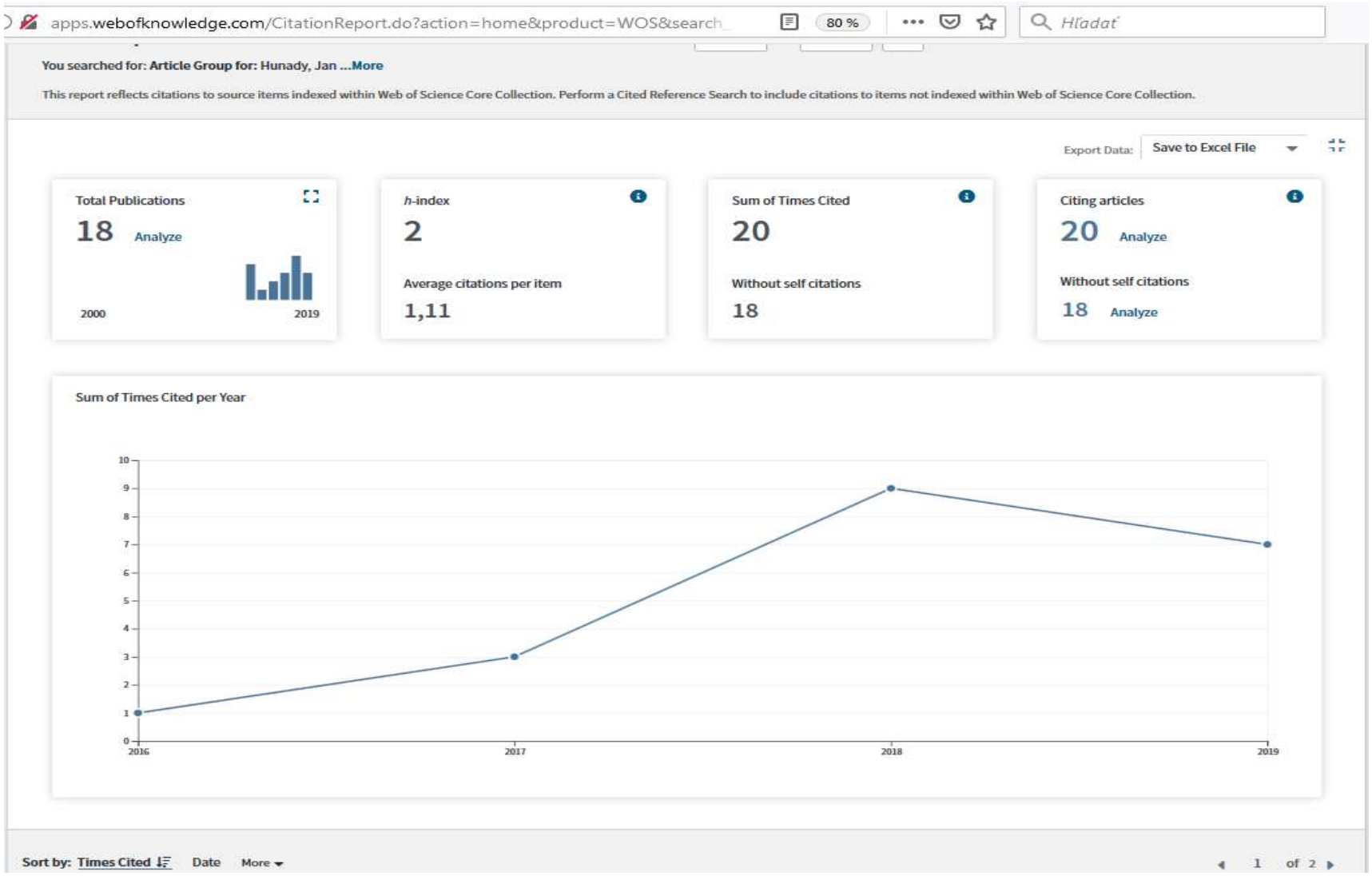
Web of Science data a metrics



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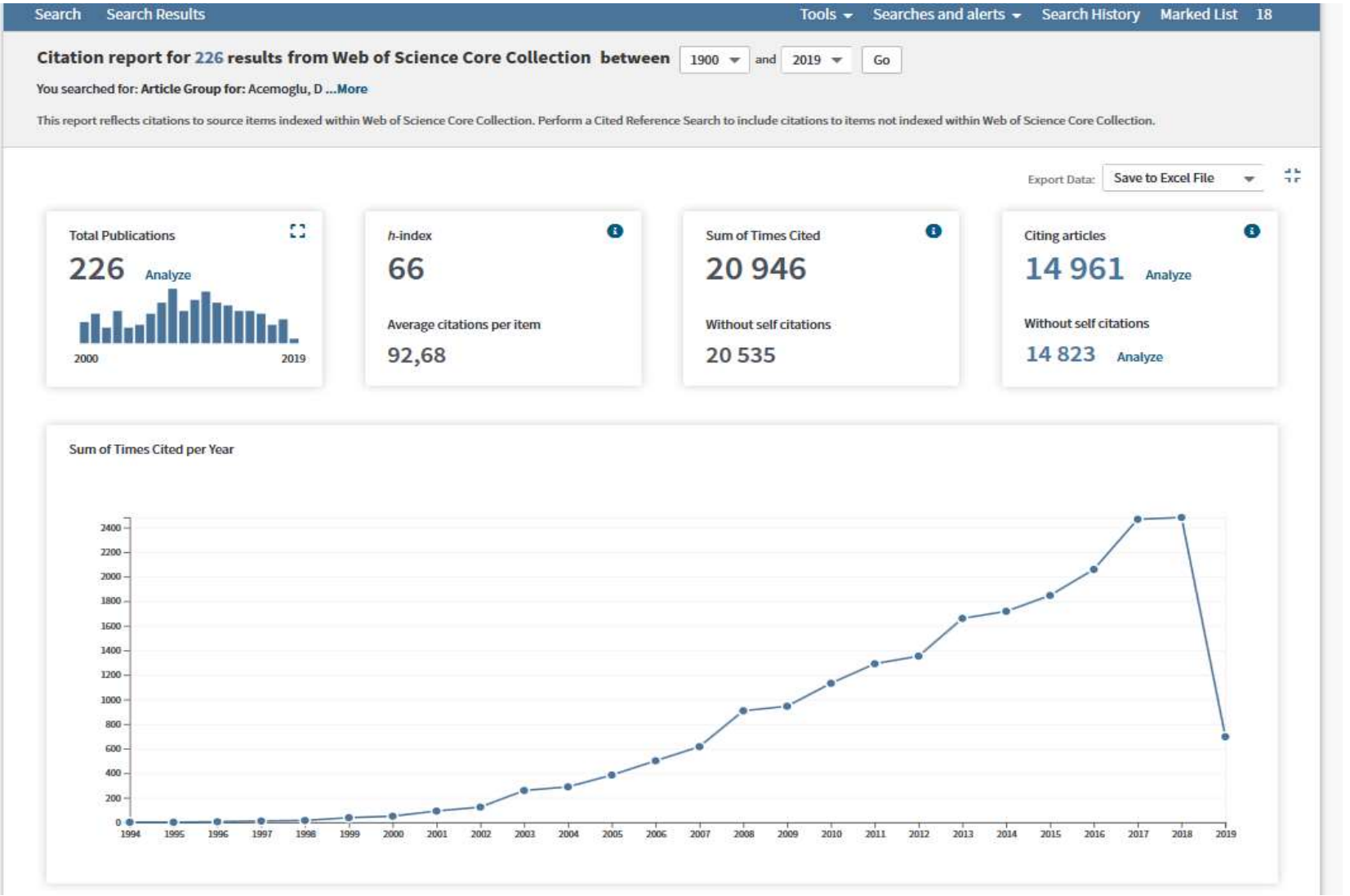
Web of Science data a metrics for D. Acemoglu



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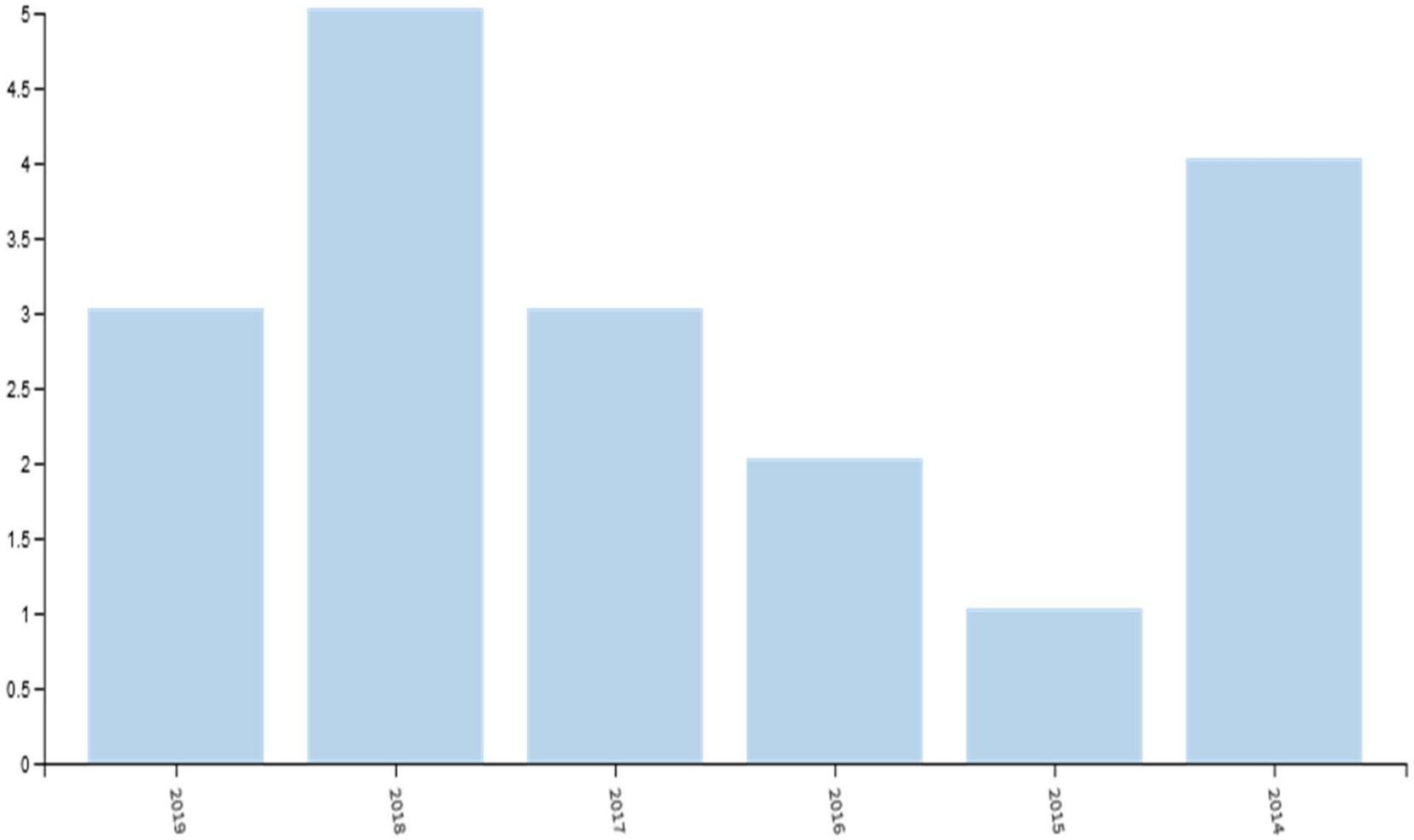
Web of Science data – publications of the researcher according publication year



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Web of Science data – publications of the researcher according to research field

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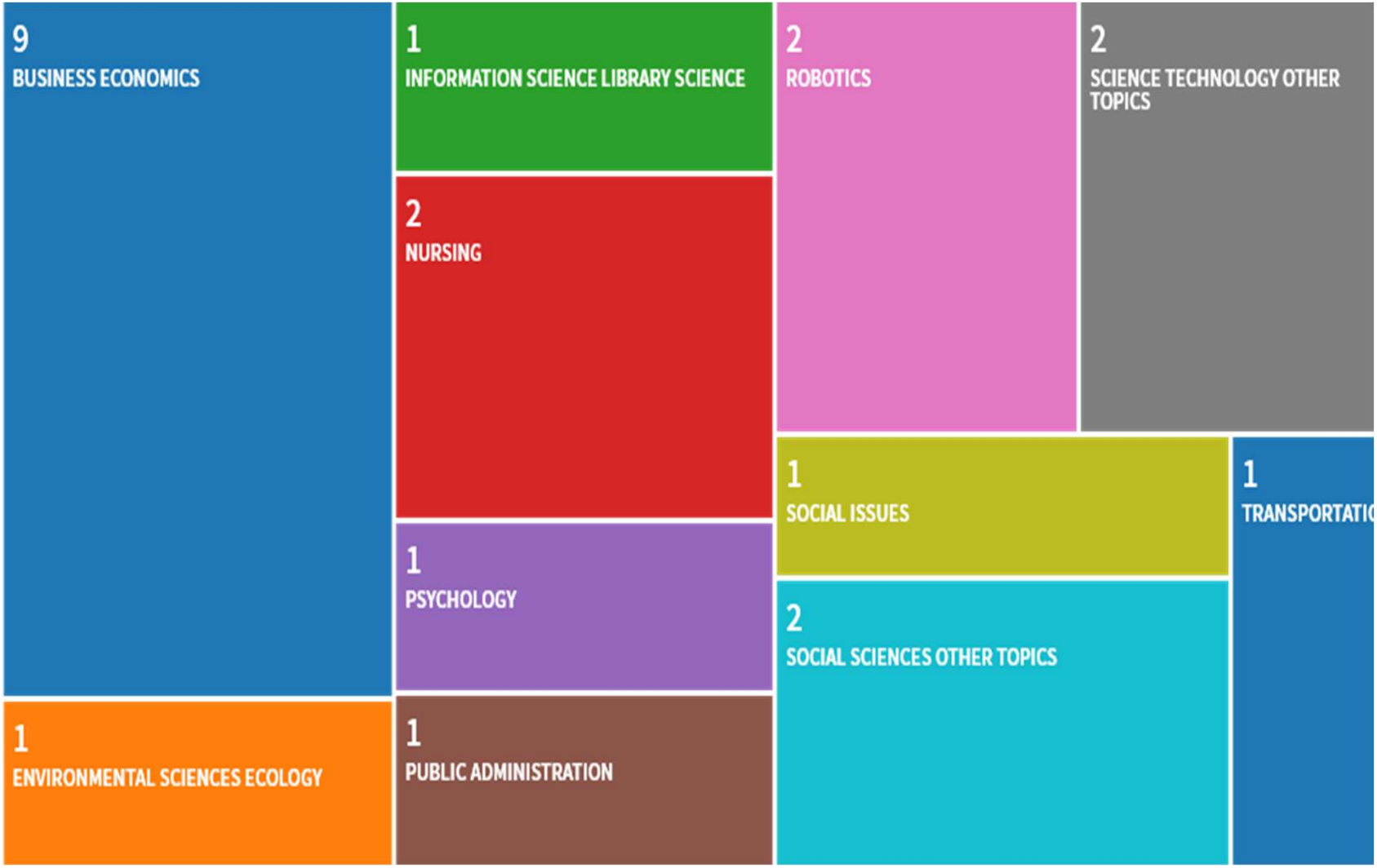
Web of Science data - citation on papers wrote by the researcher divided based on to research field of citing items



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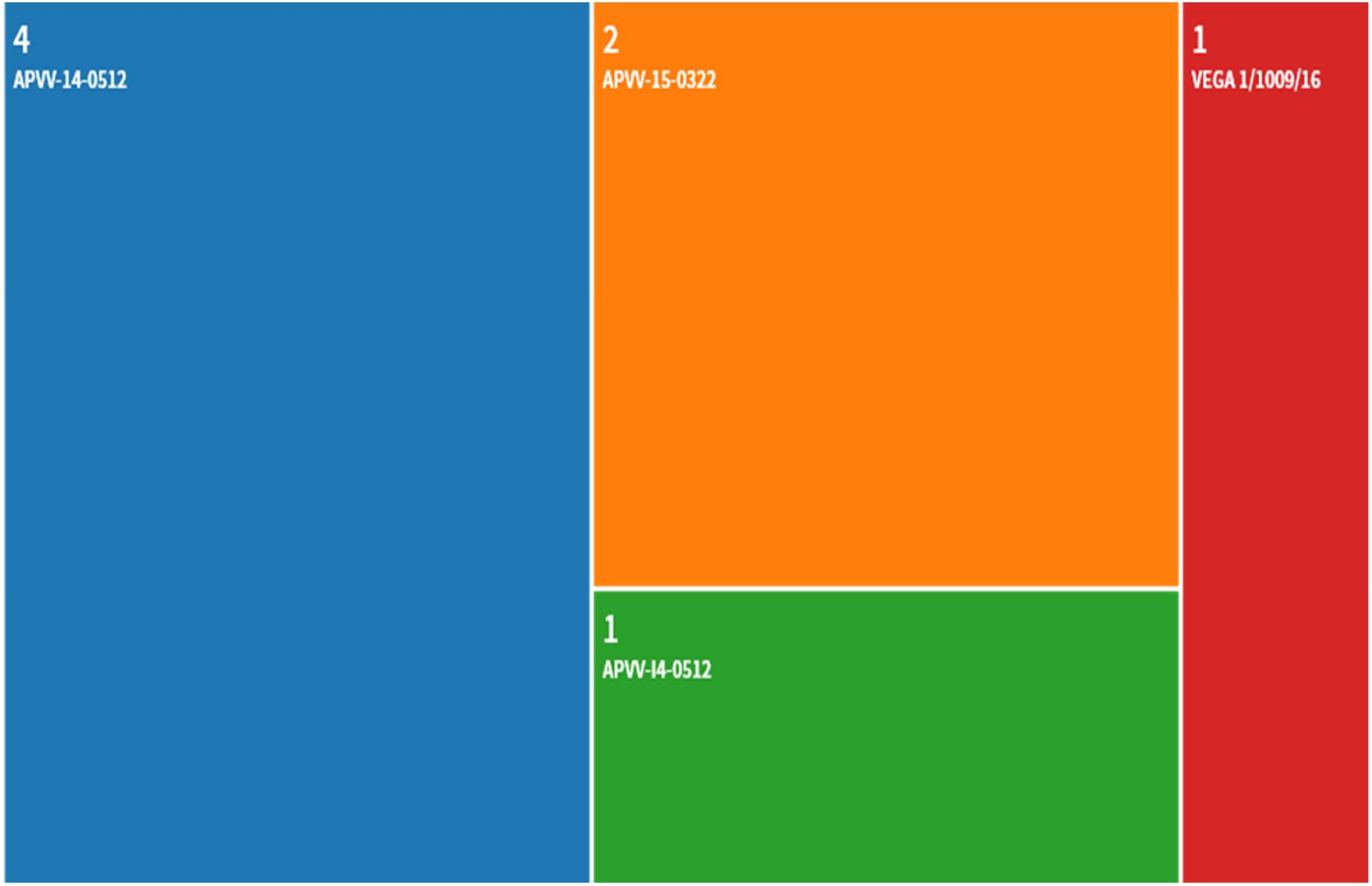
Research funding of papers in WOS by the researcher



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Author and co-authors of publications in WOS

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Type of the publication published by the Author in WOS

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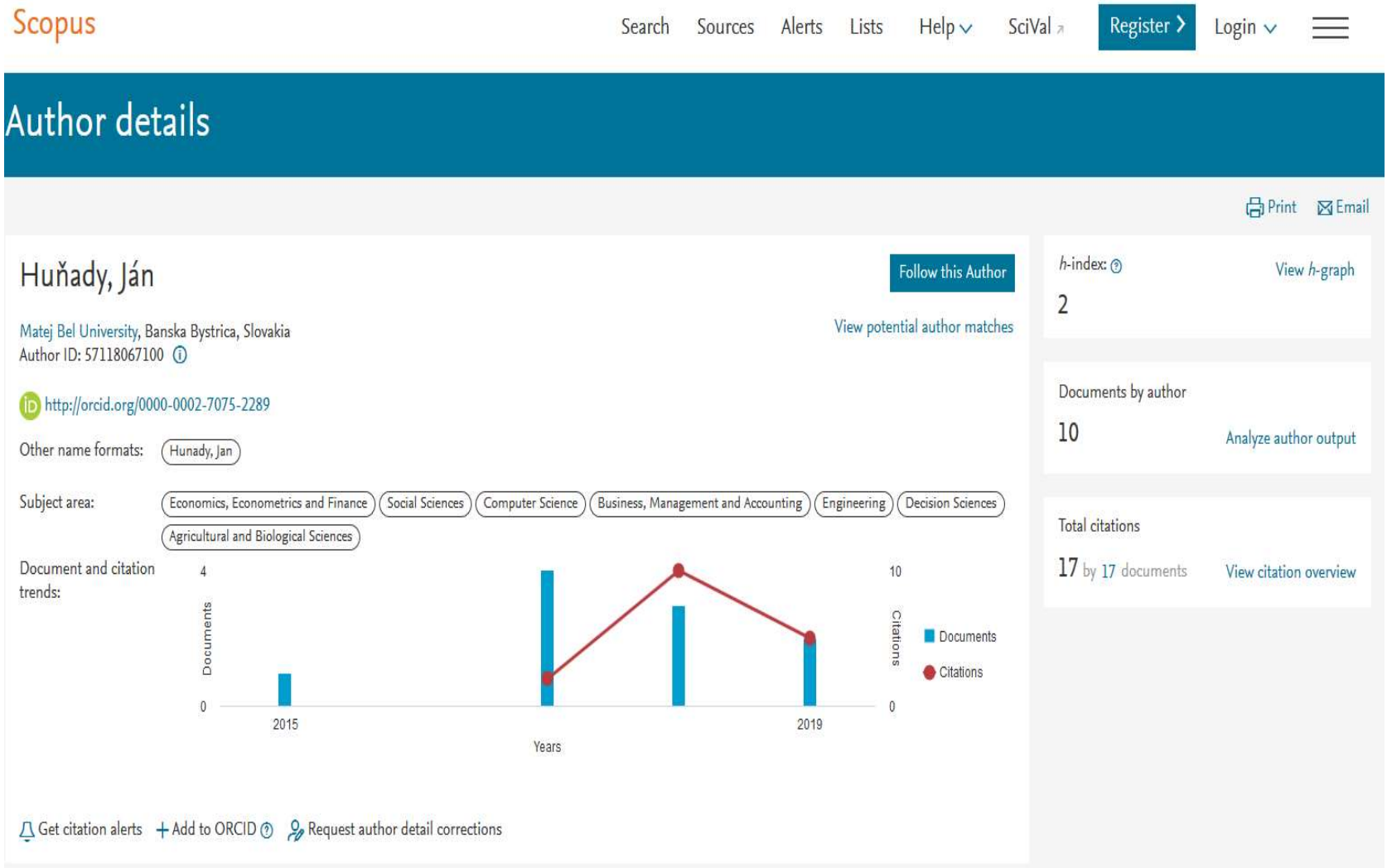
Scopus data and metrics



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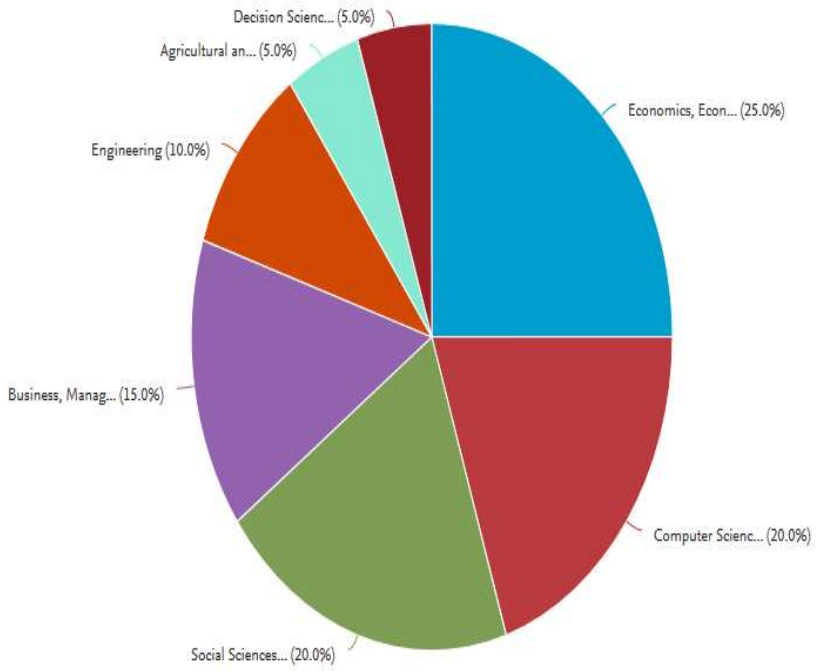
Scopus data and metrics

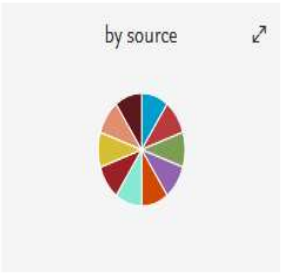
Huňady, Ján

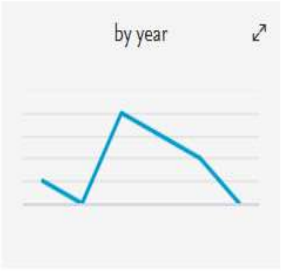
Matej Bel University, Banska Bystrica, Slovakia
Author ID:57118067100

Subject Area	Documents
Economics, Econometrics and Finance	5
Computer Science	4
Social Sciences	4
Business, Management and Accounting	3
Engineering	2
Agricultural and Biological Sciences	1
Decision Sciences	1

Documents by subject area







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Insitutions ranked by the number of highly cited papers in WOS in all fields

	Institutions	Countries/R	WOS Docu	Cites	Cites/Paper	Highly Cite
1	UNIVERSITY OF CALIFORNIA SYSTEM	USA	402205	10822616	26.91	13255
2	HARVARD UNIVERSITY	USA	216053	7161568	33.15	9819
3	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)	FRANCE	346651	6150817	17.74	5251
4	CHINESE ACADEMY OF SCIENCES	CHINA MAIN	376173	5829258	15.50	6685
5	UNIVERSITY OF LONDON	ENGLAND	202617	4586077	22.63	5958
6	UNIVERSITY OF TEXAS SYSTEM	USA	171955	4168686	24.24	5119
7	UNITED STATES DEPARTMENT OF ENERGY (DOE)	USA	141447	3718983	26.29	4923
8	NATIONAL INSTITUTES OF HEALTH (NIH) - USA,US DEPT HLTH HUN	N/A	94222	3363225	35.69	3856
9	VA BOSTON HEALTHCARE SYSTEM	USA	94522	3210130	33.96	4492
10	MAX PLANCK SOCIETY	GERMANY (F	110257	3141426	28.49	3634
11	PENNSYLVANIA COMMONWEALTH SYSTEM OF HIGHER EDUCATIO	USA	137171	3002385	21.89	3282
12	UNIVERSITY OF TORONTO	CANADA	118439	2789585	23.55	3450
13	STANFORD UNIVERSITY	USA	88402	2765153	31.28	4266
14	HELMHOLTZ ASSOCIATION	GERMANY (F	132831	2735173	20.59	3091
15	JOHNS HOPKINS UNIVERSITY	USA	94852	2642835	27.86	3205
16	UNIVERSITY OF OXFORD	ENGLAND	90444	2602598	28.78	3397
17	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)	USA	64796	2528172	39.02	3734
18	INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE	FRANCE	102381	2490610	24.33	2501
19	UNIVERSITY OF WASHINGTON	USA	85935	2418950	28.15	3281
20	UNIVERSITY OF WASHINGTON,UNIVERSITY OF WASHINGTON SEA	N/A	84574	2400186	28.38	3249
21	STATE UNIVERSITY SYSTEM OF FLORIDA	USA	135127	2357119	17.44	2593
22	UNIVERSITY OF MICHIGAN SYSTEM	USA	95883	2338573	24.39	2810
23	UNIVERSITY OF MICHIGAN SYSTEM,UNIVERSITY OF MICHIGAN	N/A	95775	2337942	24.41	2810
24	UNIVERSITY OF CALIFORNIA BERKELEY,UNIVERSITY OF CALIFORNI	N/A	71826	2335705	32.52	3174
25	UNIVERSITY OF LONDON,UNIVERSITY COLLEGE LONDON	N/A	97039	2334738	24.06	3042
26	UNIVERSITY OF CALIFORNIA LOS ANGELES,UNIVERSITY OF CALIFO	N/A	83697	2316264	27.67	2857
27	UNIVERSITY OF CAMBRIDGE	ENGLAND	81244	2239842	27.57	2949
28	UNIVERSITY OF PENNSYLVANIA	USA	80756	2212942	27.40	2839
29	UNIVERSITY OF NORTH CAROLINA	USA	108862	2209334	20.29	2630
30	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)	SPAIN	108561	2186770	20.14	2100
31	UNIVERSITE PARIS SACLAY (COMUE)	FRANCE	106166	2179795	20.53	2528
32	COLUMBIA UNIVERSITY	USA	74936	2046774	27.31	2855
33	UNIVERSITY OF CALIFORNIA SAN FRANCISCO,UNIVERSITY OF CAL	N/A	60573	2013084	33.23	2517
34	UNIVERSITY OF CALIFORNIA SAN DIEGO,UNIVERSITY OF CALIFORI	N/A	68656	1963905	28.61	2538
35	SORBONNE UNIVERSITE	FRANCE	89170	1919569	21.53	2156
36	IMPERIAL COLLEGE LONDON	ENGLAND	74785	1914337	25.60	2541
37	UNIVERSITE PARIS SACLAY,UNIVERSITE PARIS SACLAY (COMUE)	N/A	88858	1901791	21.40	2227
38	HOWARD HUGHES MEDICAL INSTITUTE	USA	26588	1898443	71.40	2373
39	YALE UNIVERSITY	USA	63679	1806608	28.37	2376
40	HARVARD UNIVERSITY,HARVARD UNIV MEDICAL AFFILIATES,MAS	N/A	50964	1802569	35.37	2478

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Insitutions ranked by the number of highly cited papers in WOS in Economics

Indicators Results List: Institutions Filter Results By: ResearchFields Filter Value(s): ECONOMICS & BUSI

	Institutions	Countries	WOS Docu	Cites	Cites/Paper	Highly C
1	NATIONAL BUREAU OF ECONOMIC RESEARCH	USA	5689	142552	25.06	319
2	UNIVERSITY OF CALIFORNIA SYSTEM	USA	6724	121446	18.06	222
3	HARVARD UNIVERSITY	USA	3662	89345	24.40	167
4	UNIVERSITY OF LONDON	ENGLAND	6595	86275	13.08	137
5	UNIVERSITY OF PENNSYLVANIA	USA	2331	50221	21.54	83
6	UNIVERSITY OF CHICAGO	USA	1980	50157	25.33	93
7	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT	USA	2027	48561	23.96	108
8	STANFORD UNIVERSITY	USA	2291	47689	20.82	93
9	UNIVERSITY OF TEXAS SYSTEM	USA	3375	46793	13.86	64
10	UNIVERSITY OF CALIFORNIA BERKELEY,UNIVERSITY	N/A	2169	46283	21.34	106
11	UNIVERSITY SYSTEM OF GEORGIA	USA	3333	45133	13.54	62
12	NEW YORK UNIVERSITY	USA	2034	42128	20.71	81
13	FEDERAL RESERVE SYSTEM - USA	USA	3325	41938	12.61	63
14	STATE UNIVERSITY SYSTEM OF FLORIDA	USA	3532	40728	11.53	51
15	PENNSYLVANIA COMMONWEALTH SYSTEM OF HIG	USA	2925	40357	13.80	51
16	COLUMBIA UNIVERSITY	USA	2190	40186	18.35	65
17	UNIVERSITY OF NORTH CAROLINA	USA	2939	39946	13.59	48
18	UNIVERSITY OF MICHIGAN SYSTEM	USA	2025	39808	19.66	46
19	UNIVERSITY OF MICHIGAN SYSTEM,UNIVERSITY OF	N/A	2010	39684	19.74	46
20	NORTHWESTERN UNIVERSITY	USA	1777	35787	20.14	60
21	UNIVERSITY OF LONDON,LONDON SCHOOL ECONO	N/A	2621	35044	13.37	56
22	ERASMUS UNIVERSITY ROTTERDAM	NETHERLA	2386	34551	14.48	47
23	DUKE UNIVERSITY	USA	1558	33388	21.43	44
24	UNIVERSITY SYSTEM OF MARYLAND	USA	1810	31166	17.22	50
25	INDIANA UNIVERSITY SYSTEM	USA	1722	30085	17.47	54
26	ARIZONA STATE UNIVERSITY	USA	1445	29839	20.65	50
27	YALE UNIVERSITY	USA	1492	28702	19.24	53
28	CORNELL UNIVERSITY	USA	2027	27876	13.75	28
29	UNIVERSITY OF OXFORD	ENGLAND	2171	27680	12.75	35
30	UNIVERSITY OF MARYLAND COLLEGE PARK,UNIVER	N/A	1380	27628	20.02	48
31	UNIVERSITY OF ILLINOIS SYSTEM	USA	1965	27261	13.87	30
32	MICHIGAN STATE UNIVERSITY	USA	1538	26435	17.19	38
33	UNIVERSITY OF MINNESOTA SYSTEM	USA	1509	26252	17.40	42
34	UNIVERSITY OF MINNESOTA SYSTEM,UNIVERSITY O	N/A	1504	26232	17.44	42
35	PRINCETON UNIVERSITY	USA	1025	25862	25.23	53
36	INDIANA UNIVERSITY SYSTEM,INDIANA UNIVERSIT	N/A	1458	25650	17.59	49
37	UNIVERSITY OF TORONTO	CANADA	1669	25354	15.19	34
38	TILBURG UNIVERSITY	NETHERLA	1763	25179	14.28	23
39	TEXAS A&M UNIVERSITY SYSTEM	USA	1582	24402	15.42	39
40	THE WORLD BANK	USA	1699	24293	14.30	20

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Country ranking based on Scimago (Scopus)

https://www.scimagojr.com/countryrank.php?year=2017&order=h&ord=desc&category=2002

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Country ranking - H-index (SciMago) all

	Country	H index
1	United States	2077
2	United Kingdom	1281
3	Germany	1131
4	Canada	1033
5	France	1023
6	Japan	920
7	Italy	898
8	Netherlands	893
9	Switzerland	866
10	Australia	848
11	Sweden	778
12	Spain	775
13	China	712
14	Belgium	702
15	Denmark	662
16	Israel	624
17	Austria	577
18	South Korea	576
19	Finland	571
20	Norway	526
21	India	521
22	Russian Federation	503
23	Singapore	492
24	Brazil	489
25	Hong Kong	479
26	Poland	479
27	New Zealand	459
28	Ireland	451
29	Taiwan	437
30	Greece	434
31	Portugal	416
32	Czech Republic	396
33	South Africa	391
34	Hungary	390
35	Mexico	378
36	Turkey	368
37	Argentina	364
38	Chile	318
39	Thailand	289
40	Saudi Arabia	271
41	Iceland	269
42	Iran	257
43	Slovenia	255
44	Malaysia	249
45	Slovakia	241
46	Croatia	236
47	Colombia	235
48	Estonia	234
49	Egypt	231

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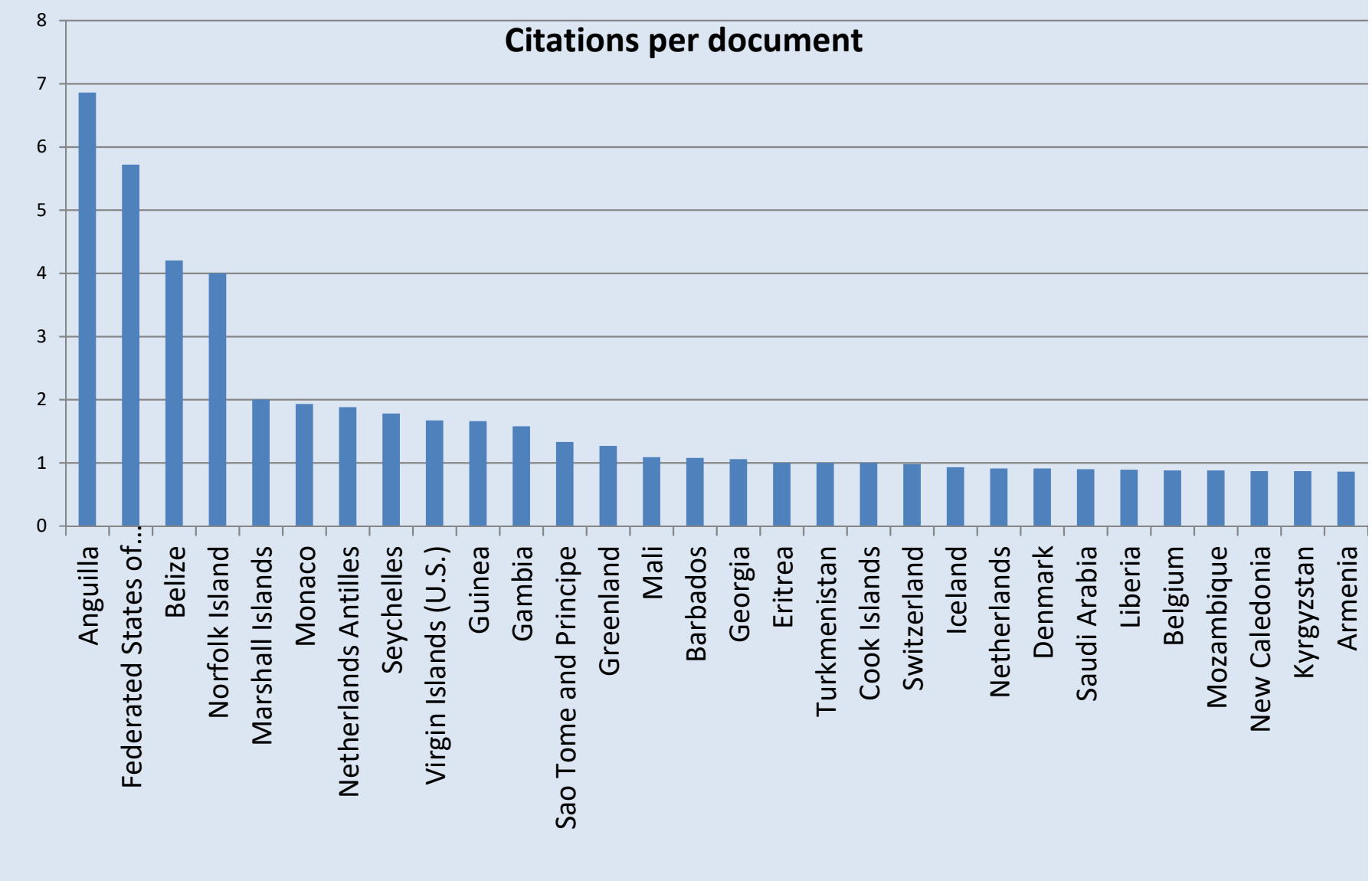
Country ranking -Citation per document (SciMago) all disciplines



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Slovakia ranked 171/230
Malaysia ranked 183/230

REPESEA

Robust Ranking of Journal Quality: An Application to Economics by Chang, Maasoumi and McAleer (2013)

- robustness of rankings of academic journal quality and research impact in general, and in Economics, in particular, based on the widely-used Thomson Reuters ISI Web of Science citations database (ISI).

- analyses 299 leading international journals in Economics using quantifiable Research Assessment Measures (RAMs), and highlights the similarities and differences in various RAMs, which are based on alternative transformations of citations and influence.

- the RAMs are grouped in 4 distinct classes that include impact factor, mean citations and non-citations, journal policy, number of high quality papers, and journal influence and article influence.

https://www.ucm.es/data/cont/docs/518-2013-11-05-McAleer_Jul13.pdf

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Table 1

15 Research Assessment Measures (RAM) for 299 Leading Economics Journals

Journal	2YIF	2YIF*	IFI	5YIF	Immediacy	5YD2	h-index	C3PO	PI-BETA	Eigenfactor	Article Influence	CAI	H-STAR	2Y-STAR	ESC
J ECON LIT	7.432	7.270	1.022	8.076	1.105	1.087	129	6.93	0.859	0.01483	8.276	1.167	100	96	2
Q J ECON	5.940	5.714	1.040	8.053	0.909	1.356	163	47.80	0.122	0.04757	11.741	10.309	100	94	3
TECHNOL ECON DEV ECO	5.605	4.259	1.316	-	1.130	-	19	5.64	0.251	0.00100	-	-	54	52	1
REV FINANC STUD	4.602	3.982	1.156	5.016	0.681	1.090	82	25.83	0.134	0.04750	6.663	5.770	84	74	5
J FINANC	4.151	3.868	1.073	6.529	0.797	1.573	164	22.36	0.442	0.06137	7.573	4.226	94	88	3
J POLIT ECON	4.065	4.016	1.012	6.896	0.120	1.696	197	41.85	0.333	0.03635	10.789	7.196	100	98	1
J BUS ECON MANAG	3.866	2.612	1.480	-	0.971	-	15	4.90	0.234	0.00046	-	-	34	36	-1
J FINANC ECON	3.810	3.413	1.116	5.631	0.570	1.478	151	59.65	0.086	0.05343	5.989	5.474	90	80	5
BROOKINGS PAP ECO AC	3.783	3.696	1.024	3.364	0.500	0.889	36	9.19	0.228	0.00416	3.880	2.995	98	96	1
J ECON PERSPECT	3.702	3.571	1.037	5.958	0.612	1.609	110	31.80	0.181	0.02436	5.900	4.832	100	94	3
J ECON GEOGR	3.662	3.441	1.064	4.487	0.412	1.225	32	11.52	0.319	0.00596	1.988	1.354	88	88	0
PHARMACOECONOMICS	3.440	3.060	1.124	3.122	1.188	0.908	56	12.28	0.142	0.00755	1.028	0.882	84	78	3
ECONOMETRICA	3.185	2.954	1.078	5.330	0.846	1.673	210	38.31	0.400	0.04605	8.854	5.312	98	86	6
AM ECON REV	3.150	3.026	1.041	4.278	0.391	1.358	215	29.92	0.206	0.10135	5.625	4.466	98	94	2
REV ECON STUD	3.113	3.031	1.027	4.300	0.660	1.381	119	34.31	0.073	0.03278	7.222	6.695	98	96	1
ECON GEOGR	3.028	2.806	1.079	3.195	0.800	1.055	51	6.75	0.558	0.00172	1.076	0.476	96	86	5
J ENVIRON ECON MANAG	2.989	2.809	1.064	3.029	0.300	1.013	75	20.04	0.078	0.00752	1.608	1.483	92	88	2
J URBAN ECON	2.892	2.086	1.386	2.607	0.673	0.901	63	15.16	0.076	0.00988	1.749	1.616	80	46	17
REV ECON STAT	2.883	2.833	1.018	4.163	0.385	1.444	105	21.29	0.095	0.02885	4.921	4.454	98	98	0
J ACCOUNT ECON	2.817	1.831	1.539	5.268	0.886	1.870	76	31.56	0.094	0.01281	4.011	3.634	72	30	21

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Table 4

11 RAM and Harmonic Mean of the Ranks for 299 Leading Economics Journals

Journal	Harmonic Mean (HM)	2YIF	2YIF*	IFI	Immediacy	h-index	C3PO	PI-BETA	Eigenfactor	H-STAR	2Y-STAR	ESC	Difference (2YIF-HM)
AM ECON REV	1	14	13	60	50	1	10	34	1	17	47	121	13
J ECON LIT	2	1	1	40	10	7	68	275	24	1	40	121	-1
Q J ECON	3	2	2	59	14	5	2	15	4	1	47	148	-1
J FINANC ECON	4	8	10	127	35	6	1	8	3	76	122	179	4
J FINANC	5	5	6	86	22	4	16	134	2	51	80	148	0
ECONOMETRICA	6	13	14	88	16	2	4	120	6	17	87	192	7
J POLIT ECON	7	6	4	32	146	3	3	98	8	1	32	105	-1
REV ECON STUD	8	15	12	44	28	8	5	3	9	17	40	105	7
REV FINANC STUD	9	4	5	155	25	17	12	18	5	128	151	179	-5
J ECONOMETRICS	10	42	41	102	67	9	14	18	7	76	99	148	32
OXFORD REV ECON POL	11	50	52	111	4	93	49	1	82	112	108	121	39
J ECON PERSPECT	12	10	8	51	31	10	7	27	14	1	47	148	-2
REV ECON STAT	13	19	15	36	51	12	17	11	10	17	32	70	6
RAND J ECON	14	77	69	70	71	15	9	2	23	35	61	121	63
ASIAN ECON POLICY R	15	175	189	231	1	203	164	6	229	286	232	1	160
J ECON THEORY	16	95	94	200	33	11	19	13	12	112	193	239	79
J MONETARY ECON	17	54	55	125	135	13	13	26	11	51	122	205	37
TECHNOL ECON DEV ECO	18	3	3	222	8	140	84	61	188	244	223	105	-15
J PUBLIC ECON	19	49	44	83	94	18	25	16	13	65	80	121	30
J LABOR ECON	20	30	23	48	12	27	15	3	32	35	47	105	10

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Top topics in Economics based on the number of Highly cited papers in Web of Science

Indicators Results List: ResearchFronts Filter Results By: ResearchFields Filter Value(s): ECONOMICS & BUSIN			
	Research Fronts	Highly Cit	Mean Yea
1	POPULIST RADICAL RIGHT PARTIES;POPULIST PARTY SUPPORT...	45	2015,5
2	BIG DATA CONSUMER ANALYTICS...	42	2015,8
2	HIGH-DIMENSIONAL SPARSE MODELS, HIGH-DIMENSIONAL MODELS...	42	2014,2
4	STRUCTURAL DECOMPOSITION ANALYSIS APPROACH...	39	2015,8
5	ONLINE BRAND COMMUNITY ENGAGEMENT...	29	2015,2
6	SHARING ECONOMY...	27	2016,1
7	EQUITY CROWDFUNDING...	25	2015,8
7	COMPETITIVE DUAL-CHANNEL GREEN SUPPLY CHAIN...	25	2015,2
7	ENTREPRENEURIAL INNOVATION...	25	2015,2
10	ONLINE CONSUMER REVIEWS...	23	2015,1
11	CHINAS REGIONAL INDUSTRIAL ENERGY EFFICIENCY...	22	2014,2
12	SOCIAL PSYCHOLOGICAL INTERVENTION...	21	2015,1
12	2008 GLOBAL ECONOMIC CRISIS...	21	2014,1
12	GLOBAL TRADE ANALYSIS PROJECT DATABASE...	21	2015,6
15	SHORT DARK TRIAD (SD3);DARK TRIAD...	19	2015,3
15	BLACKS DIMINISHED HEALTH RETURN;GENDER GROUP DIFFERENCES...	19	2016,9
17	SOCIAL ENTERPRISES ADDRESS MISSION DRIFT...	18	2014,9
17	CORPORATE SUSTAINABILITY...	18	2015,1
19	ENGLISH EQ-5D-5L VALUE SETS;MODELLING EQ-5D-5L...	17	2016,4
20	BITCOIN RETURNS;BITCOIN MARKET...	16	2016,9
20	FINANCIAL CONSTRAINTS MEASURE FINANCIAL CONSTRAINTS...	16	2014,9
20	CONSUMER FOOD WASTE BEHAVIOUR...	16	2015,4
20	IT-BASED KNOWLEDGE MANAGEMENT SYSTEMS...	16	2016,5
24	STOCK-FLOW-FUND ECOLOGICAL MACROECONOMIC MODEL;MACROECONOMIC MO	15	2017,5
24	COMPARATIVE ECONOMIC DEVELOPMENT;ECONOMIC DEVELOPMENT...	15	2014,7
24	SMART SUSTAINABLE CITIES...	15	2015,2
27	INFINITY METRIC MEASURE SPACES...	14	2014,4
27	PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM)...	14	2015,9
27	SUSTAINABLE SUPPLY CHAIN MANAGEMENT...	14	2015,3
27	TRANSDISCIPLINARY RESEARCH FRAMEWORK;ADAPTIVE GOVERNANCE...	14	2014,7
31	REDUCING GREENHOUSE GAS EMISSIONS...	13	2015
31	DYNAMIC MANAGERIAL CAPABILITIES...	13	2014,8
33	MOBILE SHOPPING AFFECTS CUSTOMER PURCHASE BEHAVIOR...	12	2015,5
33	TESTING ENVIRONMENTAL KUZNETS CURVE HYPOTHESIS...	12	2013,7
33	MEASURING ECONOMIC POLICY;GOVERNMENT ECONOMIC POLICY...	12	2015,3
33	BEHAVIORAL ECONOMICS;MONETARY INTELLIGENCE...	12	2015,6
37	CONSUMERS GREEN PURCHASE BEHAVIOR...	11	2016,1
37	FUZZY BEST-WORST MULTI-CRITERIA DECISION-MAKING METHOD...	11	2016,5
39	LABOR MARKET INEQUALITY...	10	2015,9
39	SOCIAL HEURISTICS SHAPE INTUITIVE COOPERATION...	10	2015,9
39	ADAPTIVE ROBUST OPTIMIZATION...	10	2013,8
39	FIVE-FACTOR ASSET PRICING MODEL...	10	2015,5
39	MARIJUANA USE DISORDERS;ADOLESCENT MARIJUANA USE...	10	2015,1

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Altmetrcis Usage

A record of attention: This class of metrics can indicate how many people have been exposed to and engaged with a scholarly output. Examples of this include mentions in the news, blogs, and on Twitter; article pageviews and downloads; GitHub repository watchers.

A measure of dissemination: These metrics (and the underlying mentions) can help you understand where and why a piece of research is being discussed and shared, both among other scholars and in the public sphere. Examples of this would include coverage in the news; social sharing and blog features.

An indicator of influence and impact: Some of the data gathered via altmetrics can signal that research is changing a field of study, the public's health, or having any other number of tangible effects upon larger society. Examples of this include references in public policy documents; or commentary from experts and practitioners.

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Examples of Altmetrics

Discussion--Twitter, Facebook, blogs

News--News outlets, newspapers, wire services

Shares--Twitter, Facebook Views and downloads publisher website, repositories

Ratings--Amazon.com, Speaker Deck

Likes/dislikes--Youtube, Slideshare

Holdings--Worldcat (number of libraries worldwide own a particular book)

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Advantages of Altmetrics:

1. its capacity to accumulate faster compared to traditional citation counts.

2. it can be expanded beyond books and articles to include software, videos, presentations, posters and more.

3. it provides a broader measurement for impact of research which is something funders and university administrators are starting to note.

4. it can be used to augment traditional metrics

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Disadvantages and limitation of Altmetrics

1. Altmetrics can be easily distorted or misinterpreted.

2. Almetrics are attention indicators that may not be measuring scholarly quality or impact.

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Altmetrics

Altmetrics Directory - Directory of tools to measure alternative forms of research impact metrics.

ImpactStory - An open-source, web-based tool that helps researchers explore and share the diverse impacts of all their research products—from traditional ones like journal articles, to emerging products like blog posts, datasets, and software.

Plum Analytics - This service aims to provide a more comprehensive measure of scholarly impact by gathering data about usage of data sets, open access publications, presentations, blogs and other types of scholarly communication.

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Assignments:

Work in a group (max. 5 members) and solve these tasks:

1. Find a bibliometric data about at least five global journals where you already published or want to publish your work.

2. Rank these journals according to different measures found in the first step and present this ranking.

3. Select at least 2 scientific articles published by you or any other member and compare the citation of these articles with some available almetrics (tweets, mentions in social networks...)

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Examples of bibliometric data that can be used to asses the journal.

1. Number of citations in last available year;
2. Average citation per document in 2 years;
3. Impact factor (JCR);
4. 5-years impact factor ;
5. SJR indicator;
7. CiteScore;
8. Eigenfactor Journal Ranking;
9. H-index;
10. H5 index median;
11. Article Influence Score;
12. Source Normalized Impact per Paper (SNIP);
13. Percentage of cited articles;
14. % International Collaboration;
15. Immediacy index.
16. Citing half-live and cited half-life.

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Planning and Managing Scientific Research Project

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

29. 07. -02. 08. 2019, Universiti Teknologi MARA, Campus Bandaraya, Melaka, Malaysia

Arkadiusz Kowalski

SGH Warsaw School of Economics, Poland

Co-funded by the Erasmus+ Programme of the European Union

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein

REPESEA

Planning and Managing Scientific Research Project

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Universiti Teknologi MARA (UiTM), Kampus Bandaraya Melaka, Malaysia

REPESEA SUMMER SCHOOL 2019

29th July – 2nd August 2019

Co-funded by the Erasmus+ Programme of the European Union

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REPESEA

The purpose of the training: to provide theoretical and practical information onselected aspects conected with preparation, application, planning, and obtaining resources to carry out the research, budgeting, monitoring, and management of research projects.

Assignment: Develop a schedule plan for your research project

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Elements to be tackled in the assignments

What **type of research** you plan to conduct?

Selecting a **topic** and a **title** of the research project.

Formulating **research objectives** and **research questions.**

Developing a research project **timetable (Gantt chart).**

Who will be in research team (identifying and selecting **partners**)

How to finance your research (finding the source of **financing** research project).

Prepare preliminary **budget** for the research project.

What are key **risks** for your research project?

How to deliver and communicate research outcomes (**dissemination** strategy for research project).

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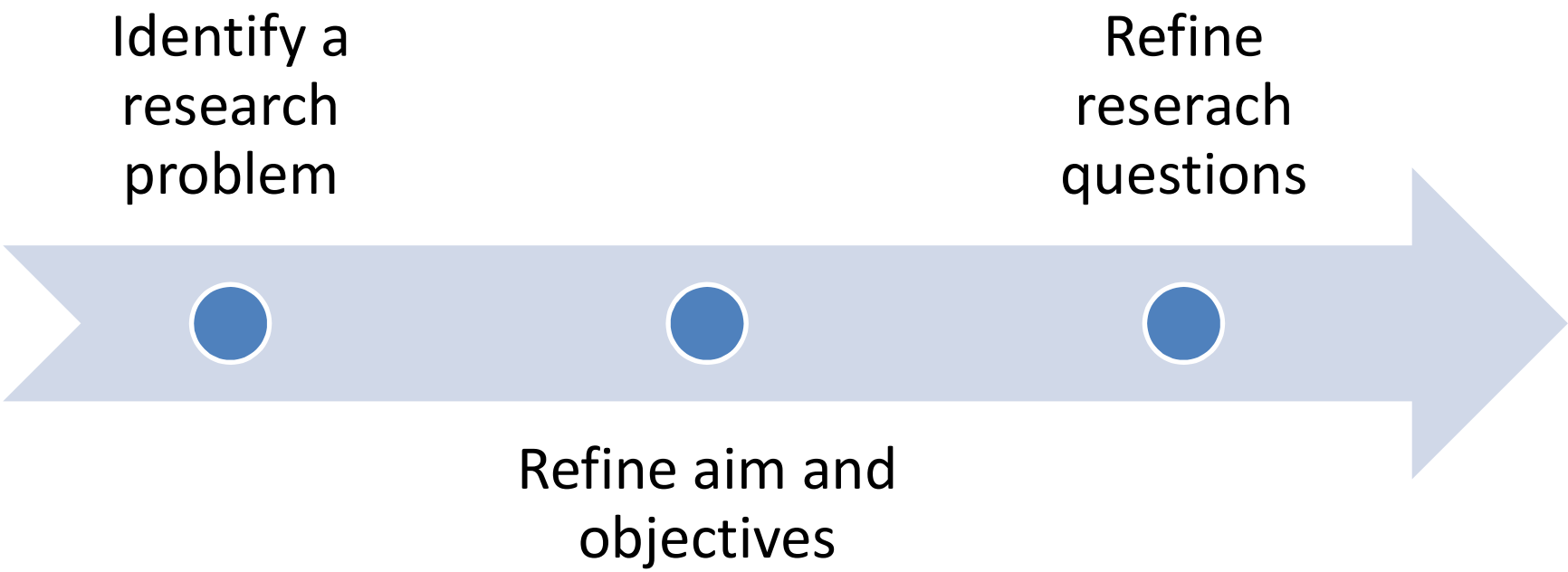
Research project stages (1/4)



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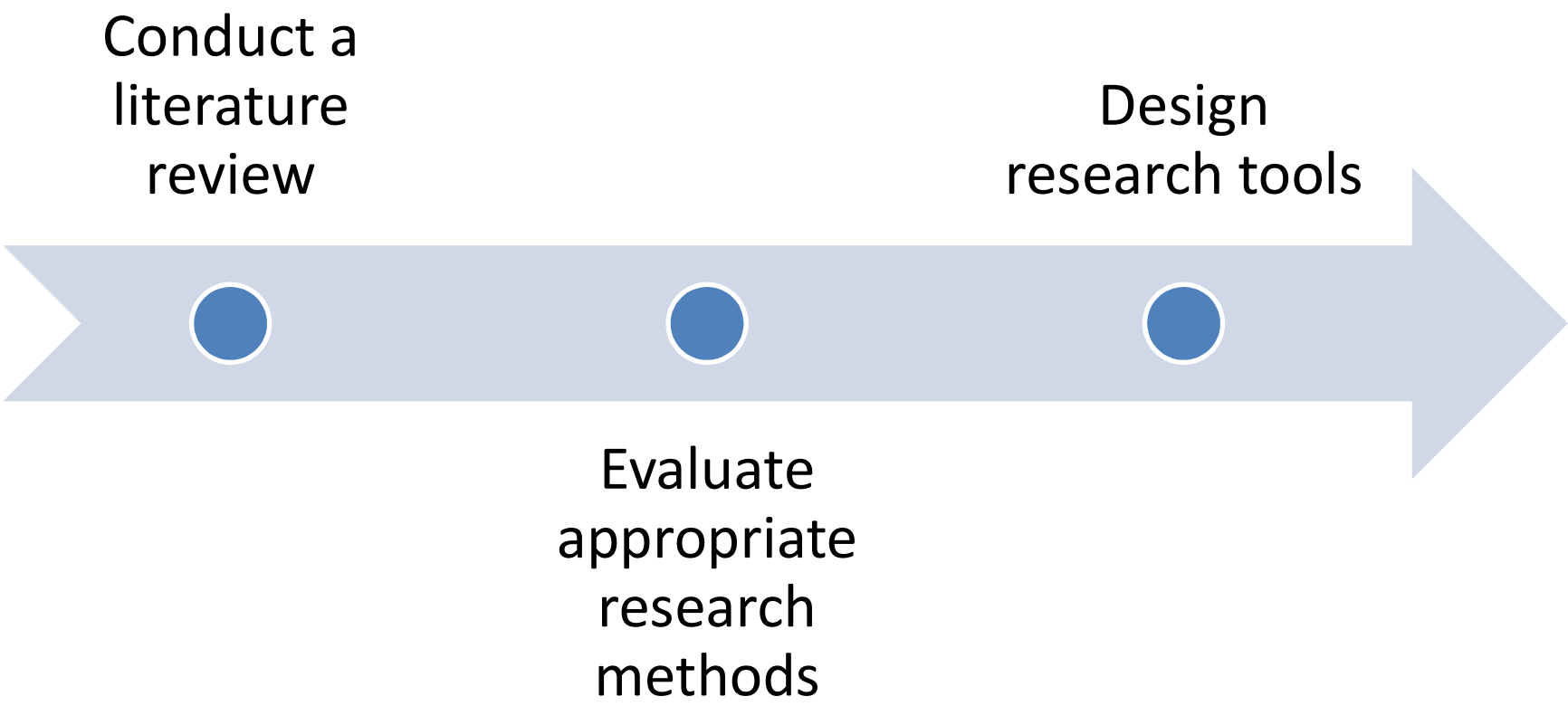
Research project stages (2/4)



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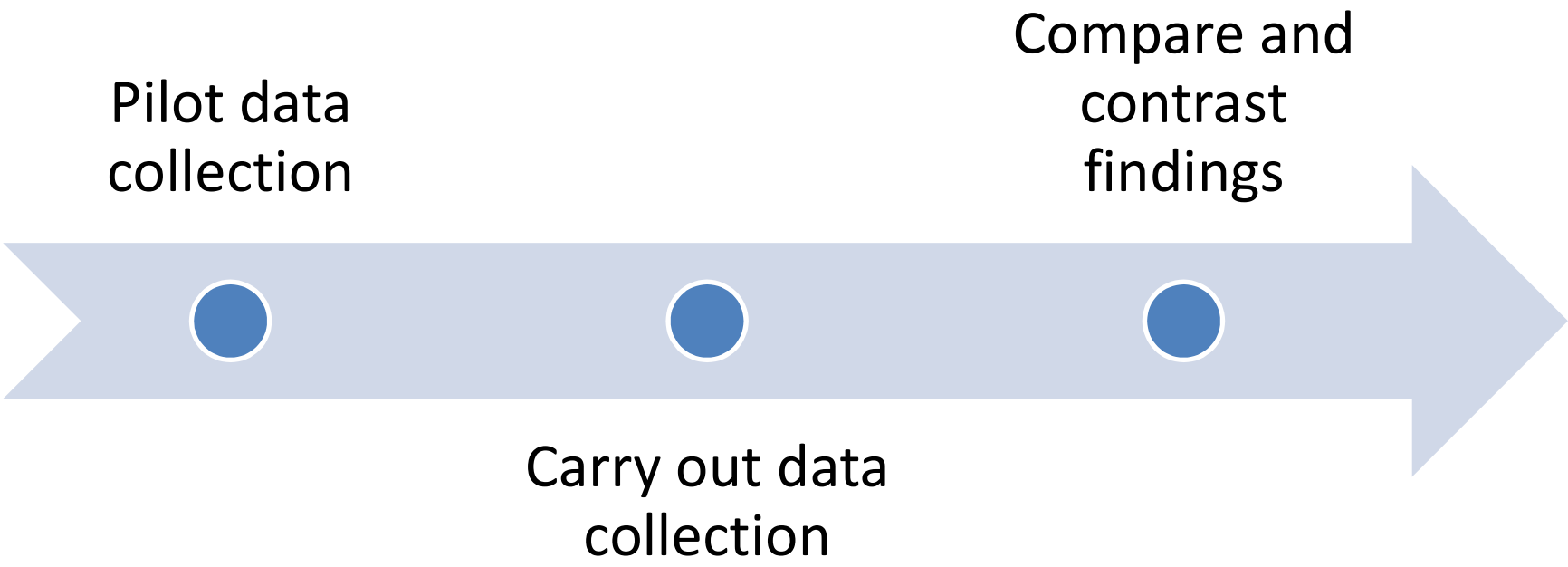
Research project stages (3/4)



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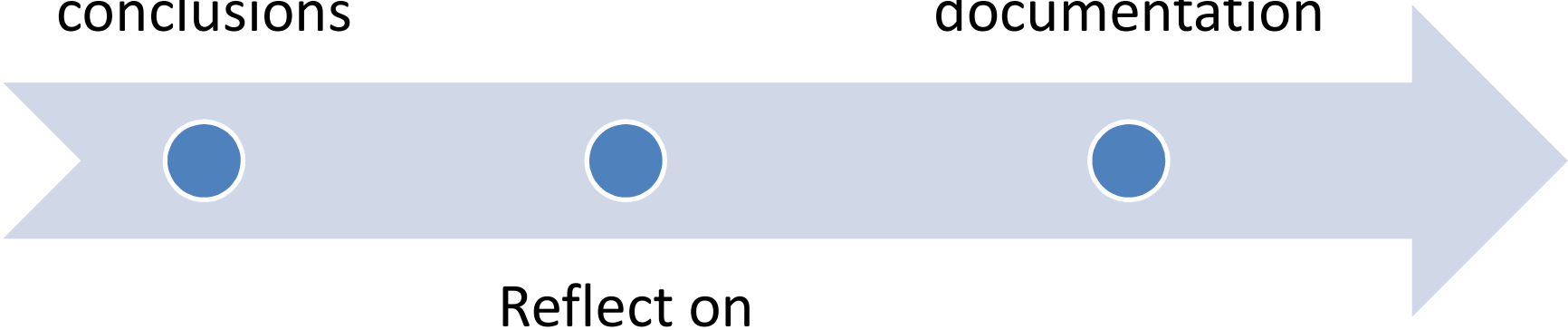
Research project stages (4/4)



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PLANNING AND WRITING A SUCCESSFUL RESEARCH GRANT PROPOSAL

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REPESEA

A general overview of research projects

basic research - conducted to enhance knowledge

applied research - focuses on analyzing and solving real-life problems using scientific methods;

problem oriented research - conducted to understand the exact nature of the problem to find out relevant solutions;

problem solving research - uses applied research to find solutions to the existing problems.

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The purposes of research proposal

provide **an overview** of the **relevance and objective** of a research project,

give an overview of the **content**, the **procedure** and the **timing** of a research project,

show whether a research project is **researchable** in scope, budget and timing.

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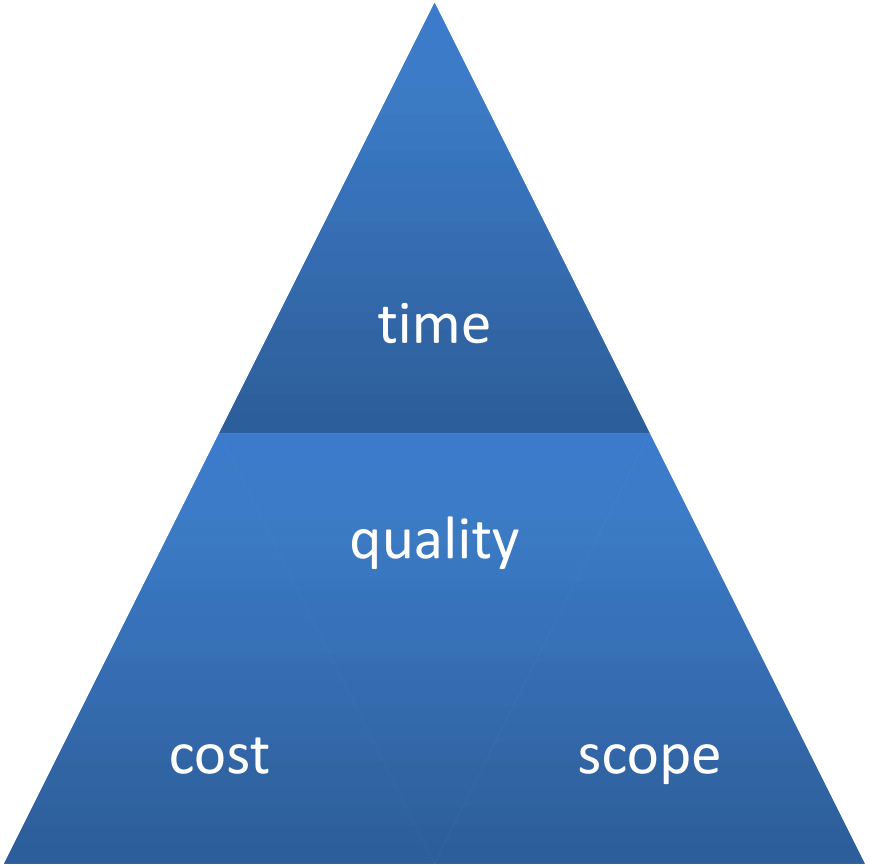
The classic project trinagle



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A well-written research proposal

Communicates the potential significance of a topic of research

Informs about the impact of the research to be carried out

Assures about the **feasibility** of the project

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Selecting a topic and a title of the research project

The research topic presents the area of investigation and is the wider notion than the project title.

WHY the topic seems to be **interesting**?

WHO are the information providers on this topic, who might publish information about it, who is affected by the topic?

WHAT are the major questions for this topic?
What are the issues and viewpoints to consider?

WHERE is the topic important:
at the local, national or international level?
Are there specific places affected by the topic?

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Selecting a topic and a title of the research project

A good title contains the fewest possible words that adequately describe the contents and purpose of research to be undertaken

Research project **title** should:

relate to the topic, niche area and scientific discipline,

be **short** but provide as **much information** about the project as possible,

accurately describe the nature of the main element of the study,

be descriptive and **to the point**,

attract the attention and interest of the reader

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CASE STUDY:

Dynamics and factors of innovation gap between Poland and China – international and regional dimensions

Financed by the National Science Centre (NCN), OPUS 11, the project started on March 2017 and will finish on Feb 2020.

Project manager: prof. Arkadiusz Kowalski

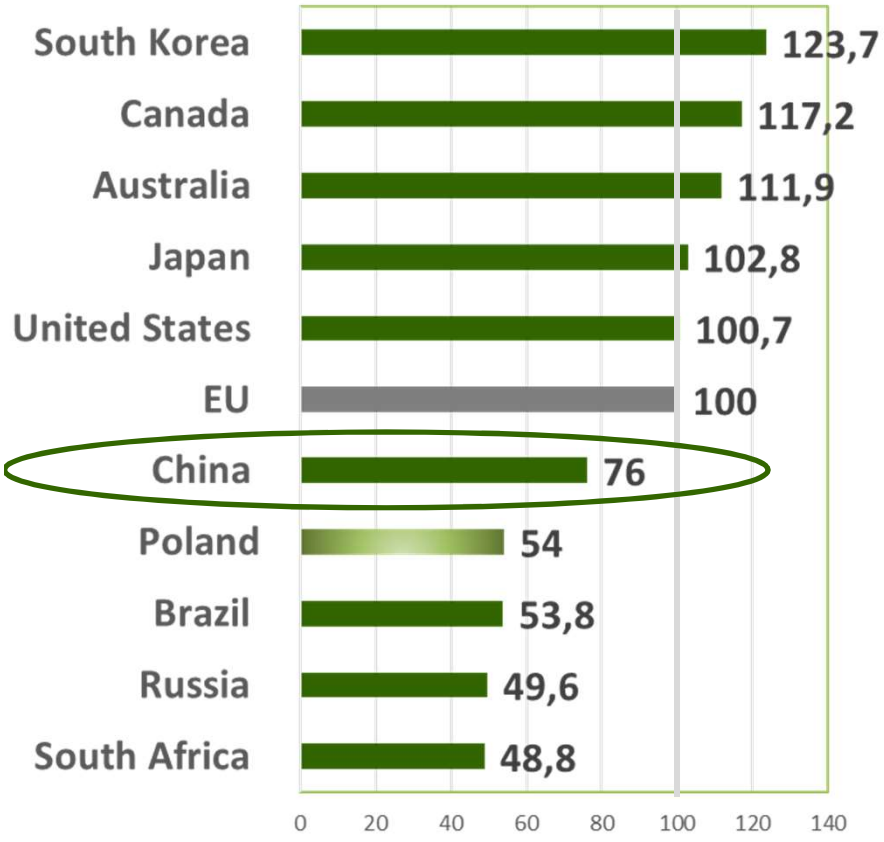
Co-funded by the Erasmus+ Programme of the European Union

REPESEA

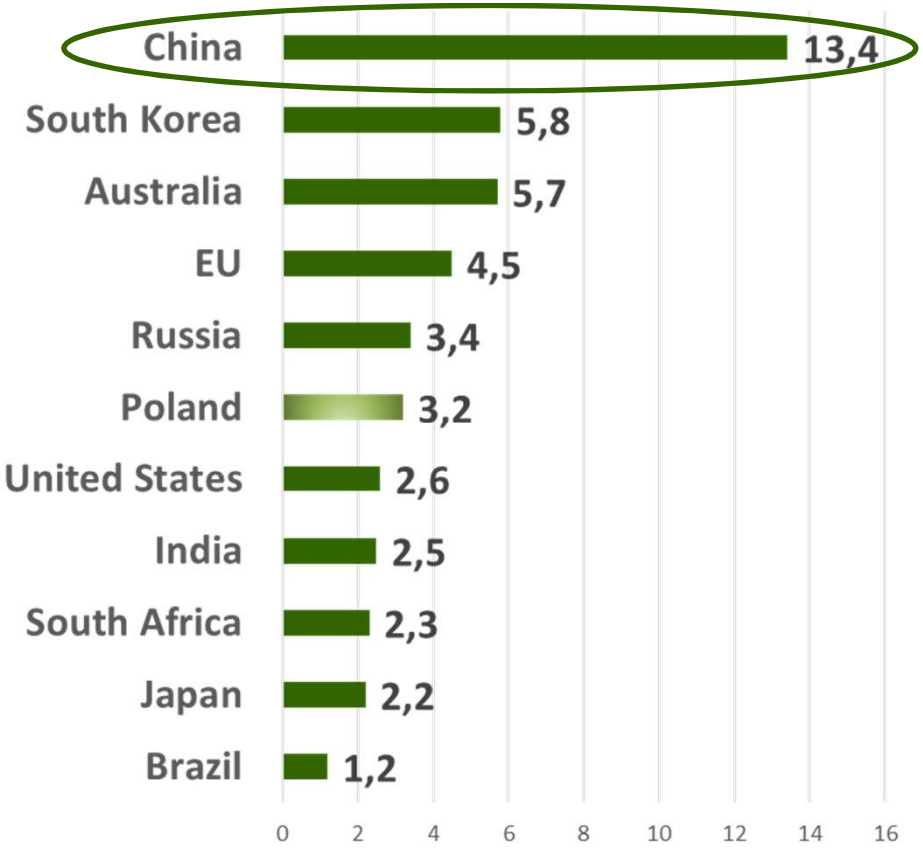
CASE STUDY

Rationale for the research project:
Global innovation performance of selected economies in 2010-2017

Countries' innovation performance in 2017 relative to that of the EU in 2017



Change in performance in 2010-2017



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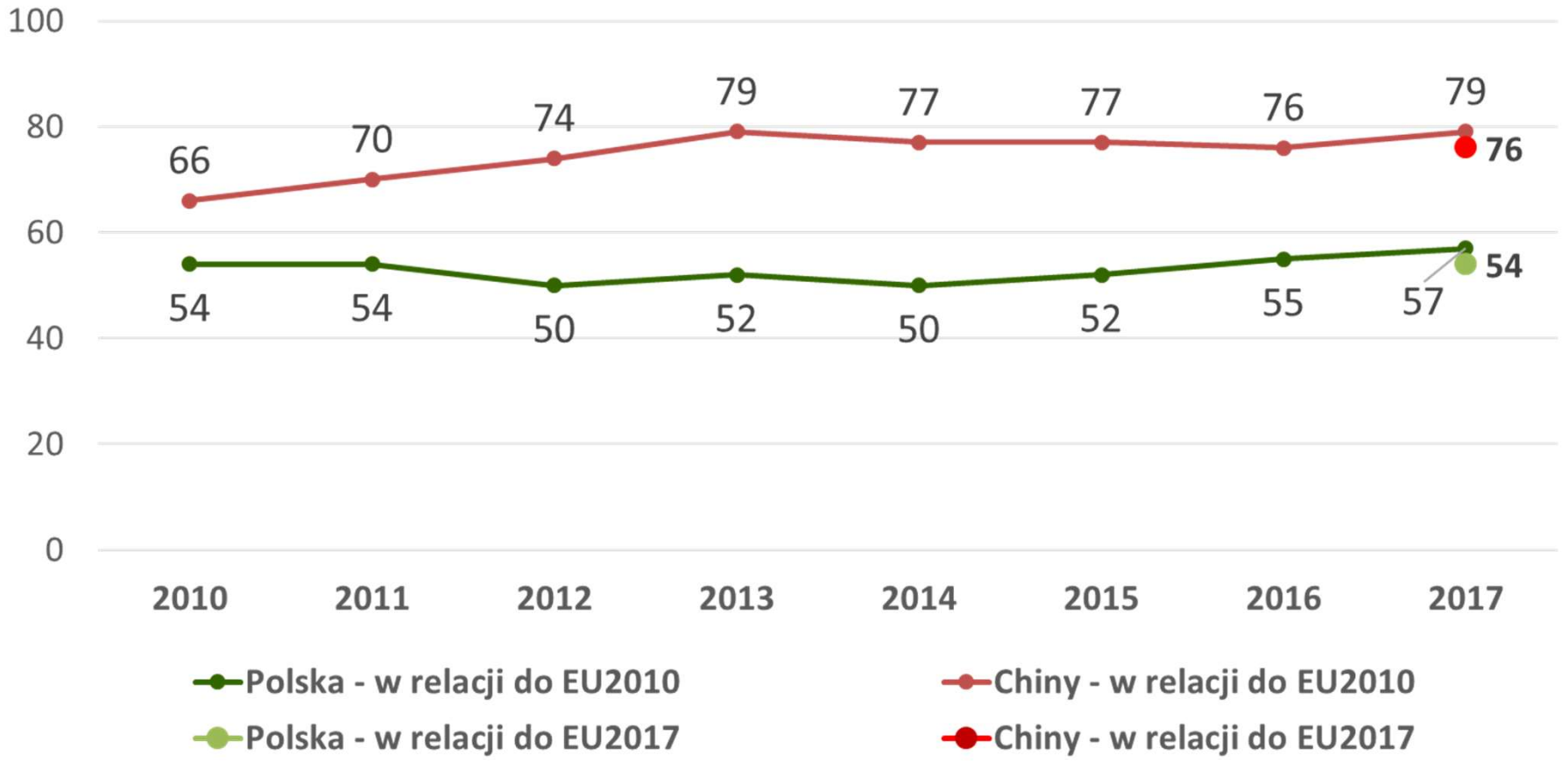
Based on European Innovation Scorebord 2018.

CASE STUDY

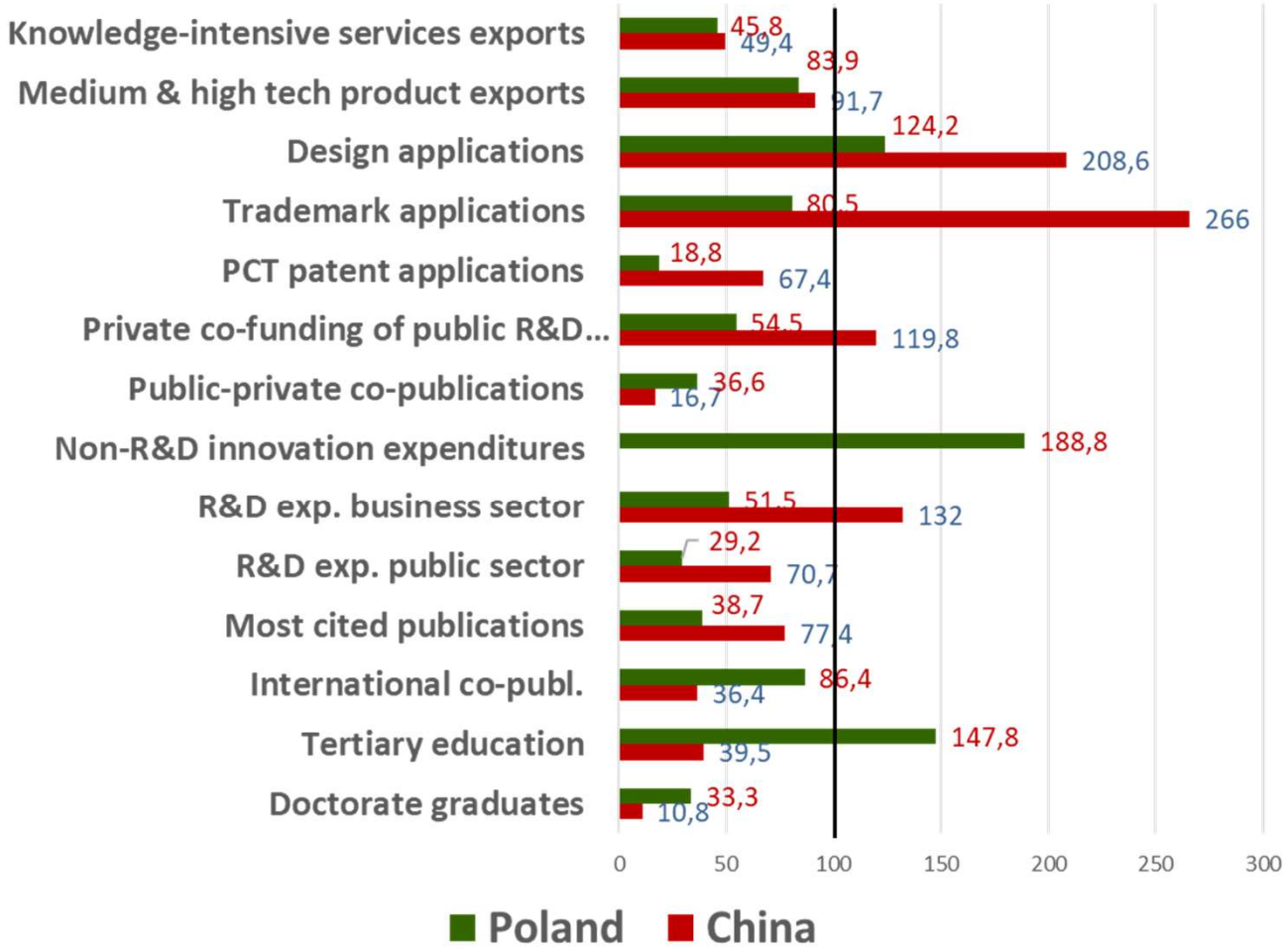
Rationale for the research project:
Chinese and Polish innovation performance relative to the EU



Based on European Innovation Scorebord 2018.

CASE STUDY

Rationale for the research project:
Chinese and Polish performance relative to the EU in selected areas



Chinese advantages:

1. Business R&D expenditures
2. Design and trademarks

Polish advantages:

1. Education
2. Non-R&D innovation expenditures
3. Design and trademarks

Higher dynamics of China for most indicators.

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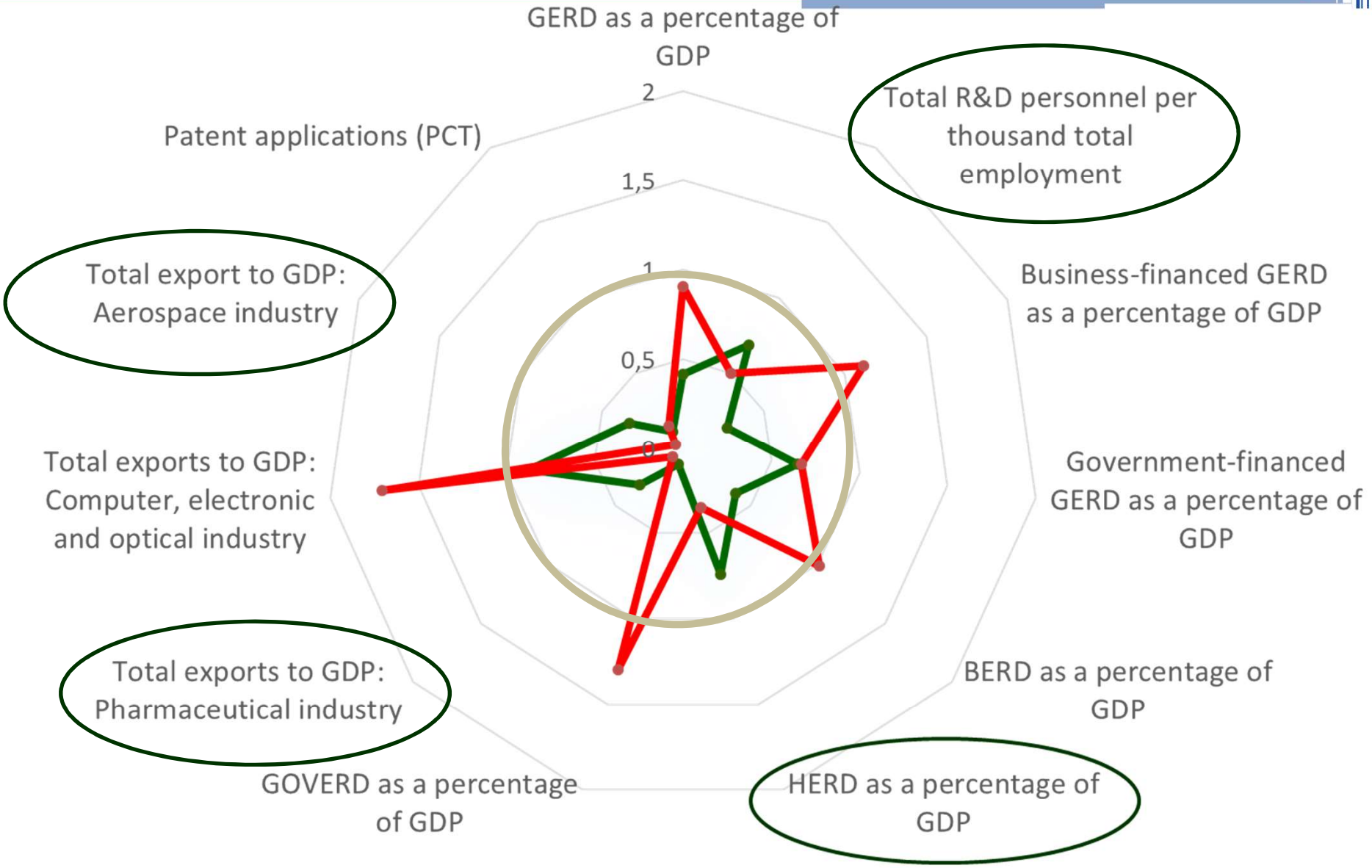
Based on European Innovation Scorebord 2018.

CASE STUDY: Characteristics of innovation system of China and Poland in 2016



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Based on: OECD.statistics

Formulating research objectives

Research objectives are the goals that are **set in** the research project, that are to be achieved through the project.

Types of research objectives:

the main objective (sometimes called general, primary or key objective) – states what researchers expect to achieve by the study in general terms, by providing clear, complete and coherent goal of the research,

the specific objectives (or secondary, additional objectives) - systematically address the various aspects of the study and provide support in attaining the main objective.

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Typical research objectives

exploration, which involves using mainly inductive methods to discover a concept and advance understanding or generalisations.

description, which involves identifying and describing the antecedents, nature and aetiology of a phenomenon,

explanation, which involves developing theory for the purpose of explaining the relationships among concepts or phenomena and determining reasons for the existence of events.

prediction, which refers to using pre-existing knowledge or theory to predict what will occur at a later point in time,

influence, which relates to manipulation of the setting or variable to produce an anticipated outcome.

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SMART approach in developing objectives

Specific, meaning that the objectives should be exact about what the research project is going to accomplish,

Measurable, implying the ability to quantify research activity or its results and that the source of and mechanism for collecting measurement data are identified,

Attainable, meaning that the objectives are reachable,

Realistic, meaning that there are the resources to make the objective happen,

Time specific, meaning that there is a defined timeframe for the achievement of the objective.

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CASE STUDY:

Dynamics and factors of innovation gap between Poland and China - international and regional dimensions

Research objectives:

to measure the dynamics of innovation gap between China, Poland and the EU

to identify the determinants of innovation performance in China and Poland

to measure and compare the processes of convergence or divergence in innovation performance inside China and Poland, taking into account regional factors, including the emergence of clusters

to assess the role of STI policy in increasing the innovativeness of China and Poland

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Research questions

A research question is a **clear, focused, concise, complex and arguable question**, which research proposal will be centred around.

Helps researchers to **focus** their scientific work by providing a path through the research and writing process.

Formulating right research questions allows to **clarify** ideas, to reflect on the **definition** and **operationalization** of important concepts.

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FINER criteria in the development of a good research questions

Feasible, meaning that they should be manageable in scope, and affordable in time and money, and that there is adequate technical expertise,

Interesting, meaning that getting the answer to research questions posed intqrigues potential reviewers of research proposal and community,

Novel, meaning that thay confirm, refute or extend previous findings,

Ethical,

Relevant to scientific knowledge, and to future research.

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Research questions – Bakker's criteria

Research questions should address a **knowledge gap**.

The research question should be **pragmatically** and **theoretically relevant**.

Main concepts are **precise** and **anchored** in the literature.

Research questions should be **manageable**, which means it is answerable by means of research within a reasonable time frame and available resources.

Formulation of research question should help the reader envision the **type of research** proposal (descriptive, evaluative, design-oriented, advisory etc.).

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CASE STUDY:

Research questions (1/2):

What is the level of innovation gap between China and Poland and how it has been evolving in the period under analysis?

What is the dynamics of innovation gap between China and Poland in comparison to the European Union average level?

Are the technological gaps between China, Poland and the European Union persistent or do they diminish or even close in the long run?

What are the determinants of innovation performance of Chinese and Polish economy, including internal (e.g. STI policy, clusters, investment in R&D), human capital) and external (e.g. international technology transfer through FDI) factors?

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CASE STUDY:

Research questions (2/2):

How do the processes of convergence/divergence in innovation performance in China and Poland look like at the regional level? How strong are the patterns of geographical polarization of innovation activity and how do they impact national innovativeness?

What are the STI policy strategic directions and actions in China, Poland, and the European Union as a whole, how they contribute to strengthening and exploiting innovation potential, and what are the conditions for an optimal policy to increase the innovativeness in these countries?

How can Poland build its innovation-based competitive advantage in order to compete with China and other emerging economies in Asia?

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Developing a research project timetable

Establishes the structure for the project.

The main elements:

the **list of tasks** to be completed,

the dates on which the tasks need to be complete,

the expected **duration** of each task,

dependencies between tasks.

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The key points when setting up project timetable

duration of project i.e. start and finish dates,

specific **stages** of the project identified i.e. pilot, focus group discussion, survey,

objectives and their inclusion in the **timeline,**

realistic project **duration / timetable**,

external **constraints / deadlines** influencing project duration / time frame)

regularity / scheduling of progress reports and the person in charge.

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A Gantt chart

Gantt chart provides a **graphical illustration** of a schedule that helps to plan, coordinate, and track specific tasks in a project.

Gantt charts break a project down to a **succession of tasks** and assign each task to a different row along the vertical axis.

helpful to identify **milestones**, or particularly important **completion points**

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No	Task	2019				2020			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Literature review								
2	Review and preparing the methodology			▼ D1					
3	Data collection								
4	Data analysis						▼ D2		
5	Interviews								
6	Interviews transcription, coding and analysing						▼ D3		
7	Preparation of case studies							▼ D4	
8	Results, discussion and conclusions								
9	Complete final report / publication								▼ D5

▼ – milestones:
Deliverable 1 (D1) – theoretical review and methodological study
Deliverable 2 (D2) – data set and statistical report
Deliverable 3 (D3) – report from interviews
Deliverable 4 (D4) – case studies
Deliverable 5 (D5) – final report

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BUILDING ALLIANCES AND SELECTING PARTNERS

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General approach to establishing research contacts

- Successful relationships are built through establishment of channels of communication and trust.

- However, collaboration is always burdened with a risk which is costly

How to select foreign partners that are reliable and guarantee a successful completion of the project?

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CASE STUDY: Horizon 2020 project: I3U

Horizon 2020 project: I3U

Investigating the Impact of the **Innovation Union**

- **I3U:** Investigating the Impact of the Innovation Union
- **Call Identifier:** H2020-INSO-2014
- **Grant Agreement:** 645884
- **Duration:** March 1, 2015 to February 28, 2018 (36 months)
- **Effort:** 349 man/months
- **Budget:** € 2,931,486.25 (EU funding)
- **Consortium:** 9 partners in 9 countries
- **Website:** http://www.i3u-innovationunion.eu

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Partners

Investigating the Impact of the **Innovation Union**

The **University of Maastricht's (UN-MERIT)** renowned researchers work in multidisciplinary teams and in close cooperation with international institutes, business and industry.

The **Institute of Studies for the Integration of Systems (ISIS)** is an expert advisor on policy integration, policy effectiveness, cost sustainability and related technologies.

SEURECO is a private company supporting the research activity of the ERASME team, which specialises in economic modelling.

The **Vienna Institute for International Economic Studies (WIIW)**, provides first-hand expertise on Central and East Europe, CIS and the Balkans.

The **University of Oslo (UiO)** is the highest ranked research institution in Norway and has a strong track record of pioneering research and scientific discovery.

The **Université Libre de Bruxelles (ULB)** has won numerous prizes for its groundbreaking research.

The **Institute of Economics, Zagreb (EIZ)** is a public scientific institute with a longstanding tradition in conducting economic research.

The **Centre for European Economic Research (ZEW)** in Mannheim is one of Germany's leading economic research institutes.

The **Warsaw School of Economics (WERI-SGH)** conducts research in economics, finance, management, business administration, public policy and political science.

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Investigating the Impact of the **Innovation Union**

Concept and Approach

- **Two complementary approaches:**
  1) **Assess the direct impact of commitments** to determine whether they have improved the knowledge-based economy;
  2) **Evaluate the final impact of the commitments**, taking interactions and dynamic effects into consideration.

- **Three issues:**
  1) Theoretical impact
  2) Direct individual impact
  3) Final impact in the innovation system

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The art of establishing alliances

Real life activities:

- Attendance in conferences, post-conference network through Research Gate and social media websites.
- Membership in academic association e.g., Academy of International Business (AIB), Harvard Business School's Microeconomics of Competitiveness etc.
- Taking part in projects.
- Participation in fellowships, teaching programs, going for research stays at other universities.
- Inviting key note speakers to your conferences, researchers to co-author scientific articles.
- Organizing/participating in joint programs, joint summer schools etc.
- Integrating foreign scholars in activities of the university (seminars, open lectures etc.)
- Exchange of students and young scientists to establish international research collaborations (de Grijs 2015).
- Internationalization of PhD programs.

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The art of establishing alliances

Online activities:

- Identifying useful email contacts (posted on the institutions website, included in scientific articles etc.)
- Establishing a profile on online scientific networks such as: Research Gate, Academia.edu, Google Scholar, Mendeley, ResearchID, etc.

to describe your research interests, show publications and research projects you are engaged in etc.

- Writing a scientific blog.
- Posting content on social media such as Facebook, LinkedIn, Twitter etc.

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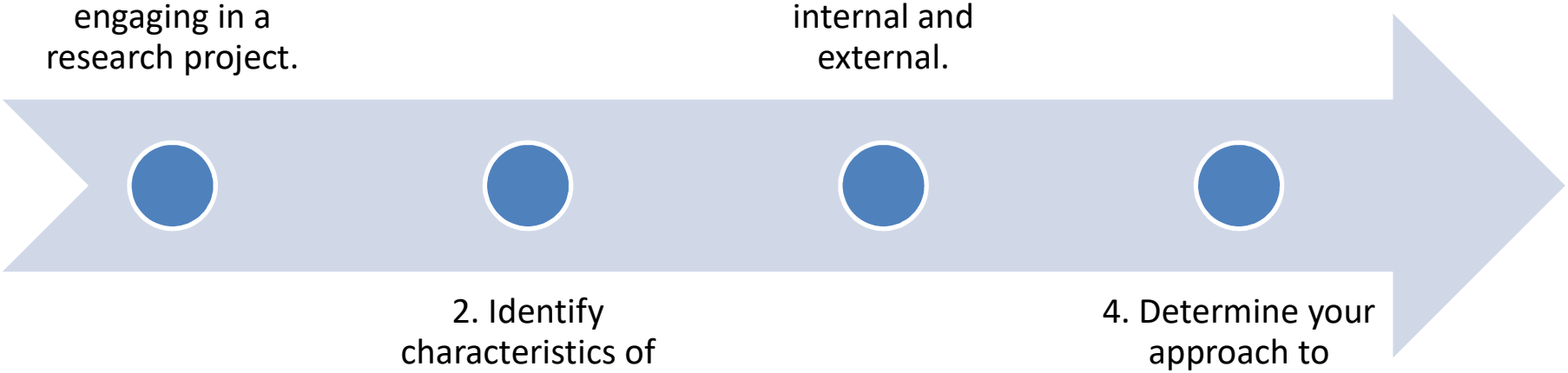
Selecting foreign partners

The key considerations when looking for collaborative partner are as follows:



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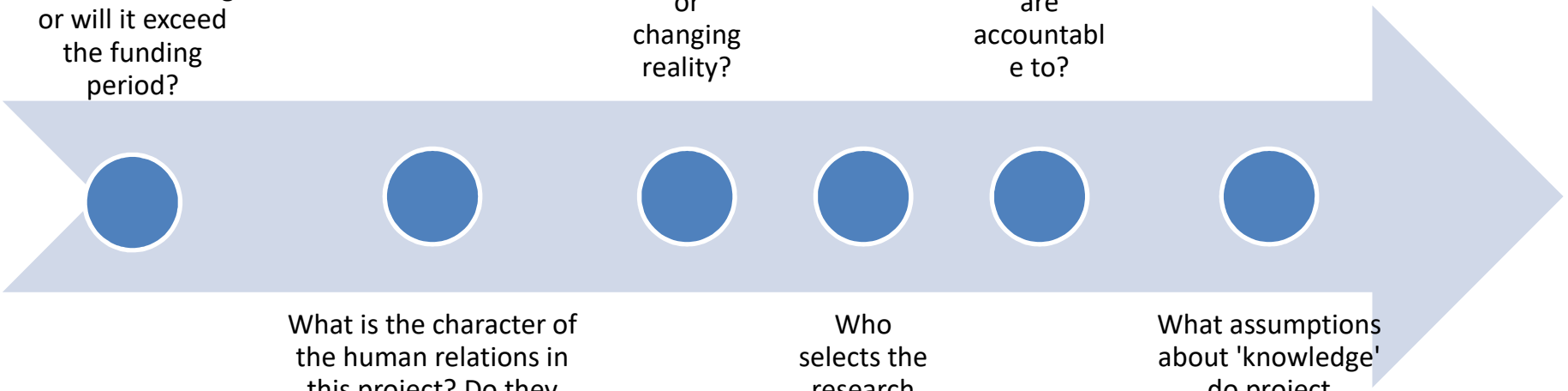
Selecting foreign partners

To clarify a collaboration approach try to ask yourself the following questions:



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Select partners early to have time to get to know each other.

The partners in international research project should complete a training on cultural awareness in order to avoid misunderstandings and conflicts resulting from cultural differences.

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Another example:
Stimulating Learning for Idea-to-Market (SLIM) Project

Partners:

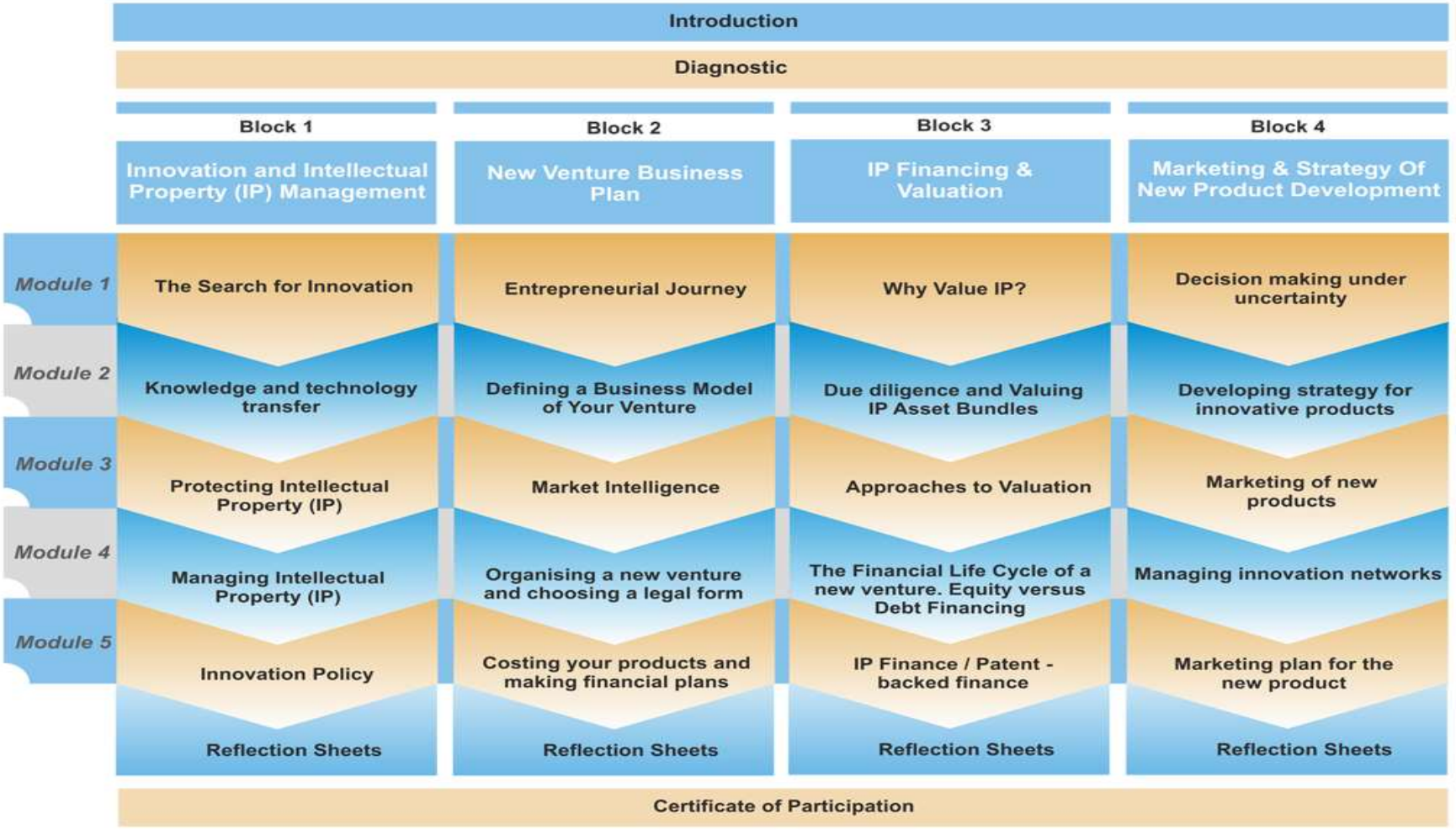
- The Manchester Metropolitan University
- Warsaw School of Economics, Poland
- University of Rijeka, Croatia
- University of Zagreb, Croatia
- European Foundation for Management Development
- Science Park, Rijeka
- The Federation of Small Business
- BTM – a small firm in Poland
- Arenda – a small firm in Croatia

SLIM ideas to market

Leonardo

Lifelong Learning Programme

SLIM e-course on innovation: **http://www.e-sgh.com/slim/**



SOURCES OF FINANCING

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Types of sources of financing research projects

government,

private industry,

foundations,

professional organizations.

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Government

The share of gross domestic expenditure on R&D financed by government is about 31% in the European Union and 24% in the US.

The most important source of funding in Europe is Horizon 2020 - the European Union's Framework Programme for Research and Innovation for years 2014-2020. Budget - EUR 80 bilion.

Horizon 2020 accepts the applications from entities based in Third Countries (non-EU countries)

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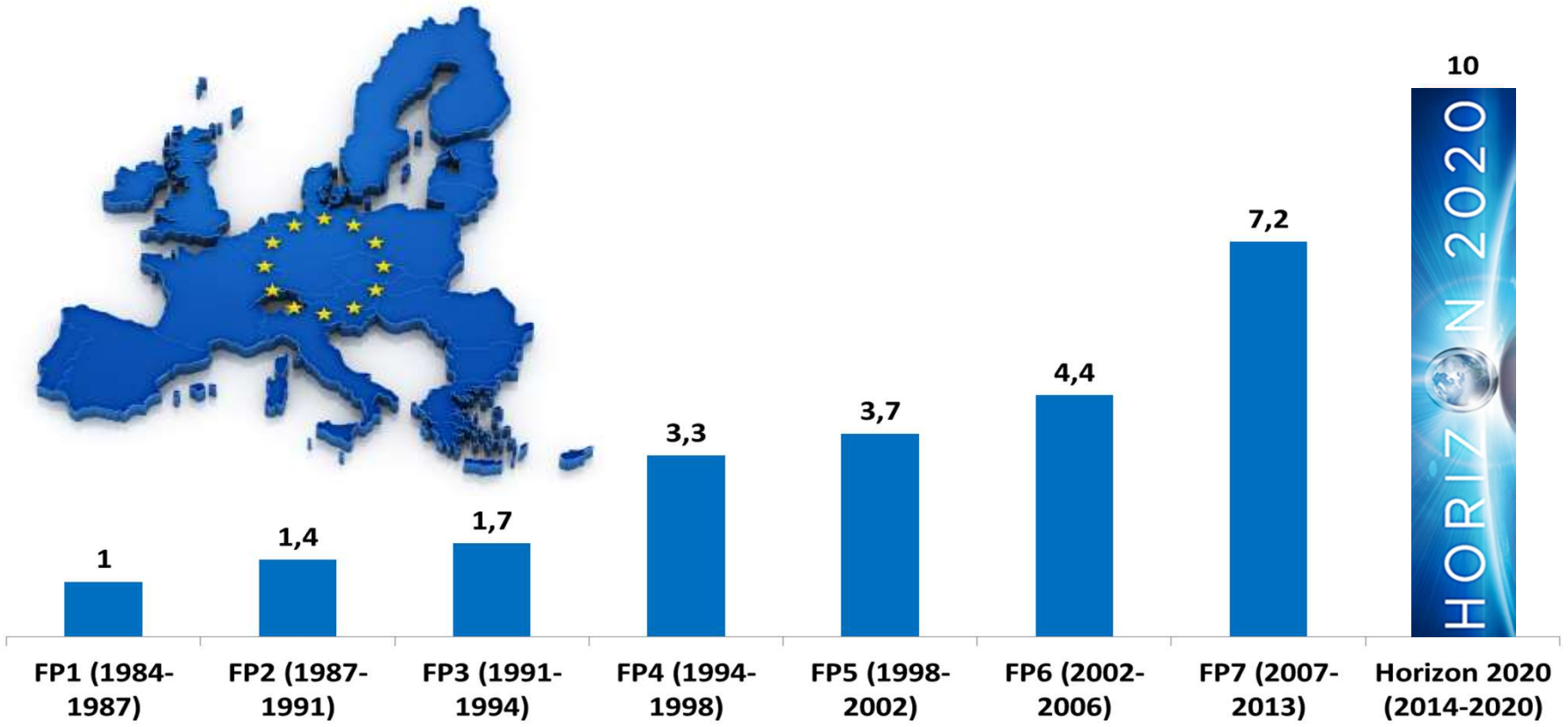
European example: framework programmes (FP)

Annual budget (in bEUR)



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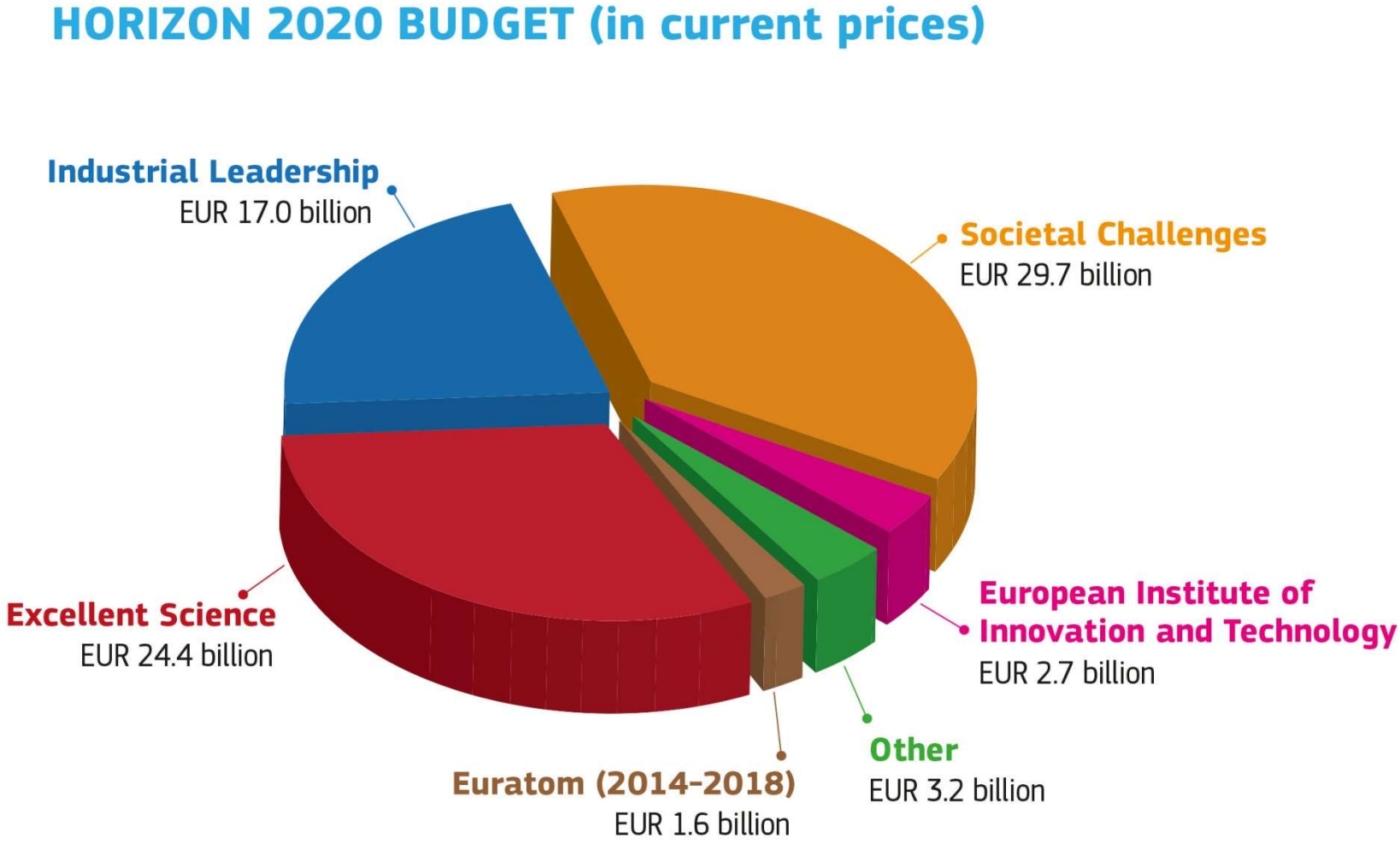
Source:https://ec.europa.eu/programmes/horizon2020/

Almost €80 billion from 2014 to 2020



Source:https://ec.europa.eu/programmes/horizon2020/

Pooling the resources across Europe – common investments in research infrastructures

Financial allocations to the projects co-financed from FP7 and Horizon 2020 (part INFRA)

Years	Financing from EU part INFRA (EUR)	Project total budget (EUR)	„Leverage"
FP7 Ad Hoc 2007-2013	965 611 €	2 915 877 €	3.02
2007	290 374 607.86 €	9 338 170 347.94 €	32.16
2008	397 300 554.16 €	14 695 221 154.54 €	36.99
2009	9 599 808 €	261 246 688 €	27.21
2010	332 017 163 €	13 270 737 661.04 €	39.97
2011	258 446 268.92 €	8 334 309 891.04 €	32.25
2012	196 290 485.61 €	6 041 768 194.18 €	30.78
2013	44 300 000 €	5 685 830 659 €	128.35
Overall FP7 2007-2013	**1 528 328 887.55 €**	**57 627 284 595.74 €**	**37.71**
H2020 Ad Hoc 2014-2020	400 000 €	729 515 €	1.82
2014	230 450 300.50 €	5 558 223 553.03 €	24.12
2015	195 952 759.51 €	4 051 045 013.84 €	20.67
INFRAIA 2014-2015	160 601 006.38 €	4 208 666 195.10 €	26.21
Overall 2020	**587 404 066.39 €**	**13 818 664 276.97 €**	**23.52**

Source: own elaboration based on financial data from CP UE in Poland.

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Financial data on allocation of funds to projects implemented by RI in the framework of FP7 (part INFRA) and Horizon 2020 for 2007-2015 are used to calculate leverage effect, which shows how many EUR spending from other sources were generated by 1 EUR spending from EU framework programs.

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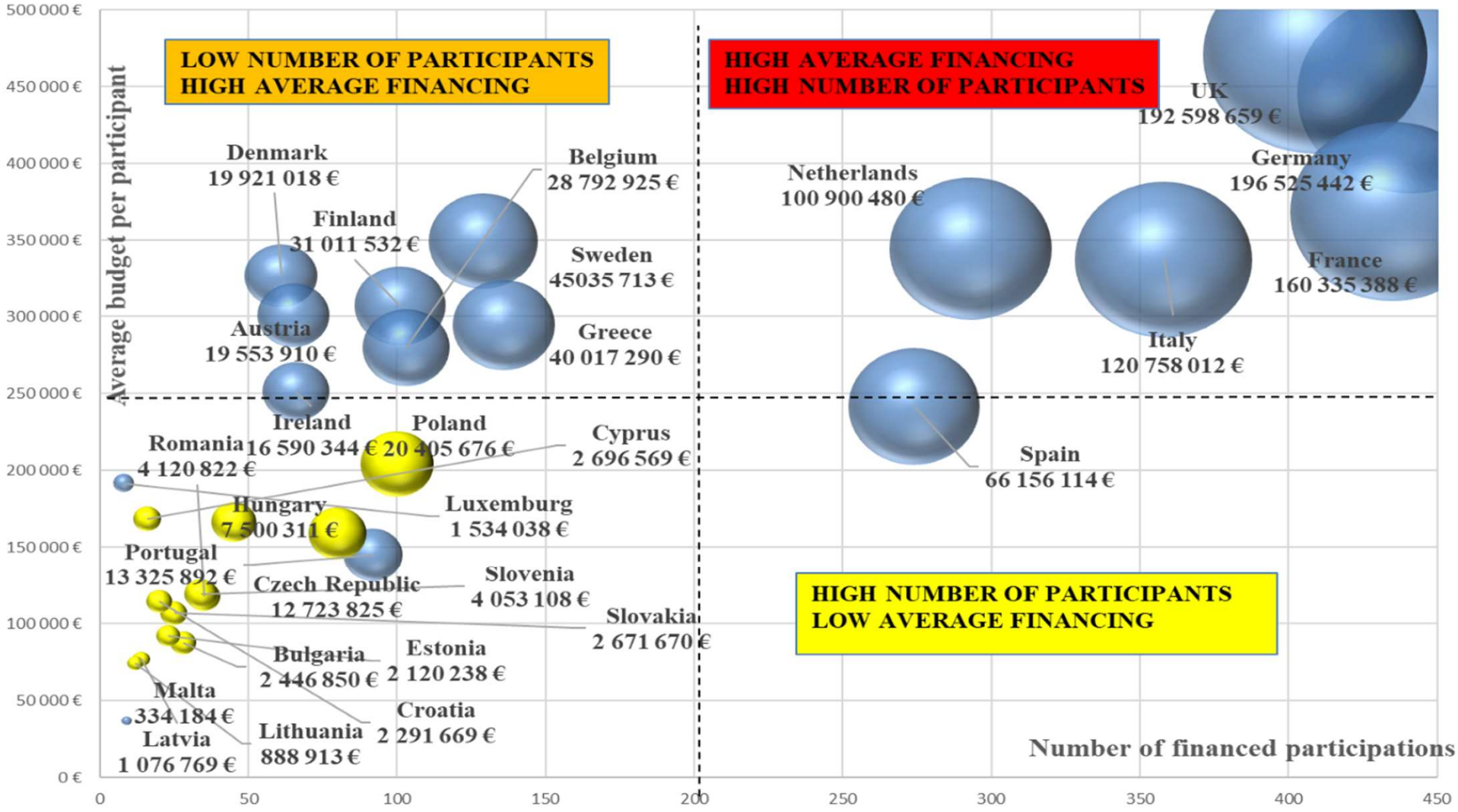
Distribution of H2020 part INFRA budget on EU Member States



Source: own elaboration based on financial data for H2020 part INFRA, data till March 2

International Cooperation in Horizon 2020

- International cooperation is crucial to address many Horizon 2020 objectives

- Principle of general openness: the programme will remain to be the most open funding programme in the world

- Need to join forces globally to tackle global challenges

Source:https://ec.europa.eu/programmes/horizon2020/

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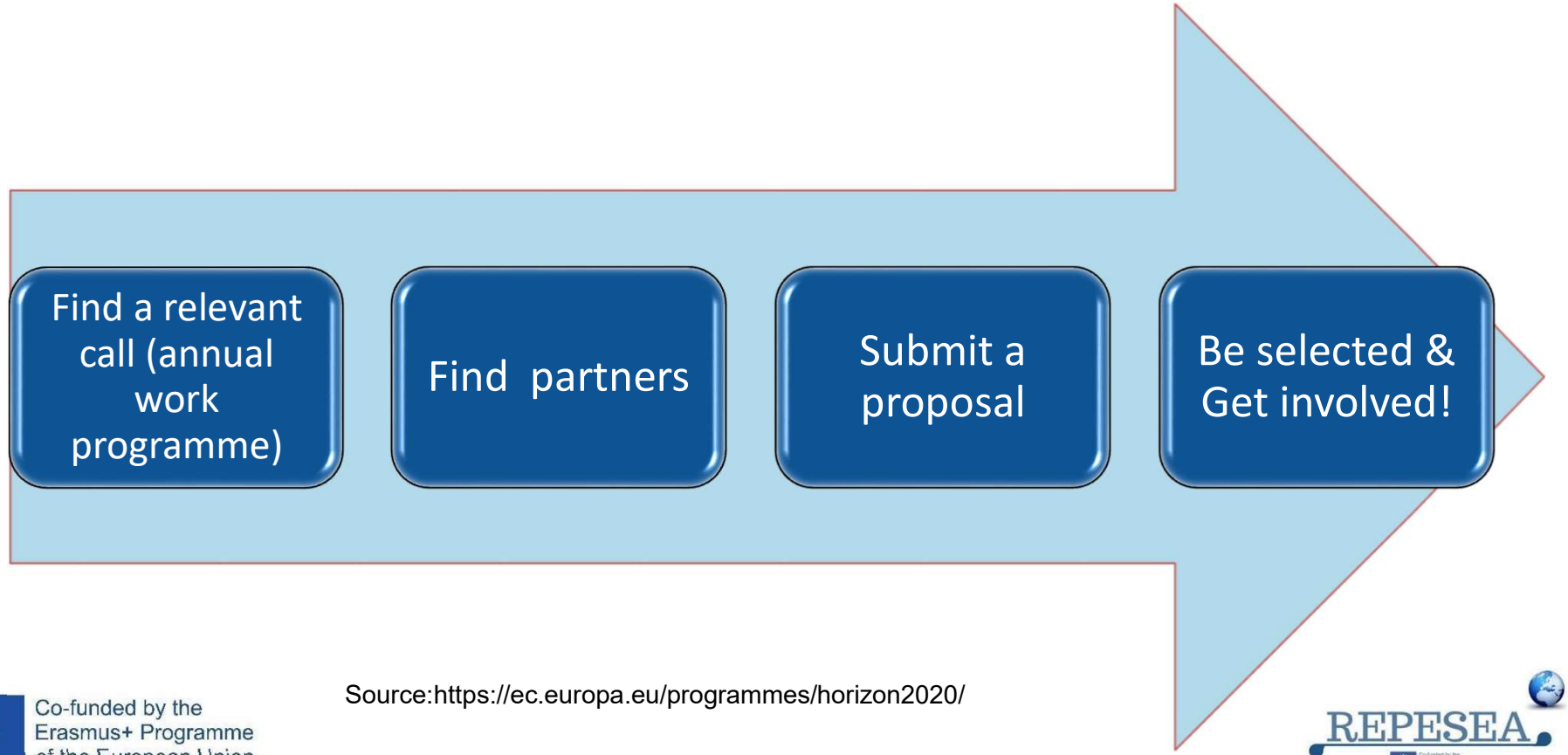
How to participate in Horizon 2020?

OPEN COMPETITION + PEER REVIEW



Source:https://ec.europa.eu/programmes/horizon2020/

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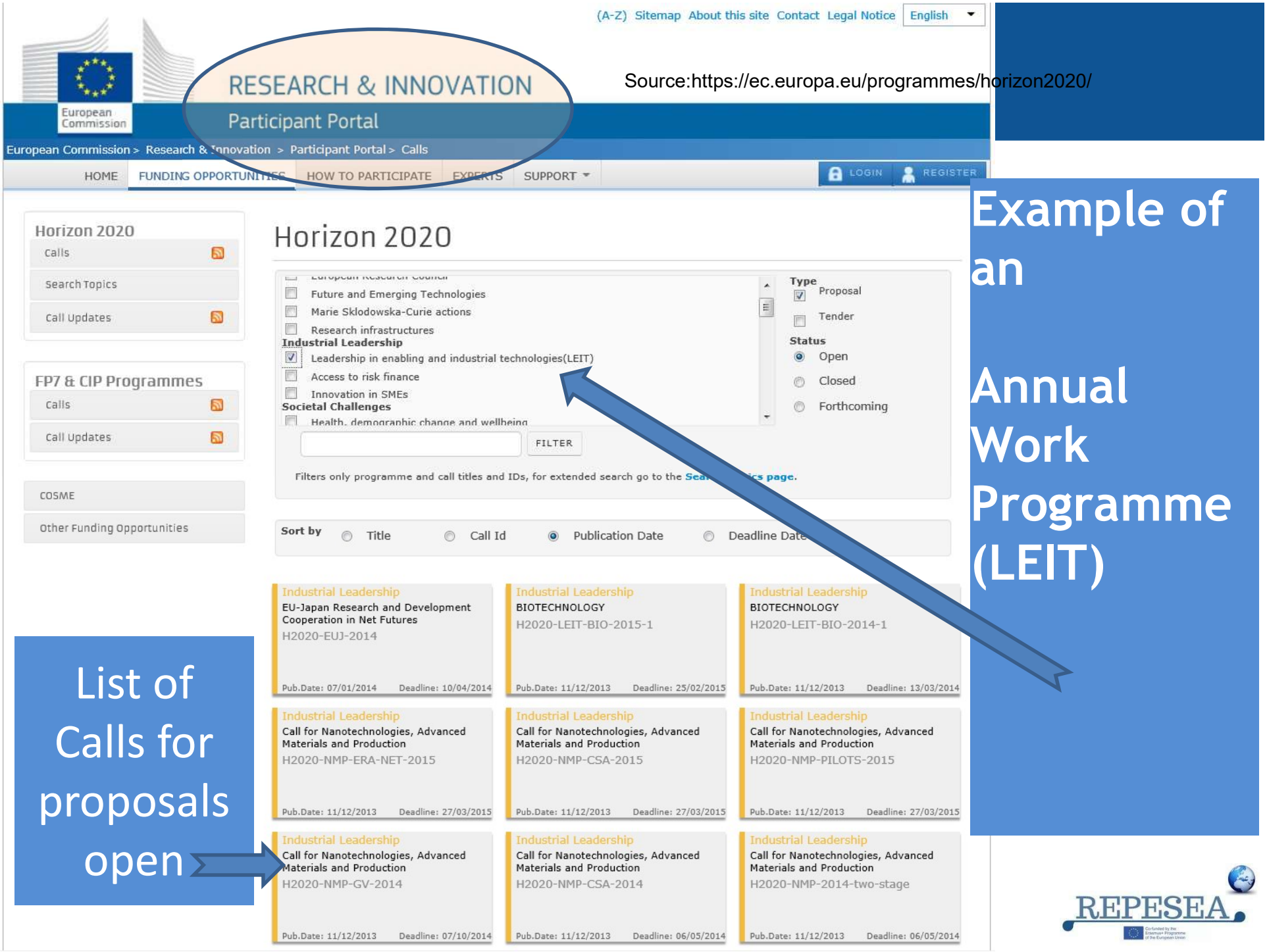

Source:https://ec.europa.eu/programmes/horizon2020/

Example of an Annual Work Programme (LEIT)

List of Calls for proposals open

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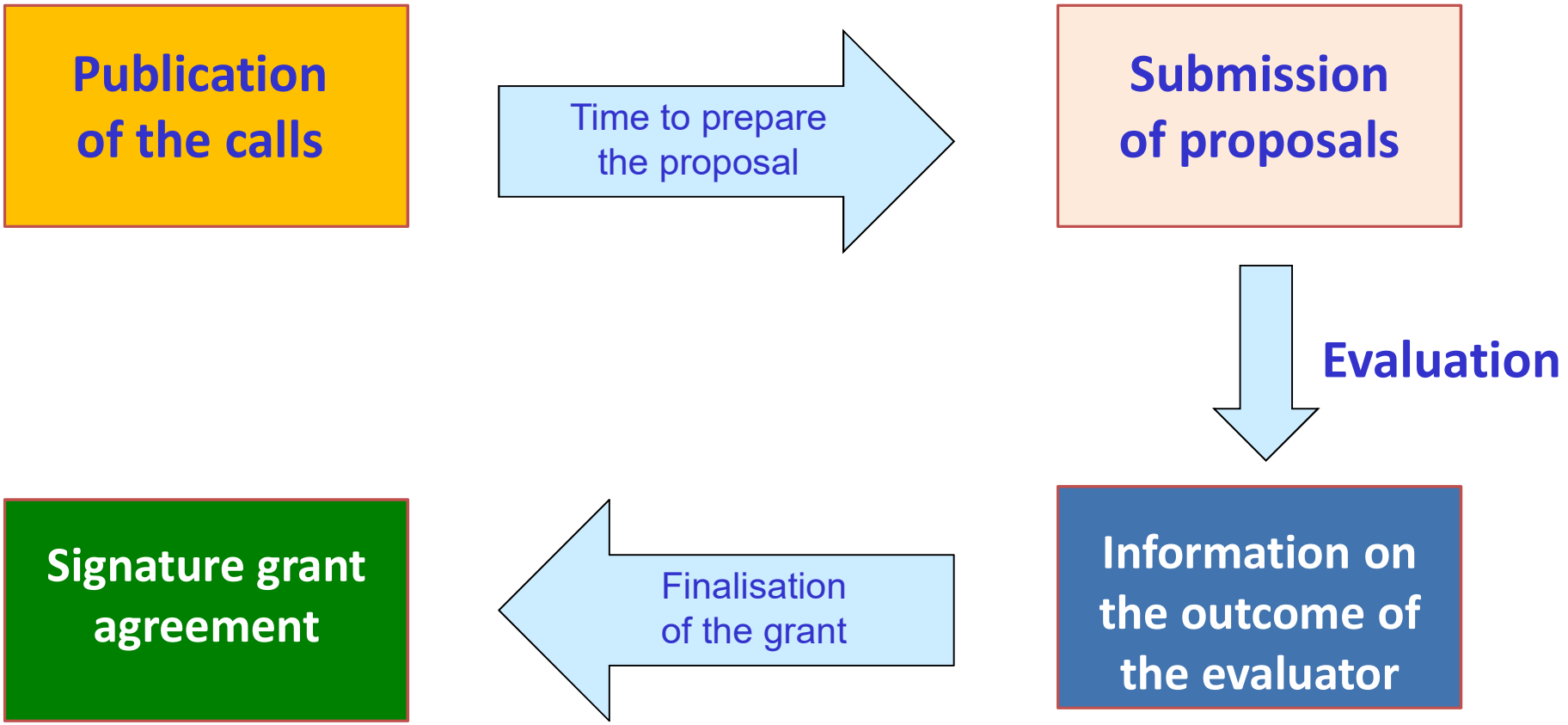
From Call to Grant



Source:https://ec.europa.eu/programmes/horizon2020/

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Private industry

Private industry-financed research is often conducted by university researchers for industry

Industry funding and partnerships offer the potential to accelerate innovations, and move research to market where it can benefit the economy and society.

In the countries representing so called market innovation system (e.g. USA, UK or Australia), the role of private industry funding of scientific research is much higher than in the countries with so called continental European innovation system (e.g. France, Germany or Italy).

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Foundations

non-profit organizations that sponsor a broad array of research, from high-profile foundations that tackle comprehensive, international challenges to small family foundations, which focus on a single important issue

The most common are foundations supporting researchers working on biological phenomena relevant to particular diseases or disorders, e.g.:

Glenn Foundation for Medical Research
http://glennfoundation.org/

the Juvenile Diabetes Research Foundation
http://www.jdrf.org/

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Professional organizations or societies

In case of professional societies, they usually offer travel grants, although a few have research grant opportunities. As it is very sector-specific, professional societies in specific areas should investigated with respect to research funds opportunities. Examples:

http://ibro.info/professional-development/funding-programmes/

https://www.seda.ac.uk/research-small-grants

https://www.sigmaxi.org/

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BUDGETING

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The main categories of costs

personnel salary of persons involved in the implementation of the project,

external services or subcontracting - costs of purchase of specific services necessary to carry out the project implemented by specialized institutions (eg. research institutes / professional services),

purchase of materials and supplies necessary for conducting research,

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The main categories of costs

- **purchase of major instrumentation and devices**,
- **indirect costs**, usually associated with the provision of appropriate working conditions for members of the research team, often referred to as a percentage share in the entire budget,
- **costs related to travel** (travel expenses, members' diet)
- costs related to the **dissemination** of research results (conferences, publications, etc.).

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The costs of personnel salary

The costs of personnel salary are in some projects calculated by dividing the number of planned working days and the daily remuneration of the members of the research team.

The salary of a member of the team usually depends on their role in the team and experience (junior, senior researcher, manager, etc.).

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MANAGING COLLABORATIVE RESEARCH PROJECTS (PROJECT CYCLE MANAGEMENT)

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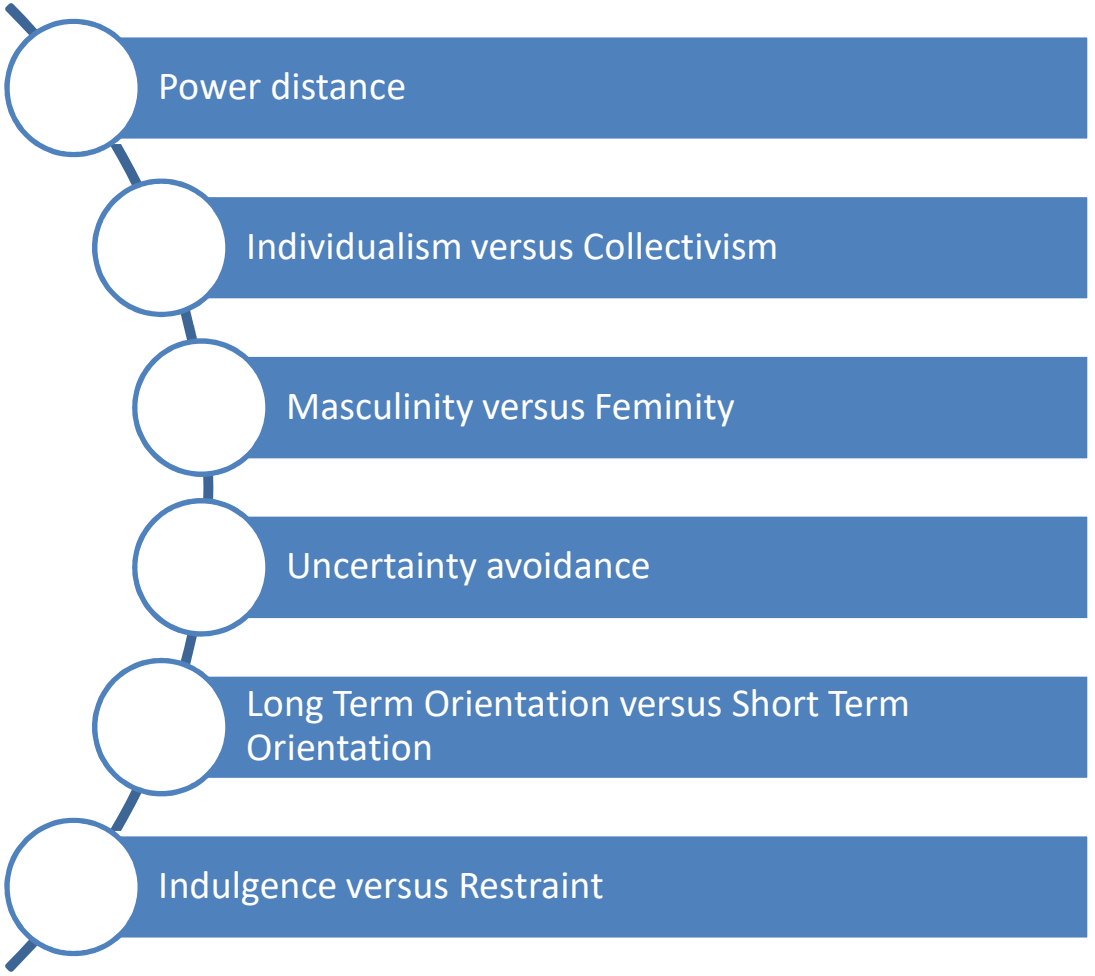
- **Cultural differences in international research projects**

➢ Six dimensions of national culture (Hofstede (2010)):



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The management of collaborative research projects requires from **project leaders**, who are characterised by:

- Ability to build **trust and respect**,
- **Flexibility in managing changes** in the course of the project,
- Good **communication skills** and **cross-cultural awareness**,
- **Project management skills**,
- Ability to create project's organization culture driven by unified, shared vision.

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Research project paradoxes (vom Brocke and Lippe (2015)):

Research projects are characterized by **uncertainty** and require **freedom and flexibility** but it is necessary to **manage it tightly to reach** the stated goals.

Collaborative research enhances **combination of views and approaches** to solve problem but diversity of partners result in managerial problems related with **managing diveristy**.

Manager of collaborative project has limited power as partners enjoy autonomy and because of governance structures.

At the same time some engagement of all partner is necessary.

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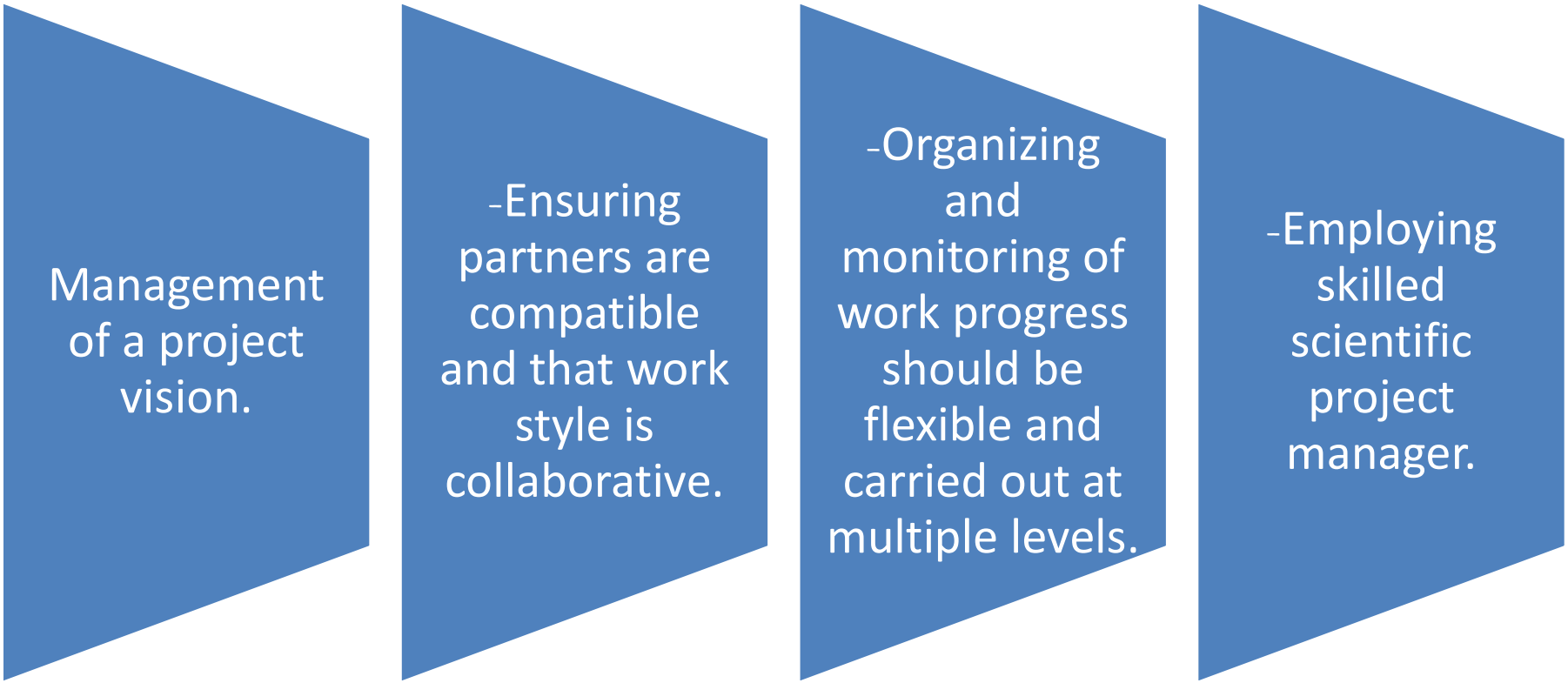
- **Managing successful research projects**

Rules of successful collaborative research project management:



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Managerial solutions to the above paradoxes (vom Brocke and Lippe (2015)):

Continuous building of mutual trust and respect throughout the project (Easterby-Smith and Malina 1999).

-Clearly stating the objectives of a project that all partners want to achieve. (Harris 2007).

-Good planning and providing realism and hope are key to effective leadership and governance.

-Misunder-standings and even conflicts in projects are common issue. Clear and frequent communication is basis for mutual trust (Lau et al. (2014)).

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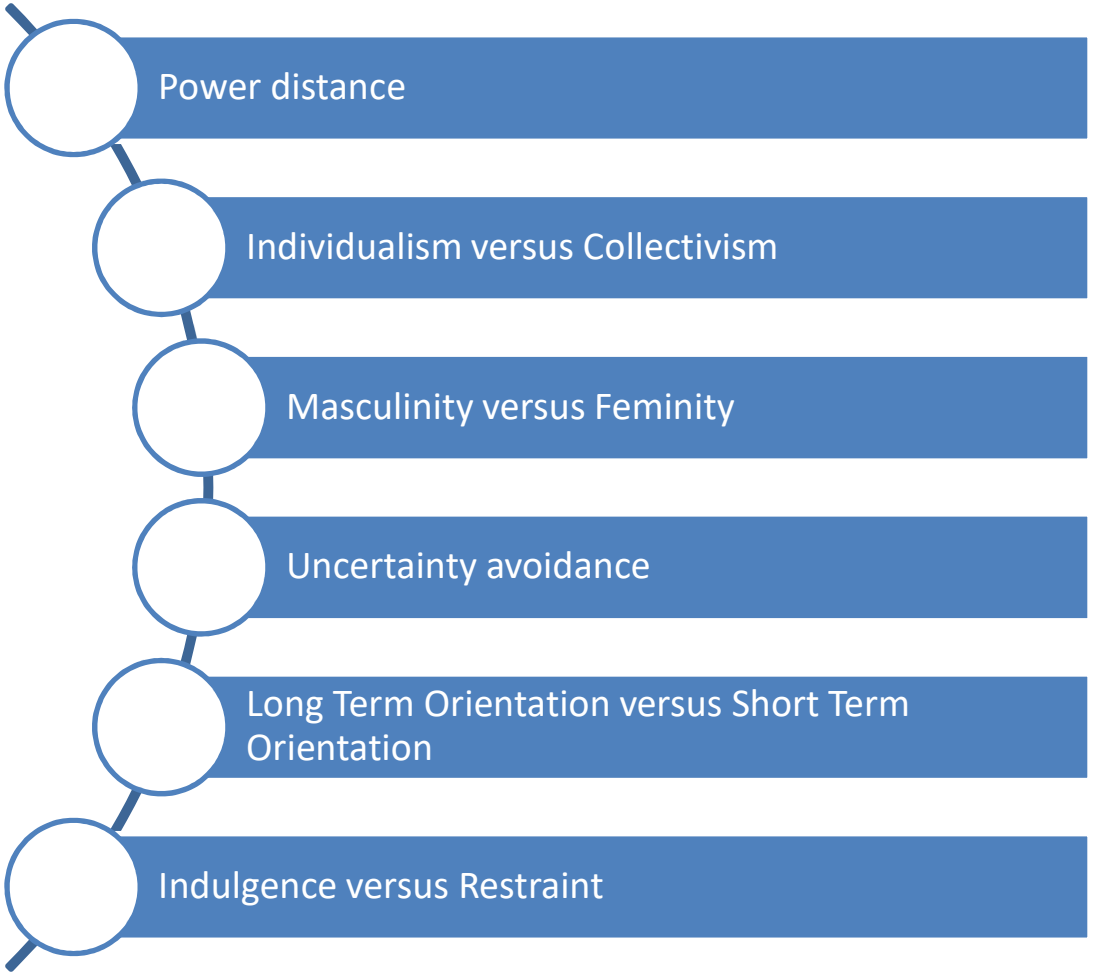
- **Cultural differences in international research projects**

➢ Six dimensions of national culture (Hofstede (2010)):



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RISKS RELATED TO RESEARCH PROJECTS

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Key benefits to the application of risk management to research projects

Risk management for research projects is crucial to ensure that the whole research conduct will be carried out smoothly and efficiently

The identification, analysis, assessment, treatment and monitoring of risks helps bring clarity to the scope of a particular research project.

It assists project participants to defend a project when adverse events occur and assists with a justification of changes as a result of those adverse events.

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		Probability		
		High	Medium	Low
Impact	High	ALARM	very high	high
	Medium	very high	high	medium
	Low	high	medium	relax

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How to handle project risks?

list all activities and related risks
initial phase - avoidance tactics
implementation phase - mitigation of risks

In the execution phase of the research project, monitoring and control are performed in order to make sure that the process is going according to the plan and all identified risks are being handled properly.

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Examples of risks

Internal risks affecting the Consortium;

Risks associated with time management (timely response and subsequent finalization of an assignment);

Risks in relation to the execution of the assignments

Risks in relation to the availability of ‘specific’ and ‘specialized’ data.

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Risk	Impact	Probability	Mitigation strategy
Senior staff leaves one of the partners	Medium	Medium	The consortium has considerable in-house capacity and expertise and should be able to deal with the departure of core team members, most of whom have long notice periods, through internal replacements by experts with similar qualifications and experience.
Differences of opinion; disputes between partners	Medium	Low	The governance of the whole consortium foresees an incentive to seek constructive solution and consensus where possible. All partners know each other well from earlier work, and there is a high level of internal trust and 'working together' ethos.

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Risk	Impact	Probability	Mitigation strategy
There are quality control issues during the course of a project	Medium	Low	The quality assurance procedure is designed to ensure that all deliverables are of high quality and meet Contractor expectations. We continually refine the QA process to learn cumulatively from past challenges.
Last minutes change of coordination activities	Low	Low	We aim to prevent this by producing a detailed work plan considering the outcome of the kick-off meeting. In the rare case that prevention proves not to be ineffective, we will be able to re-organise the activities according to the expectations of the Client

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Risk	Impact	Likelihood	Mitigation strategy
Lack of capacity within installers and lack of project management capacity. Improvement on energy performance does not result only from the equipment itself but also from the quality of implementation. Poor quality can have negative effects on the final energy savings.	4	3	Evaluation of a limited number of randomly selected projects also during the implementation phase can detect poor quality in time. A list of recommended installers sets minimum standards on installers and service providers. Information about how to implement new technologies raises awareness within end users. Organizing trainings to installers can improve their performance
High transaction costs for end users often hamper access to financing and project completion for many small energy efficiency projects.	3	3	High transaction costs can be reduced by putting Technical Assistance in place which provides administrative support of implementing the credit line. Participating banks should concentrate on their core business, i.e. performing creditworthiness analysis, originating loans and administering loans.

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Publishing in Academic Outlets: Picking the "Right" Journal and Successful Submission Process

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

29. 07. -02. 08. 2019, Universiti Teknologi MARA, Campus Bandaraya, Melaka, Malaysia

Ivan Sedliačik

Matej Bel University in Banska Bystrica, Slovakia

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„Module No 2 Publishing in Academic Outlets“

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Contents

I. Picking „the right“ journal

II. Successul submissions process

III. Hands on / Presentation of assignments 1

IV. Hands on / Presentation of assignments 2

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Objectives of the training:

- Provide a basic overview of the topic of „publishing in academic outlets“
- Inspire the trainers with best practices of the peers
- Help participants to get their academic papers published in good (or even top level) academic journals

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I. Picking „the right“ journal

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Introduction

It is not enough to have a good paper…

- pick the "right" journal
- follow the correct submissions procedures
- the paper is rejected or
- dealing with feedback
- resubmitting the revised paper
- the final submission administration

Should I prepare the manuscript and select appropriate journal afterwards or vice versa?

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So, …. which journal is appropriate for you?

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What are your academic or personal goals and how it effects the way for publishing the paper?

- Keeping the job?
- Research project output requirements?
- Academic impact?
- Promotion?
- Money?
- Prestige?
- Other?

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• Research project output requirements?

VV – D	Harmonogram a výstupy projektu / Project schedule and outcomes
02	Anticipated outcomes

Category	Outcomes	2018	2019	2020	2021	2022	2023	2024	2025
Publications and citations	1.01 Current contents publications in SR	0	1	1	2				
Publications and citations	1.02 Interantional current contents publications	0	1	1	2				
Publications and citations	1.03 SCI citations of the publications originated within project in current contents journals in SR	0	1	2	2				
Publications and citations	1.04 SCI citations of the publications originated within project in international current contents journals	0	0	2	2				
Publications and citations	1.05 Other citations of the publications originated within project in non-current contents journals	0	3	5	5				
Publications and citations	1.06 Publications in peer-reviewed scientific journals in SR	1	3	3	3				
Publications and citations	1.07 Publications in international peer-reviewed scientific journals	1	3	3	3				

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Promotion

Selected criteria for awarding „associate professor“ and „full professor“at Matej Bel University:

3. Scientific papers published in Slovakia	12	20
4. Scientific papers published abroad	5	13
5. Papers published in reviewed scientific conference proceedings abroad	8	15
6. Papers published in reviewed scientific conference proceedings in Slovakia	2	5
I7. Professional and other works (book chapters, professional papers...)	3	5
Scientific papers (total)	28	55
Publications in the category A (and 1/3 having at least IF > 0.25)	3	6
IV. Citations – in total	30	60
Citations registered in Web of Science citation indexes and Scopus	5	10

Category A includes:

- papers in scientific journals with Hirsch index HI ≥10 or impact factor IF ≥ 0.25, registered in the international professional database Web of Science or Scopus;
- papers in proceedings from world congresses/conferences issued by renowned international publishers (usually registered in Web of Science or Scopus);
- monographs issued by renowned international publishers, such as Elsevier, Springer, Palgrave, Wiley, etc.,
- studies in scientific journals or proceedings having the character of scientific monograph issued by renowned international publishers,
- chapters in monographs issued by renowned international publishers.

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Money

- An article in the scientific journal registered in the international databases Web of Science or Scopus as a high quality output (Journal with H-index ≥ 10 or IF ≥ 0.4 IFmedian - **1000 €** for 100% author share.
- An article in the scientific journal registered in the international databases Web of Science or Scopus as a top quality output (Journal with H-index ≥ 20 or IF ≥ 0.7 IFmedian - **1500 €** for 100% author share.
- An article written in a foreign language in the Proceedings of the World Congress / Conference published by renowned international publisher (eg. Elsevier, Springer, Palgrave, Wiley, etc.) indexed in Web of Science or Scopus - **500€** for 100% author share. The share of foreign co-authors is not taken into account.

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Other motivation?

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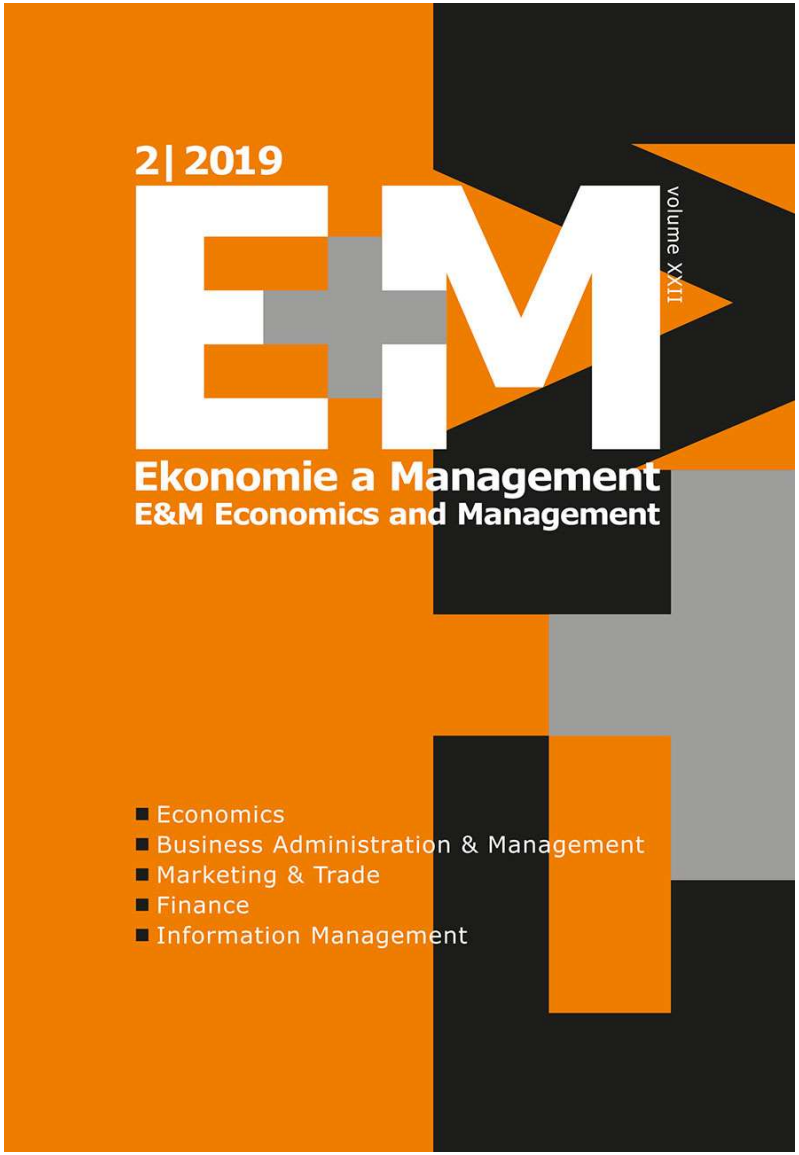

Journal metrics

Development of Citation Metrics – Social Sciences Citation Index

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Impact Factor	0.278	0.341	0.633	0.422	1.021	1.242	1.163	1.311	1.211
5-Year Impact Factor	-	-	-	0.412	0.869	1.000	1.004	1.143	1.015
Immediacy Index	0.086	0.045	0.000	0.104	0.059	0.264	0.170	0.393	0.193
Cited Half-Life	-	-	3.1	3.7	4.0	3.5	3.7	3.5	4.0
AIS	-	-	-	0.039	0.082	0.071	0.067	0.090	0.070

Source: Journal Citation Reports, 2010-2018

Development of Citation Metrics – SCOPUS

	2010	2011	2012	2013	2014	2015	2016	2017	2018
SCImago Journal Rank	0.202	0.223	0.298	0.322	0.631	0.392	0.493	0.535	0.318
Impact per Publication	0.219	0.287	0.452	0.485	0.754	0.895	1.010	1.280	0.95
Source Normalized Impact per Paper	0.633	0.632	0.675	0.588	0.950	1.093	0.997	1.036	0.754
Cite Score	-	0.379	0.551	0.588	0.957	1.021	1.079	1.460	1.180

Source: Scopus, Journal Metrics, 2010-2018, CWTS Journal Indicators, 2018

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Acta Aerarii Publici
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Cena: Nepredajné.
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Ročník 16 - číslo 1 - 2019

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Ročník 17 – číslo 2 – 2016
Volume 17 – Number 2 - 2016

EKONOMIKA A SPOLOČNOSŤ

Journal of Economics and Social Research

Ekonomika a spoločnosť
Vedecký časopis Ekonomickej fakulty UMB, vychádza dvakrát ročne.
Adresa redakcie: Ekonomická fakulta UMB
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Tlač: EQUILIBRIA s.r.o., Košice

ISSN 1335-7069

Ekonomika a spoločnosť, roč. 17/2016, č. 2

Vedecký časopis Ekonomickej fakulty
Univerzity Mateja Bela v Banskej Bystrici

The Scientific Journal of the Faculty of Economics
Matej Bel University Banská Bystrica

ELEANUM

Slovakia

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1. The scope of the journal

Some questions to be answered before the decision where to submit:

- *Is the manuscript consistent with the disciplinary focus of the journal?*
- *Is the manuscript consistent with the national or international focus of the journal?*
- *Is the manuscript consistent with the theory/practice focus of the journal?*
- *Is the manuscript in harmony with the journal's quantitative or qualitative research bias (if any), or with type of article expected?*
- *Reading already published articles.*
- *Is the length of the manuscript appropriate for the journal?*
- *How many times is the journal cited in your manuscript?*
- *What advice do your colleagues have?*

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Manuscript consistency with the disciplinary focus of the journal.

- Read **“about us”** information - **aims and scope** / topics

- Journals could be:
  -“narrow focused”
  -“full discipline”
  -“multidisciplinary”

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Example of “narrow focus”journal

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Example of “full discipline”journal

Journal of Public Administration Research and Theory
(leading journal in public administration)
https://academic.oup.com/jpart

OXFORD
UNIVERSITY PRESS

"The Journal of Public Administration Research and Theory serves as a bridge between public administration and public management scholarship on the one hand and public policy studies on the other. Its multidisciplinary aim is to advance the organizational, administrative, and policy sciences as they apply to government and governance. The journal is committed to diverse and rigorous scholarship and serves as an outlet for the best conceptual and theory-based empirical work in the field.”

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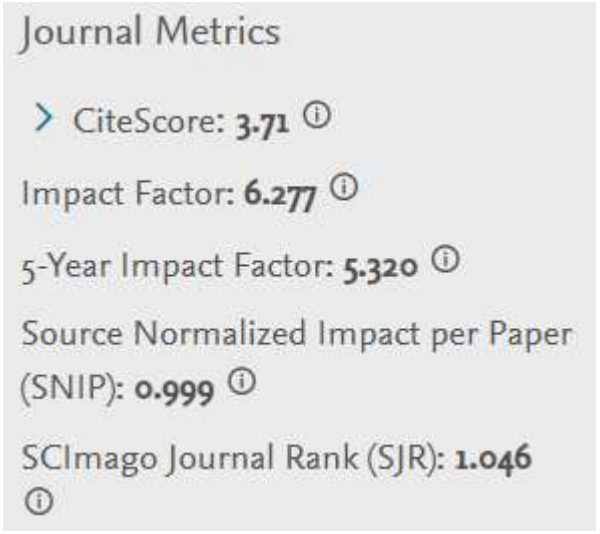
Example of “multidisciplinary”journal

Science Bulletin

https://www.journals.elsevier.com/science-bulletin



"*Science Bulletin* (*Sci. Bull.*, formerly known as *Chinese Science Bulletin*) is a multidisciplinary academic journal supervised by the Chinese Academy of Sciences (CAS) and co-sponsored by the CAS and the National Natural Science Foundation of China (NSFC). *Sci. Bull.* is a semi-monthly international journal publishing high-caliber peer-reviewed research on a broad range of natural sciences and high-tech fields on the basis of its originality, scientific significance and whether it is of general interest. In addition, we are committed to serving the scientific community with immediate, authoritative news and valuable insights into upcoming trends around the globe.”

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Manuscript consistency with the national or international focus of the journal.

- Most journals today are (or claim themselves as) international.
- Some journals ask for comparative focus.
- The title of a journal including some territorial affiliation can be very misleading.

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Manuscript consistency with the theory/practice focus

Some of the journals at least claim that their focus is the combination of academia and practice.

International Journal of Production Economics
https://www.journals.elsevier.com/international-journal-of-production-economics

"In character, the journal combines the high standards of a traditional **academic approach with the practical value** of industrial applications"

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What type of article expected, quantitative or qualitative research bias

- expected research approach, methods
- quantitative, mixed or qualitative approach
- standard papers, case studies, not all journals publish book reviews

Czech Journal of Economics and Finance
http://journal.fsv.cuni.cz/page/index/aims

This journal is also a very good example why it is strongly recommended to authors to read few articles from the selected journal. The journal web expression "empirically oriented papers" is at least partly misleading. After checking few articles the author should understand that the journal requires quantitative approach, preferably economic modelling.

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Reading already published articles

- *Is the mission statement of a journal and the types of really published articles fully harmonised?*

- *Has the journal published articles on the same subject? If not, has the journal at least published articles on the topics that form the theoretical basis for this research?*

- *Has the journal published articles using the manuscript's methodology before?*

- *If the manuscript reports insignificant results or if it is concerned with methodological issues, has the journal published papers of this same type in the past?*

- *Is the manuscript's „style of prose" consistent with that of the journal?*

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The length of the manuscript

- “Instructions for authors”
- The most frequent words limit is 6.000 to 8.000 words and normally includes tables, references, figure captions, footnotes, endnotes.

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How many times is the journal cited in your manuscript?

- Sensitive question, as almost all journals today are willing to increase their impact factor.

- The stress on impact factors has different impact on journals:
  -journals try to achieve referencing by **quality of articles** published,
  -journals **give explicit navigation** of authors and reviewers (for example reviewers may be directly asked to assess if the text includes references to previous articles in the journal.

- What is your experience?

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What advice do your colleagues have?

- If the information in the journal web page is not enough, or not accurate.
- Experiences often differ from what is written.
- **TASK:** Give examples of the journals that were incosistent with „the mission statement“.

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2. The ranking, impact and visibility of the journal: journal prestige

- Probably most important factor. Trade-off between publishing in time and publishing in high ranked journal.

- Journal's reputation is based on following factors:
  -older history
  -journal with larger circulation
  -journal with lower acceptance rate
  -journal with comprehensive review process
  -journal with well-known editor and editorial board members
  -journal with prestigious institutional affiliations of editor and board members
  -journal affiliated with a prestigious organization
  -journal often quoted over time
  -journal with high impact factor (often quoted recently)
  -journal with high visibility in multiple computerized databases

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- App. 18 existing ranking systems for academic journals:

Clarivate Analytics, Australian Business Deans Council, Journal Quality List, AERES Journal List, Chartered Association of Business Schools Academic Journal Guide, CNRS Journal List, Categorization of Journals in Economics and Management, Cranfield University School of Management Journal Recommendations for Academic Publication, Danish Ministry of Higher Education and Science Journal List, Erasmus Research Institute of Management Journals List, Business School Paris Ranking of Journals, FNEG Journal List, Classement des Revues Scientifiques en Sciences de Gestion, Financial Times Journal List, Google h5 index, Handelsblatt Journal List, HEC Journal List, SCImago Journal Rank, University of Queensland Business School Adjusted ERA Rankings List, University of Texas Journal List, German Academic Association for Business Research Journal

- The ranking of journals in these systems is not be the same, even if the same basic methodology is used.

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- Journal Citation Reports (JCR) Clarivate Analytics, Web of Science “the Five-year Impact Factor”, Impact factor (IF) is a recent ratio between the number of citations and the number of articles published by the journal.

- SCImago Journal Rank (SJR), Scopus Elsevier
  the SCImago Journal Rank (SJR) compiled on the Scopus® database. Quartiles ranking according (SJR).

- Google h5 index

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3. The type of review process in the journal

- Good journals put a lot of emphasis on the quality and neutrality of the review process.
- The standard is double-blind review.
- Some good journal use a single-blind peer-review system, reviewers are aware of the names and affiliations of the authors, but the reviewer reports provided to authors are anonymous.
- Any very simplified and fast type of review process is suspicious and such journal should be carefully checked to prevent any ethical or similar problems.
- Many journals have “gate-keeping” system – the initial editor/s screening with the aim to check the quality and focus of the paper ex-ante, before submitting it to reviewers.

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4. The length of the review process in the journal

- **TASK:** What is the longest review process you have experienced?
- Taking months, not weeks or days.
- Editors and publishers calculate the average length of the review process, but not always publish this information.
- “Preliminary accepted – major revisions needed” means that extra weeks.
- Authors who have particularly tight timeframes for publication (authors with upcoming tenure or promotion cases, authors in the last year of their research project or researchers whose area is topical only within the short or medium-term) need to focus on journals with high speed review process (but be aware concerning the ethical considerations).

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- There are many journals which try to attract authors via very **short review procedure** (in most cases open access journals with processing fees).

Sustainability journal
http://www.mdpi.com/journal/

- …promoting itself by the following information: “Rapid publication: manuscripts are peer-reviewed and a first decision provided to authors approximately 22 days after submission; acceptance to publication is undertaken in 5.9 days (median values for papers published in this journal in 2017)”.

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5. The length of the publishing process

- the publisher's processing time
- the publication backlog (sometimes over 1 year)
- to cope with "backlog delay" many journals started to use the policy "on-line first" (in many countries these on-line publications do not count for performance schemes
- online journals generally have little or no backlog of finalized, accepted articles awaiting publication

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Recenzováno: 17. 10. 2011, 24. 10. 2011
Schváleno k publikování: 25. 6. 2012

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6. The success (rejection) rate of submission for the journal

- not available on the journal web
- can be estimated using peer´s experience
- at almost all high quality journals the rejection rate is over 50 %
- Czech Journal of Economics and Finance (http://journal.fsv.cuni.cz/) rejection rate is over 90 %

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7. The philosophical and ethical concerns connected with the journal

- "predatory journal" or "predatory publisher" was first time officially mentioned in 2010 by American librarian Jeffrey Beall

- "Beall's List"
- *https://beallslist.weebly.com*

- publishers who publish articles with little or no real peer review and charge significant article-processing charges

- the fact that a journal is in Clarivate or Scopus database does not guarantee that the journal is non-predatory

- also conference proceedings to be included in Clarivate or Scopus system could be predatory

- publishing via “own” publication platforms

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Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis (indexed in Scopus from 2007)

- This journal published during the period 2013-2016 in total 968 articles.
- From this 56 % of articles was published by authors from Mendel University,
- 89 % of authors are from the Czech Republic.
- One author from Mendel University managed to publish during the above mentioned period 34 articles in this journal, 15 from them in 2016.

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Task:

- Discuss ethical issues that you experienced: ghost writer, salami publishing, proof reader or translator as author…

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II. Successful submission process

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Summary of previous session

- Picking the "right" journal
- The scope of the journal
- The ranking, impact and visibility of the journal: journal prestige
- The type of review process in the journal
- The length of the review process in the journal
- The length of the publishing process
- The success (rejection) rate of submission for the journal
- The philosophical and ethical concerns connected with the journal

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Introduction

- This part aims to describe the submission process and clarify each step of this process.
- The next step after preparing good quality paper for publication and choosing appropriate academic journal is its submission to this journal.
- Despite some common or similar procedures, there are still many differences between journals with respect to submission.

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Introduction

Several types of publication in economic journals:

Research Articles - full-length papers (up to 8,000-10,000 words in Research Policy journal and up to 30,000 in Economia Politica)

Research Notes - typically of 3,000-5,000 words. This category is a vehicle for specific types of material that merit publication, but do not require all the 'normal' components of a full research article. This might cover, for example, specific aspects of methodology or short reports about specific sets or types of data (and their access and use) that merit publication without the full set of requirements for a normal article

Discussion Papers - occasionally published on important topical issues where views differ

Book Reviews – should have commonly up to 3,500 or 5,000 characters

Research Articles in Special Issues and Special Sections.

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1. Before the submission

a. Manuscript structure

b. Format requirements

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Manuscript structure

- Manuscripts' structure of the research articles are generally very similar.
- Some of the academic outlets are more specific or strict; others are more relaxed to authors.

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Manuscript structure

Research Policy *(Elsevier journal)*

- ***Title, abstract, keywords, JEL Classification***
- ***Introduction.*** Objectives, background, justification of the topic and its originality.
- ***Literature review, theoretical or conceptual framework, hypotheses, research questions etc.*** Explain the motivation for the paper and why its contribution is original and significant
- ***Material and methods.*** Sufficient details should be provided to allow the work to be reproduced by an independent researcher.

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Manuscript structure

Research Policy *(Elsevier journal)*

- ***Discussion.*** This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Extensive citations and discussion of published literature should be avoided.)
- ***Conclusions.*** Main conclusions, what is the original contribution of the paper, discuss the policy or management implications of the findings, provide a critical assessment of the limitations of study, and outline possible fruitful lines for further research)
- ***Acknowledgement. References. Appendices.***

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Format requirements

- **Format requirements**
  -Each paper publishing requires adherence to formal requirements of a specific academic outlet.
  -Check the size (word count) of a paper required by academic outlet.

- ***Research Policy (Elsevier journal)*** 8,000-10,000 words
  -New submissions- „Your Paper Your Way service", single Word or PDF file to be used in the refereeing process,
  -Revised submissions. Author is requested to put the paper in to a 'correct format, alignment, spacing, margins, grammar check, proofreading, reference style.

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2. Submission process

a. Standard online submission system of publisher – the same for most of the journals.

b. Own unique online submission system of the journal.

c. Uploading directly on the website or into data storage.

d. Third party submission system.

e. E-mail communication with editors.

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https://ees.elsevier.com/respol

www.editorialmanager.com/epol/default.aspx

https://easychair.org/

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RESEARCH POLICY

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Username: ivan.sedliacik@umb.sk
Switch To: Author Go to: My EES H

Supports Open Access

Open Access

Research Policy

Welcome to the online submission and editorial system for *Research Policy* and *Research Policy: X*.

Important notice: This is the submission site for both *Research Policy* and its fully gold open access mirror journal, *Research Policy: X*. Both Journals share the same aims and scope, editorial team, submission system and rigorous peer review.

Please note, the editorial system submission process and letters will continue to refer to *Research Policy*.
The difference between the journals is the access model under which the journals will publish your work and the indexation status.

As an author, upon acceptance of your paper, you can choose to publish your work in either:

Research Policy, where your work will be available to readers through subscription or gold open access; or

Research Policy: X, where your work will be available to readers through gold open access.

This journal charges an Article Publishing charge (APC). Please check the APC on the journal homepage. As an introductory offer for this journal Elsevier will pay the APC and you can publish free of charge.

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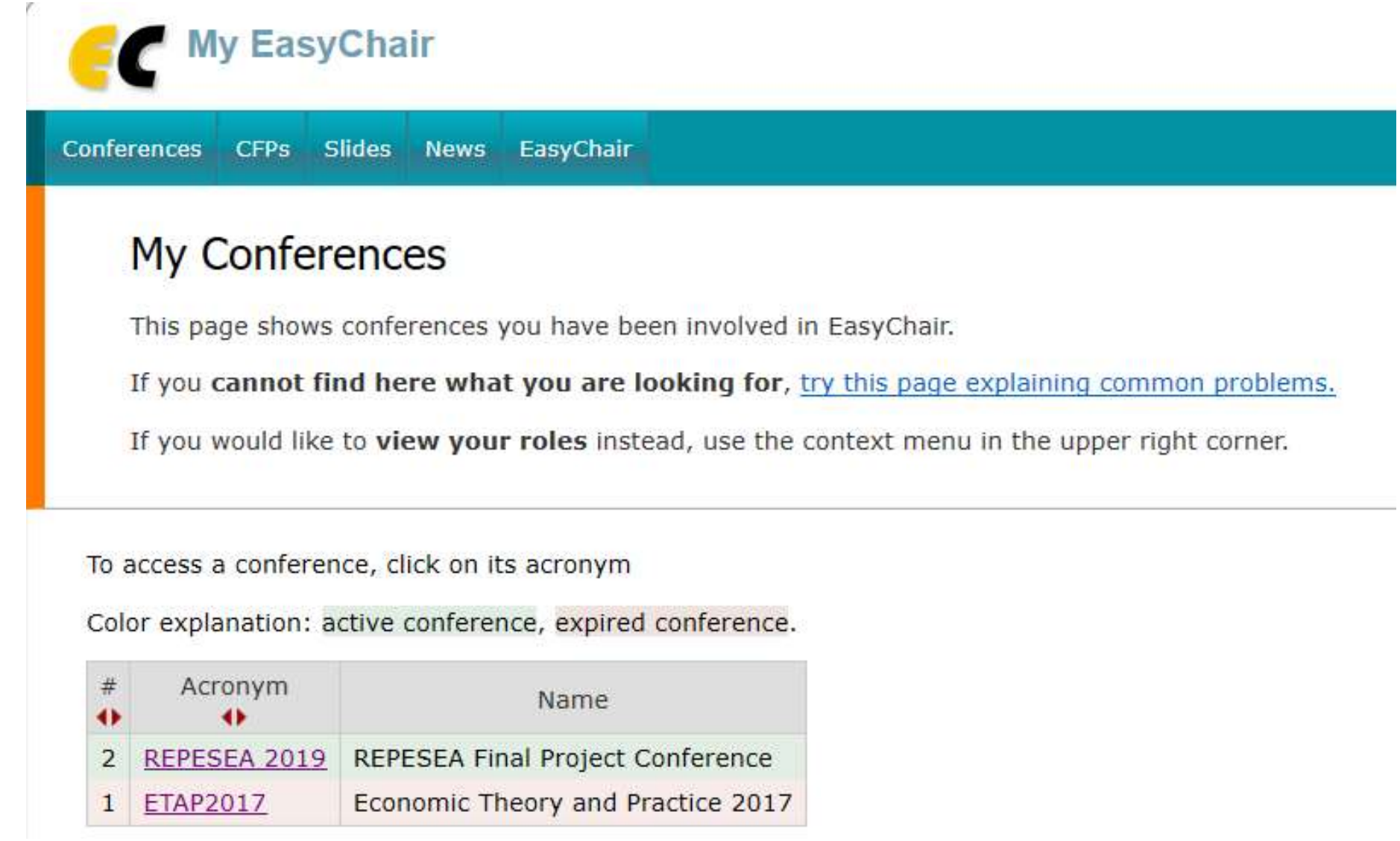

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Home > For authors > General instructions

General instructions

The articles should be submitted electronically using MS Word to the editorial office (casopis@tul.cz).

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	Research Policy (2018) (Choose Article Type)	Economia Politica (2018) (Select an article type)
Types of the submission	1. Research note	1. Original research paper
	2.Research paper	2. Editorial
	3. Special issue: “Academic misconduct”	3. Book review
	4. Special issue: “Policy makers”	4. Special issue: “R&D and firms’ internationalisation
	5. Special issue: “Innovative start-ups”	5. Special issue: “Small businesses in the aftermath of the Great Recession”:
	Book review	

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	Submission process options / Research policy (2018) :
Submission steps during new submission	1. Select article type (type of the submission – required for starting the submission)
	2. Enter title (Entering a full title - required for starting the submission process)
	3. Add/edit/remove Authors
	4. Submit Abstract
	5. Enter Keywords
	6. Additional Information
	7. Enter Comments
	8. Request Editor
	9.Attach Files

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Additional information needed Please respond to questions or statements below (instruction are mostly available):	Answer required with limited number of characters (e.g. 20000)
Can you assure us that **this paper has not been previously published** (in whole or in a part), that it or a part of it is not currently under consideration by another journal and that it will not be submitted for publication elsewhere until a decision has been made by this journal.	
Have you read and do you fully accept **the Ethical Guidelines** of the publisher for journal publication in particular the responsibilities set out in the section headed Duties of Authors and can you confirm that your paper contains no element of data fabrication, data falsification or plagiarism (including unacknowledged self-plagiarism).	

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Uploading the manuscript and other items into the submission system

Item description:	Required/ Voluntary item
Page containing Authors names and contact details/ Title page with names	Required item
Manuscript (without authors names and contact details – double blind policy)	Required item
Cover Letter/ Letter to the Editor	Mostly voluntary item but in some journals required
Tables (included separately)	Voluntary item
Figures (included separately)	Voluntary item
Research highlights	Voluntary item
Graphical abstract	Voluntary item
Video	Voluntary item
LaTeX source file	Voluntary item
Data	Voluntary or required item
Supplementary interactive plot data (CSV format)	Voluntary item

3. Dealing with rejected papers

- There is no real and **successful researcher** who never experienced rejection.
- **Understanding the reasons** for rejection is extremely important to help authors improve their future work.
- Rejection of the first version of a paper often leads to **significant improvements** of the manuscript.
- **Rejection rate** of high impact journals is often 50-80%.

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Types of rejection

- Desk rejection by editor in chief.
- Rejection by editorial officer (plagiarism, format, out of scope).
- Rejection by reviewer(s).
- Outright and conditional rejection.

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Causes of Manuscript Rejection

The most typical reasons:

- manuscript does not fall within the aim and scope of the journal *(reaction – resubmit to more suitable journal)*,
- the manuscript contains elements that are suspected to be against the publication ethics-plagiarism, duplicate publication, ghost writer, salami publication, images without permission *(try to prevent, correction necessary)*,
- incomplete manuscript *(prevent)*,
- poor use of English *(prevent-use copy-editor/proofreader)*,

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Causes of Manuscript Rejection

The most typical reasons:

- references are inconsistent with style, incomplete, or very old *(prevent-use reference manager, such as Mendeley, Endnote, etc.,),*
- the quality of research lacks novelty *(prevent or explain better why do you duplicate existing research),*
- the manuscript is below the journal's standards *(see part one of this manual),*
- data is poorly presented *(prevent),*
- the procedures and/or analysis of the data are seen as defective *(prevent, improve),*
- inappropriate method *(prevent, improve, but if you feel that your method is feasible, submit to other journal),*
- being too ambitious-trying to publish in high impact journal.

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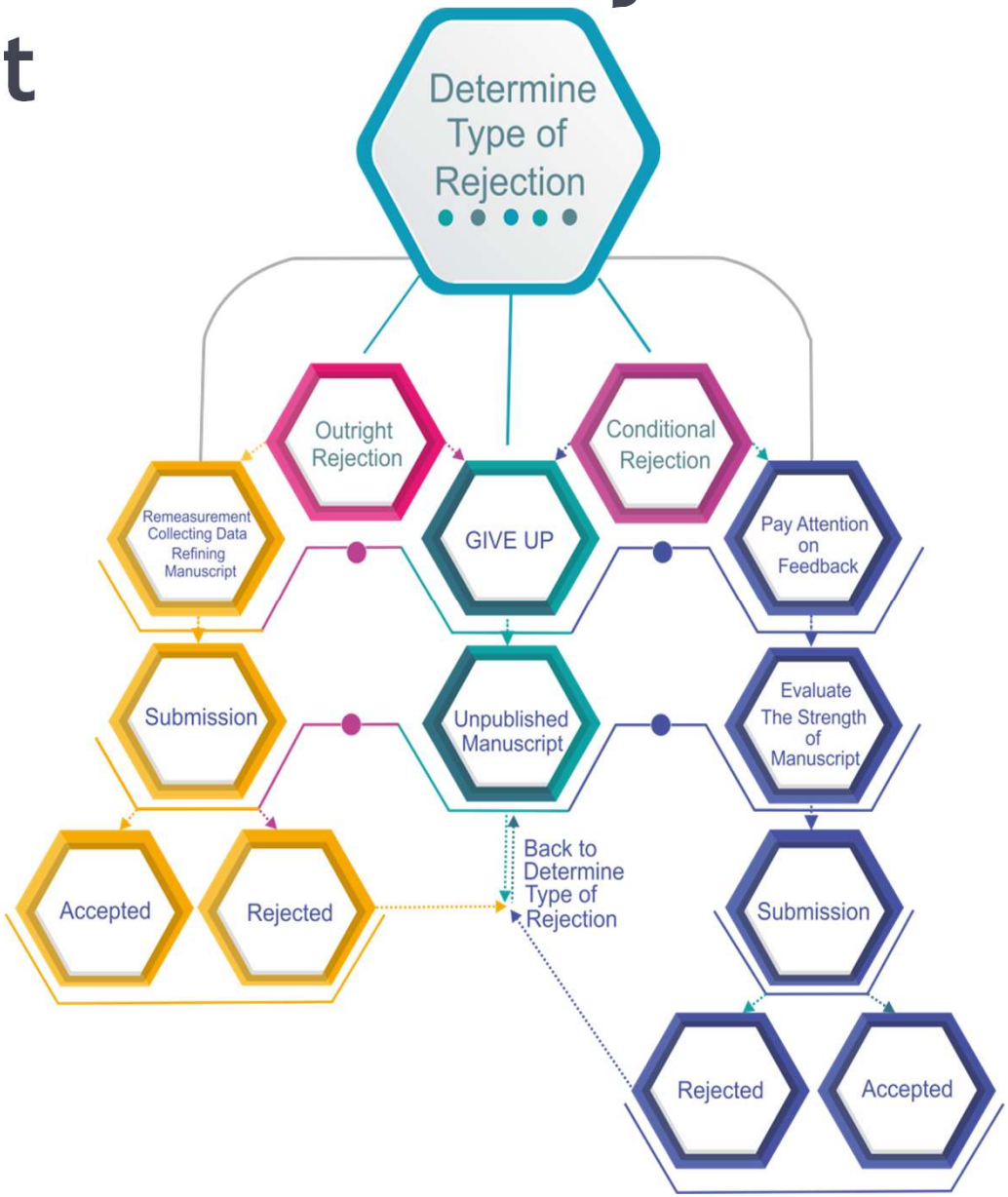
What to Do After the Rejection of the Manuscript



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Elements to evaluate per section when revising the rejected article

Section	Potential Rejection Reason	Requirements for Acceptation
Abstract	• Unclear • Does not adequately describe the research work presented in the whole manuscript	• Consists of all components • Well-written • Data are accurate • Expresses the originality of the work
Introduction	• No clear statement on objective, hypothesis, or aim of the study • Inadequate references	• Shows that the research is up to date and contributes to the state of the art • Provides a brief detail on interesting points related to innovation, new conceptualizations, or any new finding from the presented results

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Elements to evaluate per section when revising the rejected article

Section	Potential Rejection Reason	Requirements for Acceptation
Materials and Methods	• Clear description of procedures are missing, indicating that the results are not reproducible • Questionable data Inadequate/missing figures/tables • Poor use of language (i.e., grammar, punctuation, and spelling errors)	• Accurate data • All research components are present and clearly stated • The used procedures are clearly described in a concise manner and are easily replicable • Manuscript advances previous knowledge • All compliance guidelines are met • Tables and figures contribute substantially to the content

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Elements to evaluate per section when revising the rejected article

Section	Potential Rejection Reason	Requirements for Acceptation
Results	• Missing or unsupportive results in relation to the items mentioned in the Materials and Methods section • Does not answer the research questions • Not credible • Statistical significance of the findings is not stated	• Exhibit the significance of the findings • Results are credible and answer the research question/hypothesis • Contains effective and well-prepared figures and tables
References	• The numbers of the list do not match the ones in the text • Too many or too few • Too old (out of date)	• Up to date • Relevant • Appropriate to manuscript type • Correlate well with the text

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4. Dealing with feedback, revisions

- **Accepted** – no revision needed
- **Revise and Resubmit** – minor or major revision required
- **Rejected**

Authors are expected to respond to each comment in **systemic, succinct and clear form**, to correct all what is related to the improvement of sentences, punctuation, abbreviations, references, and grammar, to show the respect to reviewers and their comments and to show the “try” to respond to suggestions (to explain, why some proposed changes are impossible).

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The do's and don'ts of responding to the reviewer feedback

do's

- ***Respond to each comment***
  - The authors have to submit the revised manuscript along with a point-by-point response to each reviewer's comment.
- ***Always agree to the reviewer feedback that is related to the improvement of sentences, punctuation, abbreviations, and grammar***
  - Authors need to make sure that the required actions for correction has been made and that the reviewers or the editor can easily see the changes in the revised version.

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The do's and don'ts of responding to the reviewer feedback

do's

- ***Begin the response to each comment with a direct answer to the point***
- ***Respect the reviewer and their comments***
- ***Keep the responses succinct and clear***
- ***Do what the reviewer asks, if possible***
- ***Give an explanation for not fully adhering to demands***
- ***Respond to reviewer's suggestion for references***
- ***Provide the revision summary/report***

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The do's and don'ts of responding to the reviewer feedback

don'ts

1. **Don't forget to address any feedback from the reviewers**. If this happens, it reflects that the authors did not take the feedback sincerely.

2. **Don't argue against every single comment**. If the reviewer has suggested a minor revision that the authors might not entirely agree with, but it is easy to comply with and does not take away any value from the study, it might be easier just to incorporate it.

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The do's and don'ts of responding to the reviewer feedback

don'ts

3. **Don't cause controversy among the reviewers**. *A reviewer may give suggestions or feedback that is contrary to the feedback of other reviewers*. Do not use this to cause controversy among them. For example, avoid making statements such as "*reviewer A actually suggests the opposite of what you are suggesting*." The authors must take the most appropriate action for a better manuscript. So, they must strive for the approval of one reviewer and explain properly to the other one why this decision was made, leaving the other reviewer out of it.

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The do's and don'ts of responding to the reviewer feedback

don'ts

4. Don't deny the request of the reviewers to include the original/raw data as it will probably result in fundamental improvements of the manuscript.
5. In case the reviewers have the same feedback, do not ask one reviewer to go and read the response of the other. For example, "*Your question is similar to that of reviewer B, just look at my response for Reviewer B.*"

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5. Resubmitting the revised paper

a. Read the comments carefully

b. Itemize and group the comments (overlap of same issue raised by both reviewers)

c. Discussion with co-authors and colleagues

d. Revised manuscript with table of revision

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6. Final administration

a. Acknowledgement email from the publisher
b. Decision letter (copy editing and type setting)
c. Copyright (In order to publish the manuscript, the author and the publisher are required to agree on certain right and responsibilities.)
d. Access and share the manuscript (At this stage, no further changes are possible)
e. *'Early view article'* that carries an online publication date and Digital Object Identifier (DOI) for citation. Most of the publishers provide a personalized link to the final published version of the article that can be used for sharing via email or social networks.

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7. In class assignment and homework

a. Form group of 4 people with common research interest and different country of origin.
b. Discuss the paper you are preparing.
c. Describe the journal and your motivation of publishing it there.

d. Find a review (and bring it) of recently published or accepted paper and present them. How did you cope with referee remarks and recommendations?
e. Prepare a list of 5 journals that might suit you with your future submissions. Explain characteristics of journals and why you might choose exactly those.

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Summer School Program (Malaysia)

Transferable Research Skills for Trainers I

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities

REPESEA SUMMER SCHOOL, 29.7. - 2.8.2019, UiTM Melaka

Ivan Sedliačik

Matej Bel University, Slovakia

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Publishing in academic outlets: Picking the “right” journal and successful submission process

Erasmus+ Capacity Building in Higher Education
Assessing and Improving Research Performance at South East Asian Universities
REPESEA SUMMER SCHOOL, 29.7. - 2.8.2019, UiTM Melaka

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III. Hands on / Presentation of assignments 1, 2

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Contents

I. Picking „the right“ journal

II. Successul submissions process

III. Hands on / Presentation of assignments 1

IV. Hands on / Presentation of assignments 2

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Objectives

a. Showing best practices of dealing with paper reviews.

b. Identification of possible paper rejection reasons.

c. Sharing paper publication strategies and motivations.

d. Identification of suitable journals for participants future publishing.

e. Getting to know personal expertise of participants as basis for potential future research and publishing cooperation.

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Assignment 1

a. Present in brief a review of your recently published or accepted paper.

b. How did you manage with referee remarks and recommendations?

c. What do you think was the keypoint of acceptance of your paper?

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Assignment 2

a. „Refresh“ your group of 4 people with common research interest and possibly with different country of origin.

b. Present the paper you are preparing (one per group).

c. Describe the journal and your motivation of publishing it there.

d. All others, pls advice your colleague alternative journal that is suitable for upcoming publishing.

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Assignment 3

a. You were supposed to prepare a list of 5 journals that might suit you with your future submissions.

b. Explain the characteristics of prefered journal and why you might choose exactly that one.

c. Identify your academic or personal goals and prepare your brief „publication“ strategy for upcoming 2 years.

d. Present it.

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Assignment 4 / (in-class or homework)

a. Create (or login to) a profile in your upcoming journal publication/submission system.

b. Search for important information.

c. Make summary notes.

d. Present it to the class.

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Homework

a. Find 2-3 reviews (and bring it) of recently rejected papers

b. Prepare brief presentation of them.

c. What were the reasons of rejection?

d. What would you change back then if you knew them?

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Thank you for your attention!

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