

Guia Básico para Uso do Biblioshiny

Michele Nascimento Jucá

1. Objetivos do material

- Instalação dos softwares R
- Importação do arquivo para o Biblioshiny
- Apresentação das principais análises realizadas pelo software, incluindo as estatísticas descritivas de dados obtidos junto aos artigos para fins de análise bibliométrica

2. Referências de artigos sobre revisão sistemática

2.1 Exemplos de artigos de análise bibliométrica e revisão sistemática que usam o Biblioshiny

Artigo 1 – Shome, S., Hassan, M. K., Verma, S., & Panigrahi, T. R. (2023). Impact investment for sustainable development: A bibliometric analysis. *International Review of Economics & Finance*, 84, 770-800. <https://doi.org/10.1016/j.iref.2022.12.001>

Artigo 2 – Cosma, S., Rimo, G., & Cosma, S. (2023). Conservation finance: What are we not doing? A review and research agenda. *Journal of Environmental Management*, 336, 117649. <https://doi.org/10.1016/j.jenvman.2023.117649>

Artigo 3 – Sharma, G. D., Verma, M., Shahbaz, M., Gupta, M., & Chopra, R. (2022). Transitioning green finance from theory to practice for renewable energy development. *Renewable Energy*, 195, 554-565. <https://doi.org/10.1016/j.renene.2022.06.041>

Artigo 4 - Khan, M. A. (2022). ESG disclosure and firm performance: A bibliometric and meta analysis. *Research in International Business and Finance*, 61, 101668. <https://doi.org/10.1016/j.ribaf.2022.101668>

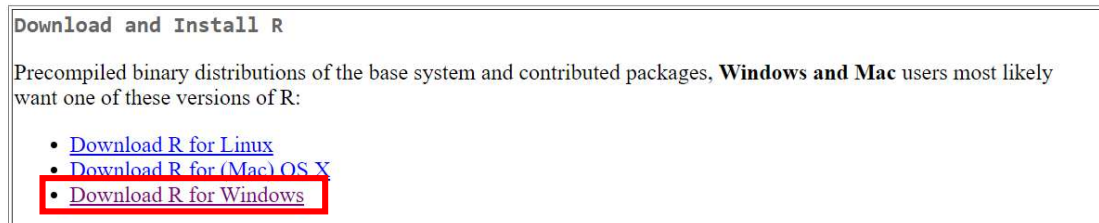
2.2 Referência de artigo sobre o pacote Bibliometrix

Artigo 5 - Aria, M. & Cuccurullo, C. (2017) bibliometrix: An R-tool for comprehensive science mapping analysis, *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>

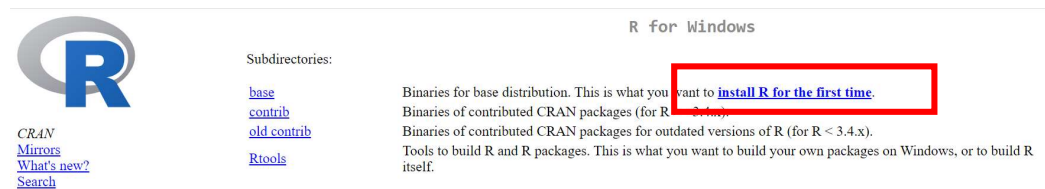
3. Instalação do software R

3.1 Baixe e instale a versão mais recente do R, clicando em <https://cran.r-project.org>

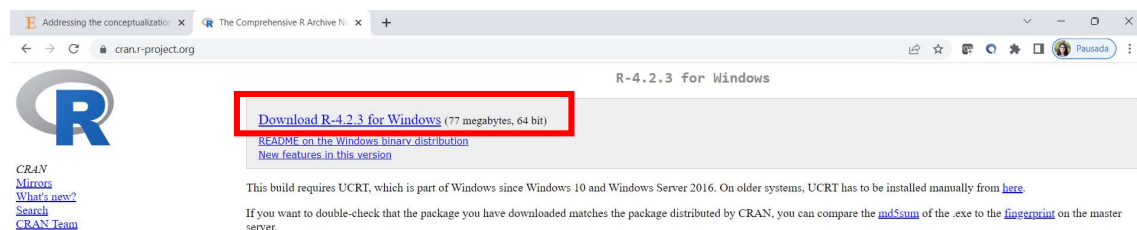
3.2 Clicar em Download R for Windows



3.3 Clicar em Install R for the first time



3.4 Clicar em Download R 4.2.3 for Windows (77 megabytes, 64 bit)



3.5 Acesso ao Biblioshiny no ambiente web a partir do R

Instalação dos pacotes básicos do R e Bibliometrix

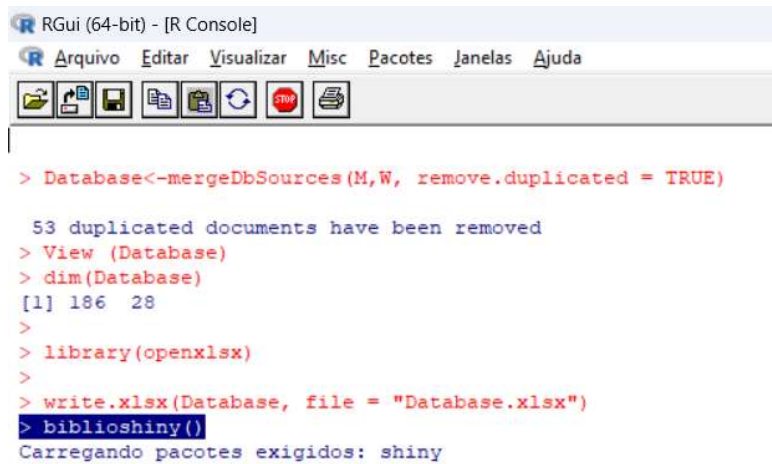
```
install.packages("openxlsx")
```

Obs: Se o sistema perguntar: Would you like to use a personal library instead? Clique em YES e depois escolha a opção Brazil (SP 1) [https] e Clicar em OK

```
install.packages("bibliometrix")
```

```
library("bibliometrix")
```

```
biblioshiny()
```



```

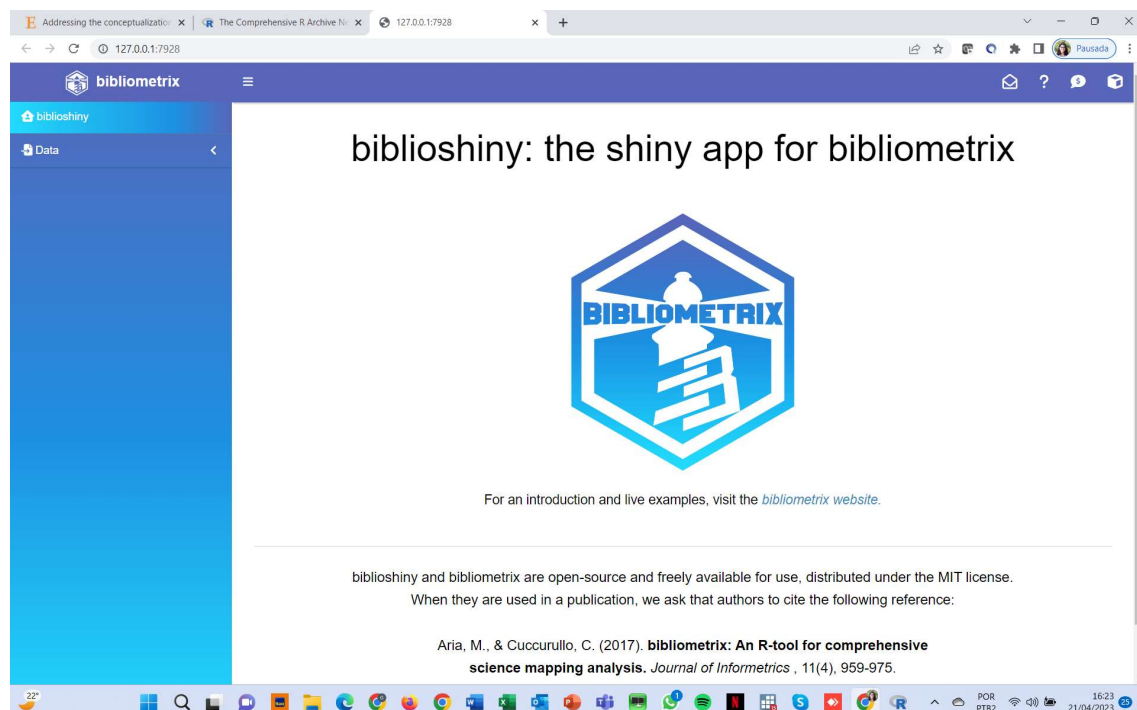
RGui (64-bit) - [R Console]
Arquivo Editar Visualizar Misc Pacotes Janelas Ajuda

> Database<-mergeDbSources(M,W, remove.duplicated = TRUE)

53 duplicated documents have been removed
> View (Database)
> dim(Database)
[1] 186 28
>
> library(openxlsx)
>
> write.xlsx(Database, file = "Database.xlsx")
> biblioshiny()
Carregando pacotes exigidos: shiny

```

Obs: Deve abrir a seguinte página no seu ambiente web:



4. Informações iniciais sobre o Biblioshiny

4.1 Como usar o Biblioshiny

Please follow the biblioshiny tutorial at:

www.bibliometrix.org/biblioshiny

<http://www.bibliometrix.org/biblioshiny/assets/player/KeynoteDHTMLPlayer.html#0>

https://www.bibliometrix.org/vignettes/Introduction_to_bibliometrix.html

Video: <https://www.youtube.com/watch?v=9YwVhFEovCA>

O Biblioshiny é um aplicativo que fornece uma interface da web para bibliometrix.

Ele apoia os estudiosos no uso fácil dos principais recursos do bibliometrix:

o Importação de dados e conversão para coleta de quadro de dados

o Coleta de dados usando Dimensions, PubMed e coleta de APIs Scopus

- o Filtragem de dados
- o Analytics e Plots para três métricas de nível diferentes:
 - Fontes
 - Autores
 - Documentos
- o Análise de três estruturas de conhecimento (estruturas K):
 - Estrutura Conceitual
 - Estrutura Intelectual
 - Estrutura Social

4.2 Alguns conceitos importantes

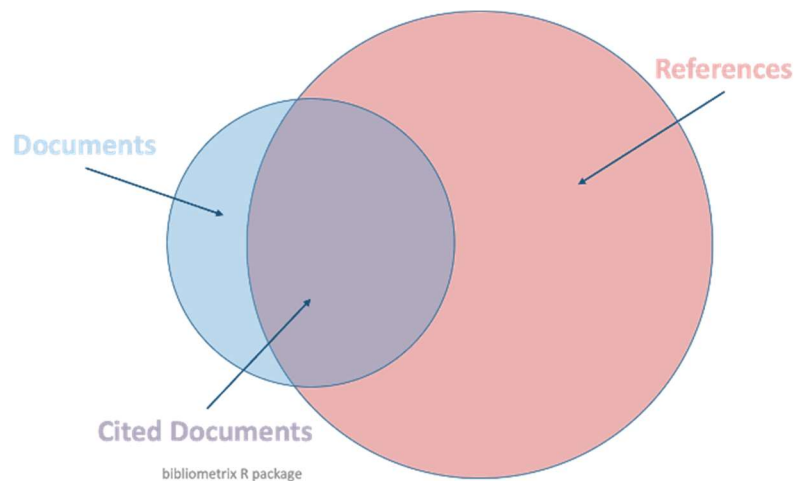
Global Citations (TC) means the Total Citations that an article, included in your collection, has received from documents indexed on a bibliographic database (WoS, Scopus, etc.). So, TC counts citations received by a selected article "all over the world".

In **Most Cited References**, Bibliometrix counts the local citations, in other words, the citations that a reference (a document included in, at least, one of the bibliographies of the articles in your collection) has received from documents included in your collection.

The reference lists include all documents from bibliographies as then many of the references could not be part of your collection! When a reference is also part of your collection, it is called "Cited document".

So, **Local citations** are citations received by a reference article "internally to your collection".

- A cited document is a document cited by other document of the same collection
- It belongs both in the Document Set and in the Reference Set



Data frame columns are named using the standard Clarivate Analytics WoS Field Tag codify:

Field Tag	Description
AU	Authors
TI	Document Title
SO	Publication Name (or Source)
JI	ISO Source Abbreviation
DT	Document Type
DE	Authors' Keywords

ID	Keywords associated by SCOPUS or ISI database
AB	Abstract
C1	Author Address
RP	Reprint Address
CR	Cited References
TC	Times Cited
PY	Year
SC	Subject Category
UT	Unique Article Identifier
DB	Bibliographic Database

An object of class “bibliometrix” is a list containing the following components:

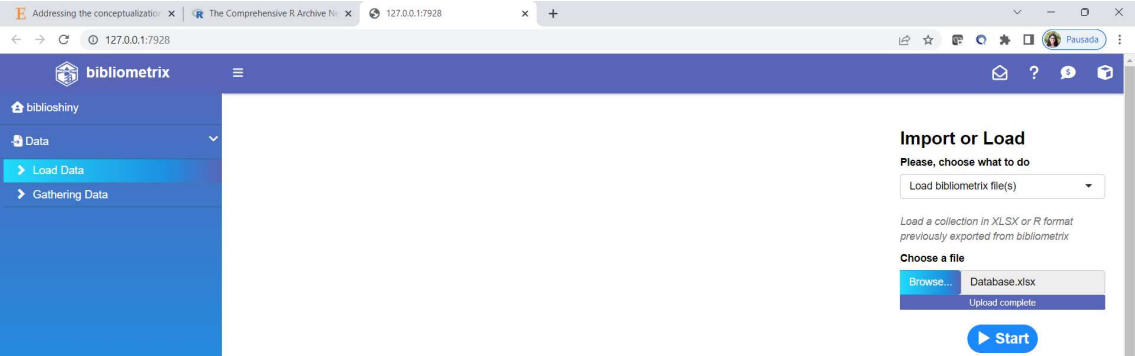
List element	Description
Articles	the total number of manuscripts
Authors	the authors’ frequency distribution
AuthorsFrac	the authors’ frequency distribution (fractionalized)
FirstAuthors	corresponding author of each manuscript
nAUpperPaper	the number of authors per manuscript
Appearances	the number of author appearances
nAuthors	the number of authors
AuMultiAuthoredArt	the number of authors of multi-authored articles
MostCitedPapers	the list of manuscripts sorted by citations
Years	publication year of each manuscript
FirstAffiliation	the affiliation of the corresponding author
Affiliations	the frequency distribution of affiliations (of all co-authors for each paper)
Aff_frac	the fractionalized frequency distribution of affiliations (of all co-authors for each paper)
CO	the affiliation country of the corresponding author
Countries	the affiliation countries’ frequency distribution
CountryCollaboration	the intra-country (SCP) and inter-country (MCP) collaboration indices
TotalCitation	the number of times each manuscript has been cited
TCperYear	the yearly average number of times each manuscript has been cited
Sources	the frequency distribution of sources (journals, books, etc.)
DE	the frequency distribution of authors’ keywords
ID	the frequency distribution of keywords associated to the manuscript by SCOPUS and Thomson Reuters’ ISI Web of Knowledge databases

5. Importação da base de dados – arquivo Database.xlsx

Na página do Biblioshiny da internet, seguir esses comandos, clicando em:

Data / Load data / Import or Load: Load bibliometrix file(s) / Choose a file: Importar o arquivo.xlsx – **ex: Database** / Start

Obs: Esse arquivo Database foi obtido a partir dos critérios de pesquisa apresentados na Aula 3 sobre ANÁLISE BIBLIOMÉTRICA/REVISÃO SISTEMÁTICA que ocorreu no dia 27/04/2023. O tema de pesquisa refere-se à ESG and “financial performance” e os anos de análise são 2021 e 2022.



Completeness of bibliographic metadata

Metadata	Description	Missing Counts	Missing %	Status
C1	Affiliation	0	0.00	Excellent
AU	Author	0	0.00	Excellent
DT	Document Type	0	0.00	Excellent
SO	Journal	0	0.00	Excellent
LA	Language	0	0.00	Excellent
TI	Title	0	0.00	Excellent
TC	Total Citation	0	0.00	Excellent
AB	Abstract	1	0.54	Good
DE	Keywords	1	0.54	Good
RP	Corresponding Author	4	2.15	Good
DI	DOI	5	2.69	Good
PY	Publication Year	9	4.84	Good
ID	Keywords Plus	78	41.94	Poor
CR	Cited References	94	50.54	Critical
NR	Number of Cited References	186	100.00	Completely missing
WC	Science Categories	186	100.00	Completely missing

The screenshot shows the Bibliometrix web application interface. On the left is a sidebar with navigation options: biblioshiny, Data, Load Data, Gathering Data, Filters, Overview, Sources, Authors, Documents, Clustering, Conceptual Structure, Intellectual Structure, Social Structure, Report, and Settings. The main area displays a table with columns: DOI, AU, DE, ID, C1, JI, AB, AR, and RP. The table contains three rows of bibliometric data. On the right, there is an 'Import or Load' sidebar with options to load a collection in XLSX or R format, choose a file (Browse... or Database.xlsx), and a 'Start' button. Below this, 'Conversion results' show 'Number of Documents: 186'. At the bottom, there is an 'Export collection' section with a 'Save as:' dropdown.

DOI	AU	DE	ID	C1	JI	AB	AR	RP
10.1016/j.jclepro.2022.134951	CHEN H KUO T CHEN J	CLIMATE CHANGE- RELATED RISKS AND OPPORTUNITIES ENVIRONMENTAL FINANCIAL PERFORMANCE MANUFACTURING INDUSTRY MULTILEVEL QUADRATIC GROWTH MODE O	BENCHMARKING, CLIMATE MODELS, AND DECISION MAKING ECONOMIC AND SOCIAL EFFECTS, ENVIRONMENTAL MANAGEMENT FINANCE, MANUFACTURE RISK ASSESSMENT: CL	DEPARTMENT OF MARKETING AND LOGISTICS MANAGEMENT, CHILSEE UNIVERSITY OF TECHNOLOGY, TAIPEI (2205), TAIWAN, DEPARTMENT OF INDUSTRIAL MANAGEMENT, NATION	J. CLEAN PROD.	IN THE FACE OF GLOBAL SYSTEMIC RISKS BROUGHT ABOUT BY CLIMATE CHANGE GOVERNMENT ORGANIZATIONS, CIVIL SOCIETIES, AND ENTERPRISES GLOBALLY HAVE BEGUN S	134951	CHEN, H.-M., DEPARTMENT OF I AND LOGISTICS MANAGEM EMAIL: BROOKSMIN@MAIL.CHILSEE
10.1016/j.jclepro.2022.134721	LIU P ZHU B YAO M CHU X	ENVIRONMENTAL SOCIAL GOVERNANCE: ESG FINANCIAL PERFORMANCE: FUZZY SET QUALITATIVE COMPARATIVE ANALYSIS, NEW ENERGY	FUZZY SETS CAUSAL RELATIONSHIPS, CORPORATE FINANCIAL PERFORMANCE: ENERGY COMPANIES ENVIRONMENTAL SOCIAL GOVERNANCE: ENVIRONMENTAL SOCIAL AND D	SCHOOL OF MANAGEMENT SCIENCE AND ENGINEERING, SHANDONG UNIVERSITY OF FINANCE AND ECONOMICS, SHANDONG JINAN, 250014, CHINA; SCHOOL OF ECONOMICS AND MA	J. CLEAN PROD.	THE RELATIONSHIP BETWEEN ENVIRONMENTAL SOCIAL AND GOVERNANCE (ESG) AND CORPORATE FINANCIAL PERFORMANCE (CFP) HAS RECEIVED MUCH ATTENTION, PREVIOUS S	134721	LIU, P.; SCHOOL OF MANAG SCIENCE AND ENGINEERING S CHINA; EMAIL: PEIDE LIU@S
10.1007/s40804-022-00264-0	MCCAHERY J PUDSCHEDL P STENDL M	ESG: EXIT INSTITUTIONAL INVESTORS PRIVATE EQUITY; VENTURE CAPITAL, VOICE	TILBURG UNIVERSITY; TILEC, AND ESG: TILBURG, NETHERLANDS; TILBURG UNIVERSITY; TILEC, TILBURG, NETHERLANDS; UNIVERSITY OF APPLIED SCIENCES WIENER NEUS	EUR. BUS. ORD. LAW REV.	WE SURVEY INSTITUTIONAL INVESTORS TO UNDERSTAND WHY THEY INTEGRATE ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS INTO THEIR INVESTMENT MANAGEMENT			MCCAHERY, J.A.; TILBURG UN NETHERLANDS; EMAI J.A.MCCAHERY@TILBURGUNIV PUDSCHEDL, P.C.; TILBURG UP NETHERLANDS; EMAIL

Showing 1 to 3 of 186 entries

6. Exemplos de análises do Biblioshiny

Na barra azul à esquerda, escolher os tipos de análise desejadas pelos seguintes critérios: Overview, Sources, Authors, Documents, Clusterings, Conceptual Structure, Intellectual Structure, Social Structure. Dica: **Após escolher a análise, clicar em Run, quando indicado.**

6.1 Overview

Overview / Main information / Plot

The screenshot shows the 'Main Information' dashboard in the Bibliometrix web application. The dashboard displays various key metrics in a grid format:

- Timespan:** 2021:2023
- Sources:** 93
- Documents:** 186
- Annual Growth Rate:** -31.49 %
- Authors:** 457
- Authors of single-authored docs:** 17
- International Co-Authorship:** 20.97 %
- Co-Authors per Doc:** 2.76
- Author's Keywords (DE):** 600
- References:** 5492
- Document Average Age:** 1.15
- Average citations per doc:** 9.812

The left sidebar shows the navigation menu with 'Overview' selected, and 'Main Information' is highlighted under the 'Overview' section.

Overview / Main information / Table

Main Information

Show 50 rows

Copy

CSV

Excel

PDF

Print

Search:

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2021:2023
Sources (Journals, Books, etc)	93
Documents	186
Annual Growth Rate %	-31.49
Document Average Age	1.15
Average citations per doc	9.812
References	5492
DOCUMENT CONTENTS	
Keywords Plus (ID)	430
Author's Keywords (DE)	600
AUTHORS	
Authors	457
Authors of single-authored docs	17
AUTHORS COLLABORATION	
Single-authored docs	22
Co-Authors per Doc	2.76
International co-authorships %	20.97
DOCUMENT TYPES	
article	177
article; early access	9

Showing 1 to 21 of 21 entries

Previous1Next

Overview / Annual Scientific Production / Table

bibliometrix

biblioshiny

Data

Filters

Overview

Main Information

Annual Scientific Production

Average Citations per Year

Three-Field Plot

Annual Scientific Production

Plot

Table

Show 10 rows

Copy

CSV

Excel

PDF

Print

Search:

Year	Articles
2021	49
2022	105
2023	23

Showing 1 to 3 of 3 entries

Previous1Next

Overview / Average Citations Per Year/ Table

bibliometrix

biblioshiny

Data

Filters

Overview

Main Information

Annual Scientific Production

Average Citations per Year

Three-Field Plot

Average Citations Per Year

Plot

Table

Show 10 rows

Copy

CSV

Excel

PDF

Print

Search:

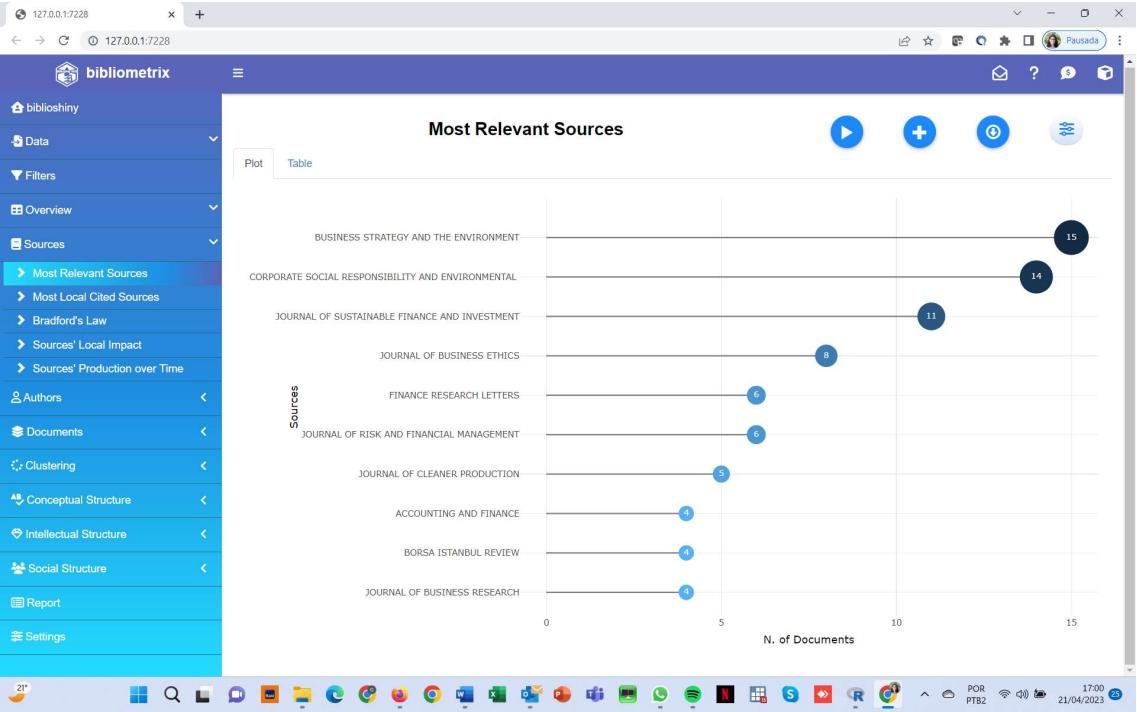
Year	MeanTCperArt	N	MeanTCperYear	CitableYears
2021	18.9	49.00	6.30	3
2022	7.53	105.00	3.77	2
2023	3.17	23.00	3.17	1

Showing 1 to 3 of 3 entries

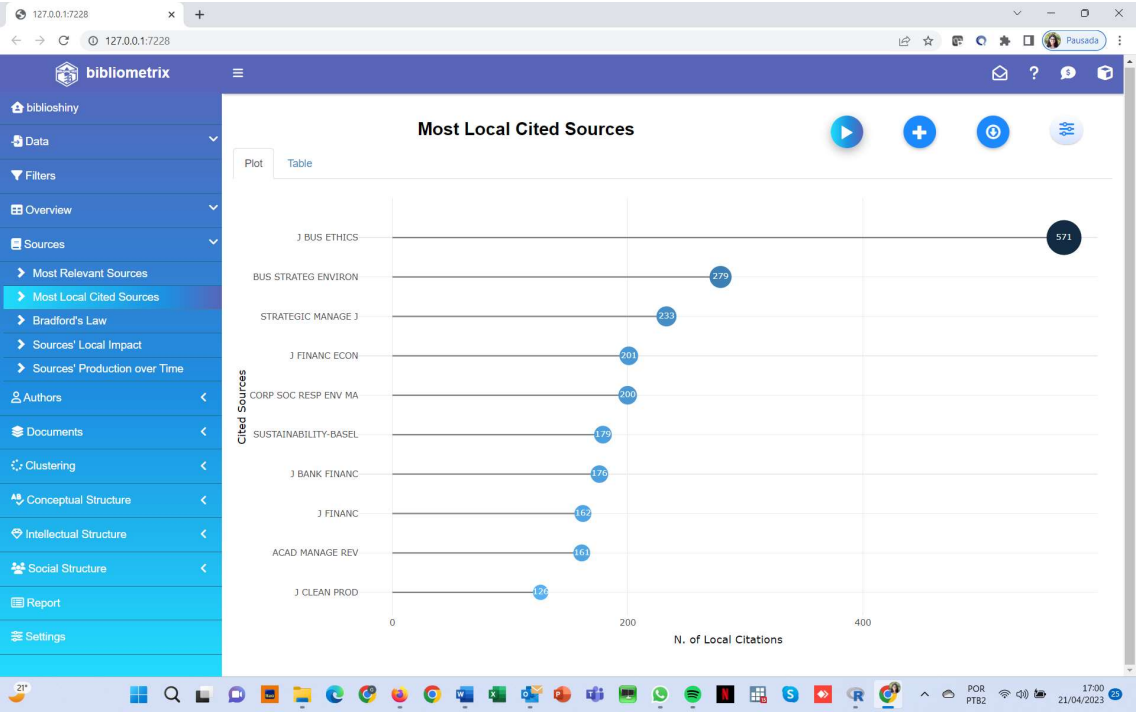
Previous1Next

6.2 Análise dos periódicos - Sources

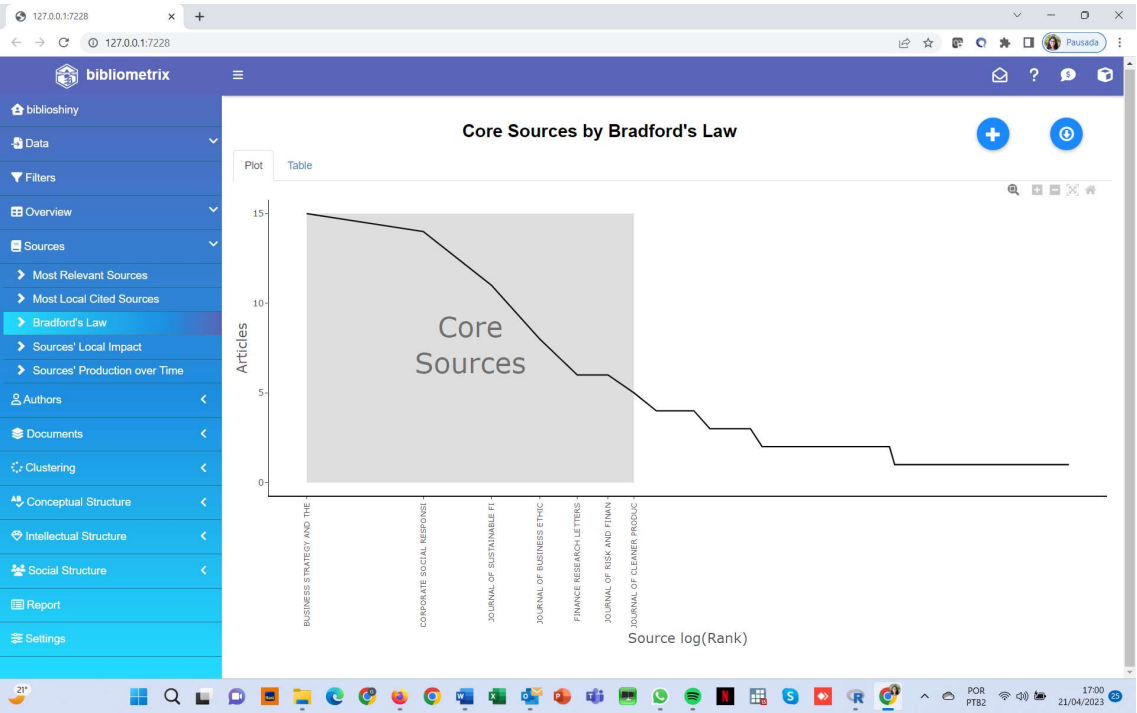
Sources / Most Relevant Sources



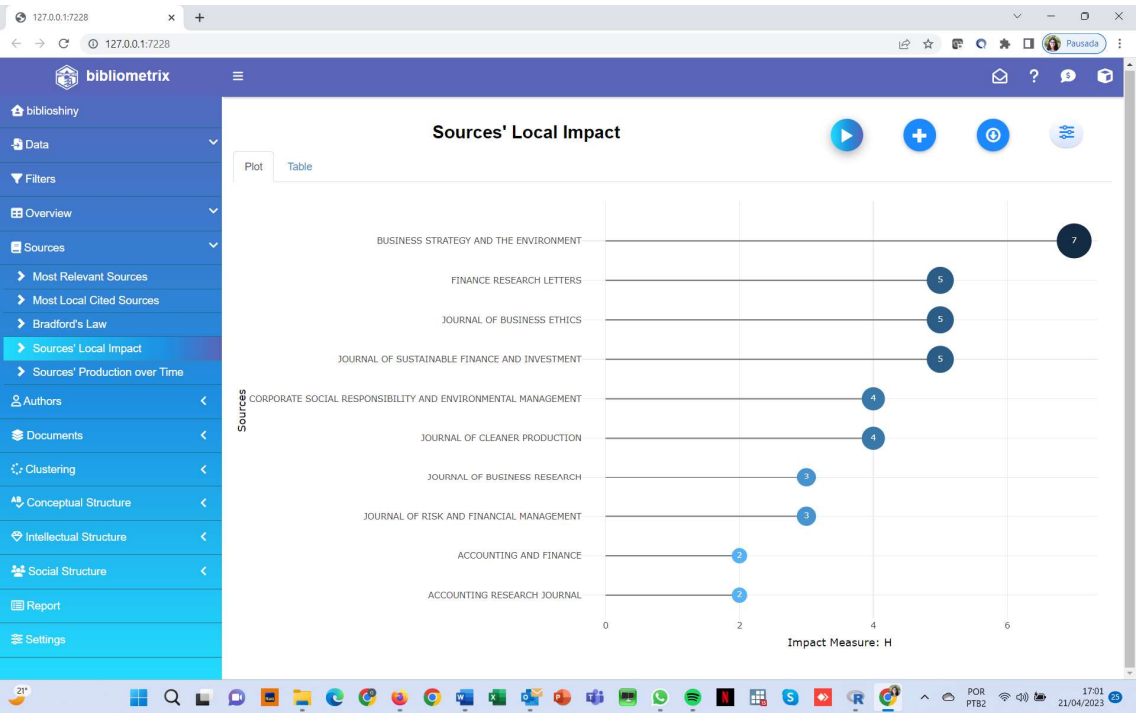
Sources / Most Local Cited Sources



Sources / **Bradford's Law**



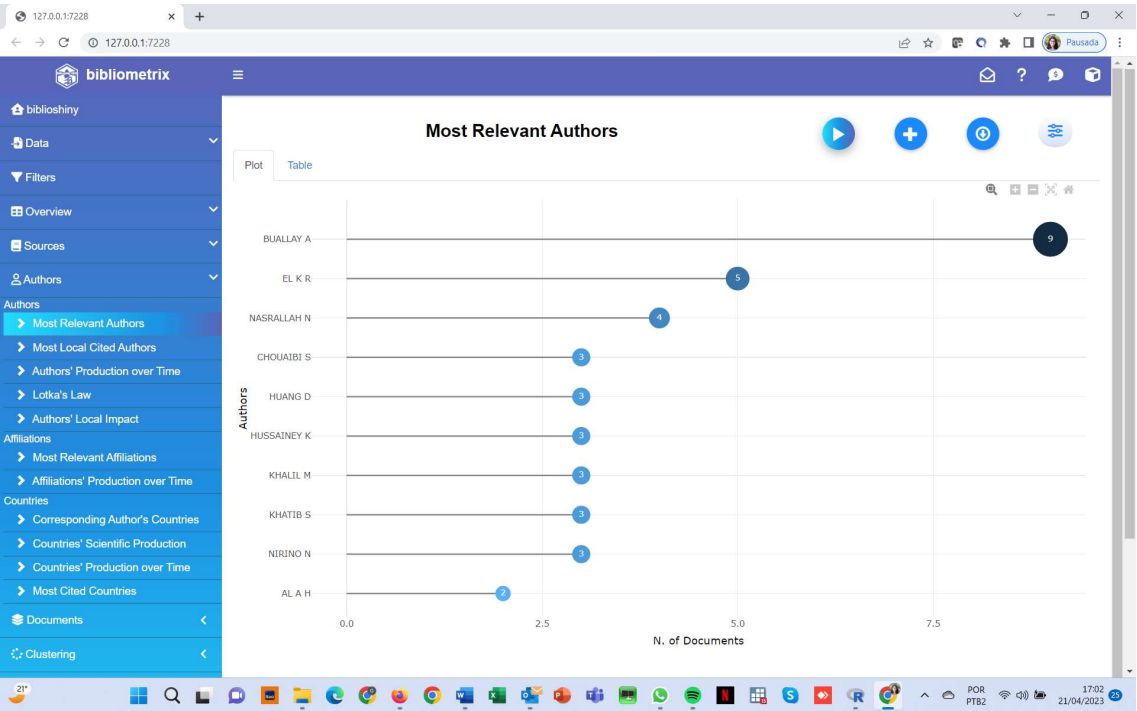
Sources / Source Local Impact



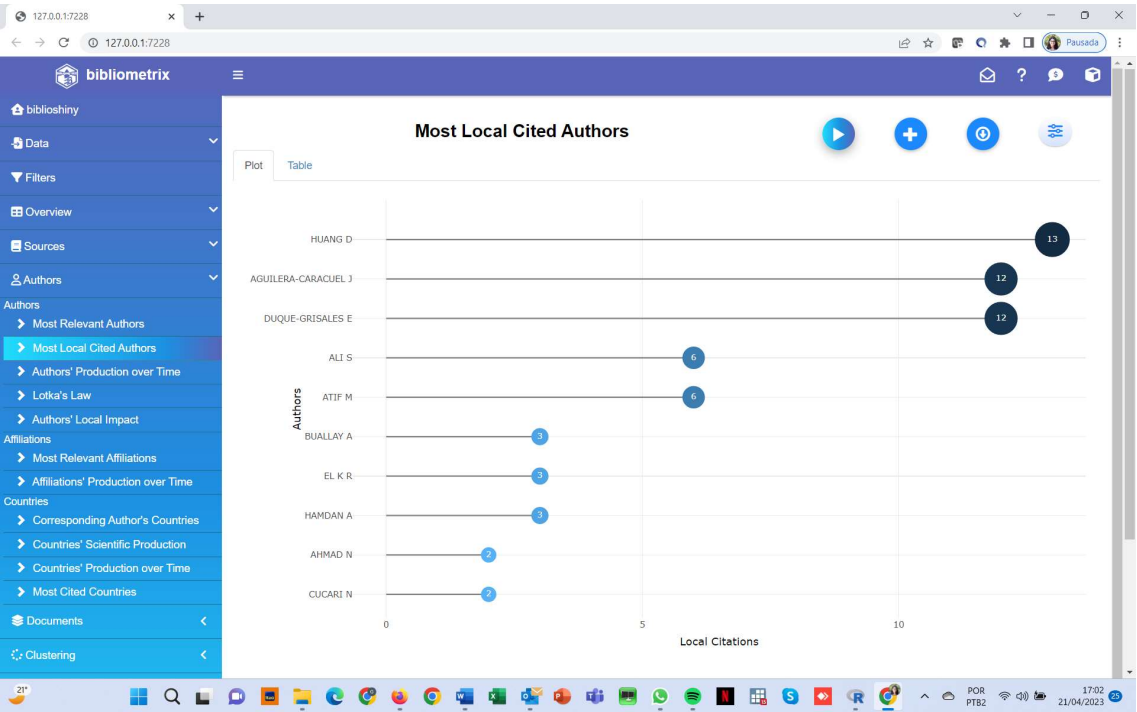
Obs: Local citations are citations received by a reference article "internally to your collection".

6.3 Análise dos autores - Authors

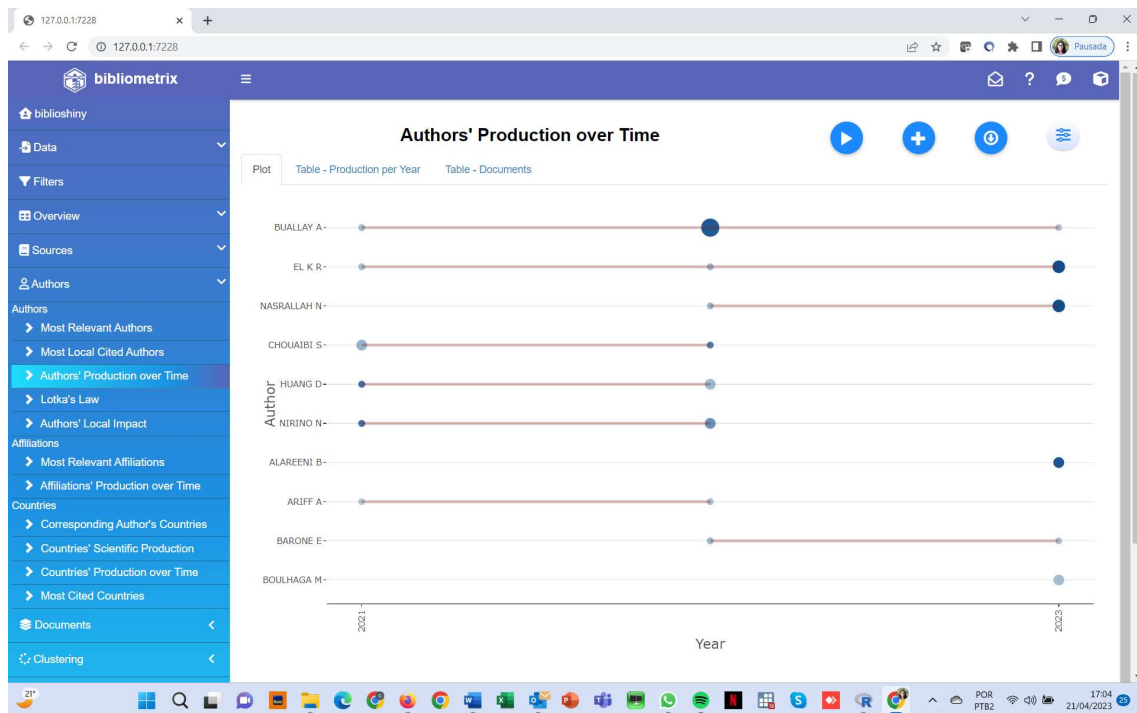
Authors / Most Relevant Authors



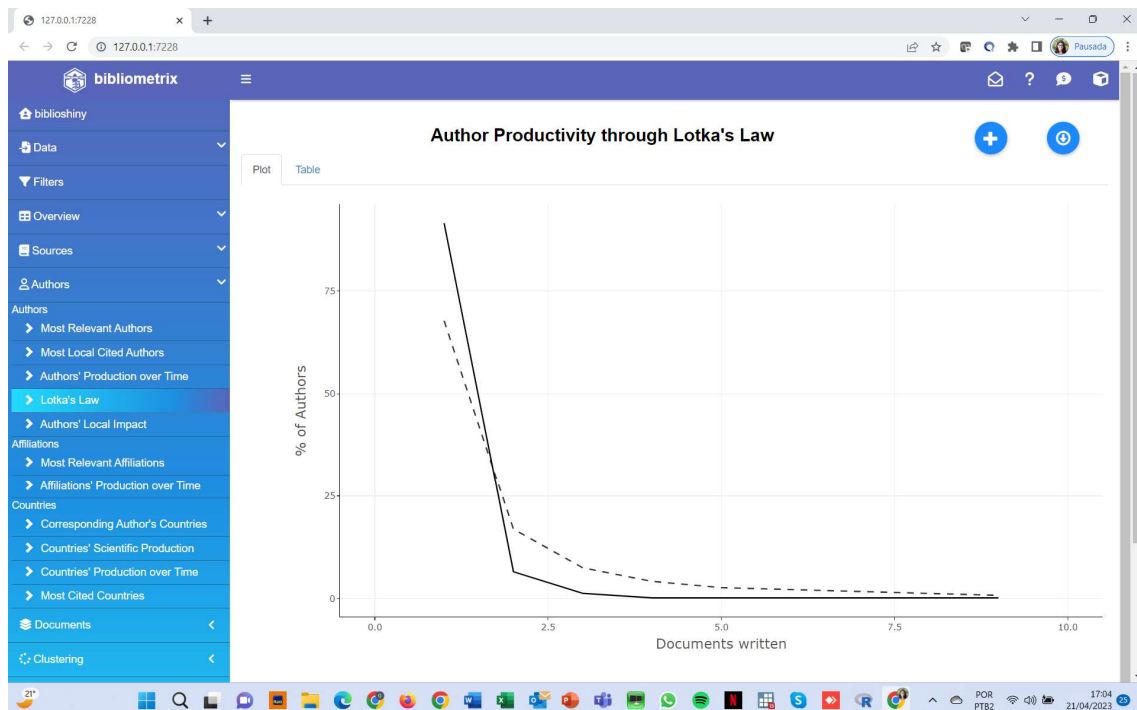
Authors / Most Local Cited Authors



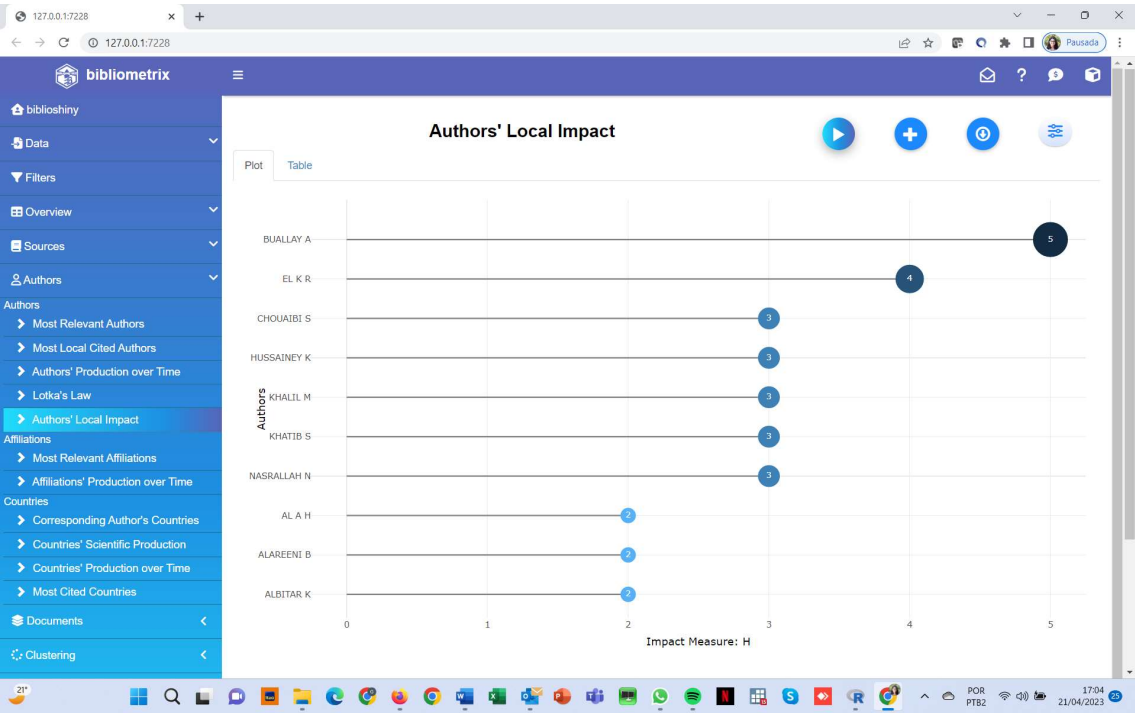
Authors / Authors' Production over Time



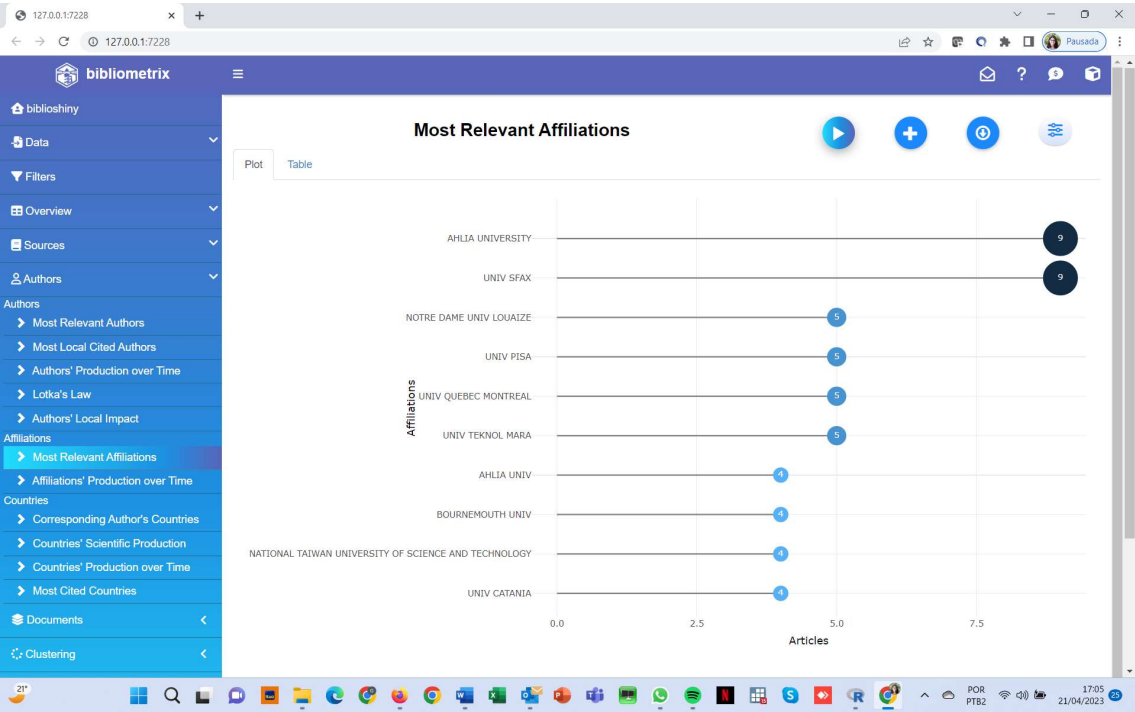
Authors / Lotka's Law



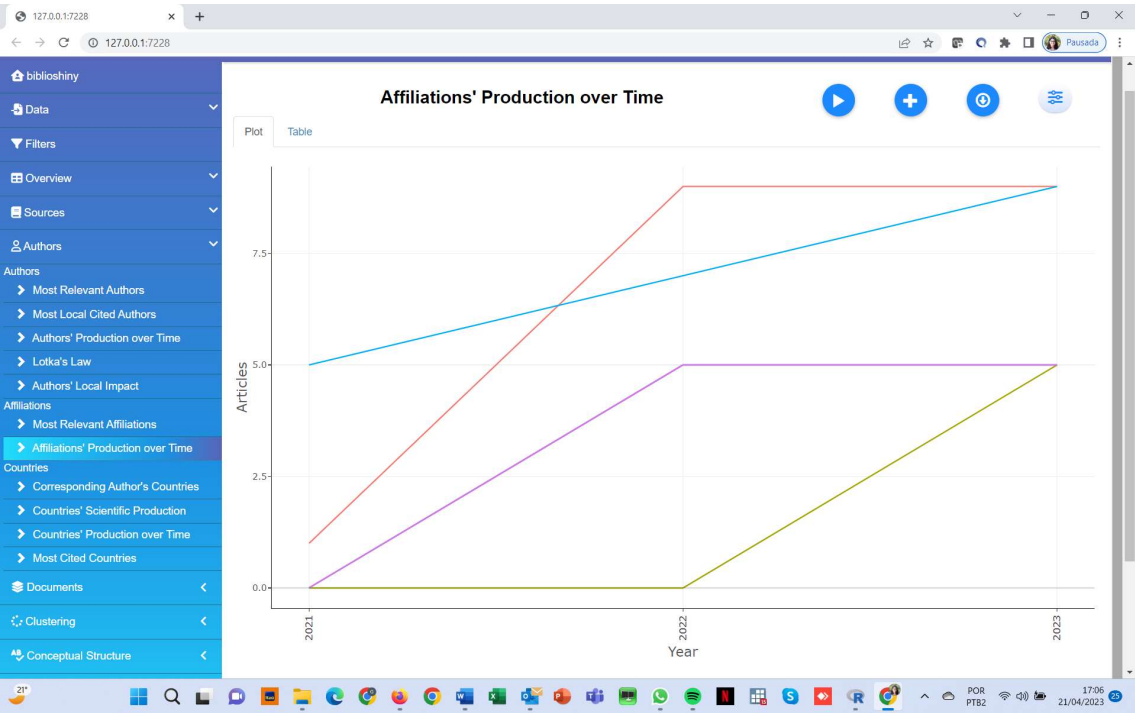
Authors / Author's Impact



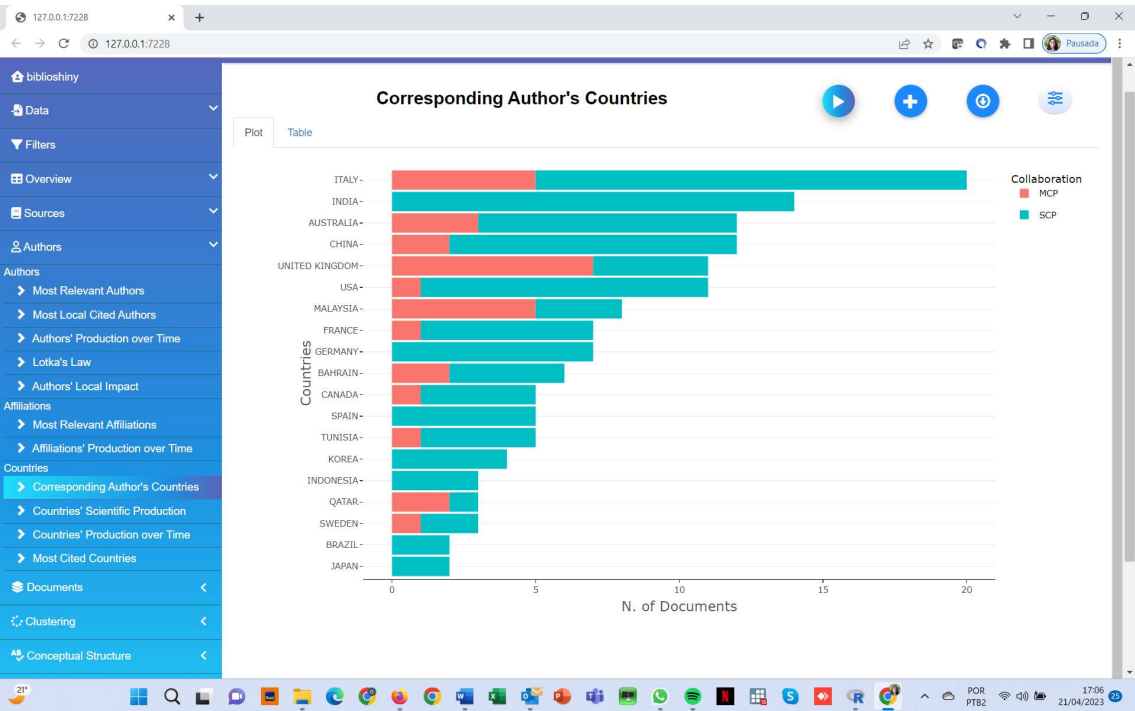
Authors/ Affiliations / Most Relevant Affiliations



Authors/ Affiliations / Affiliations' Production over Time

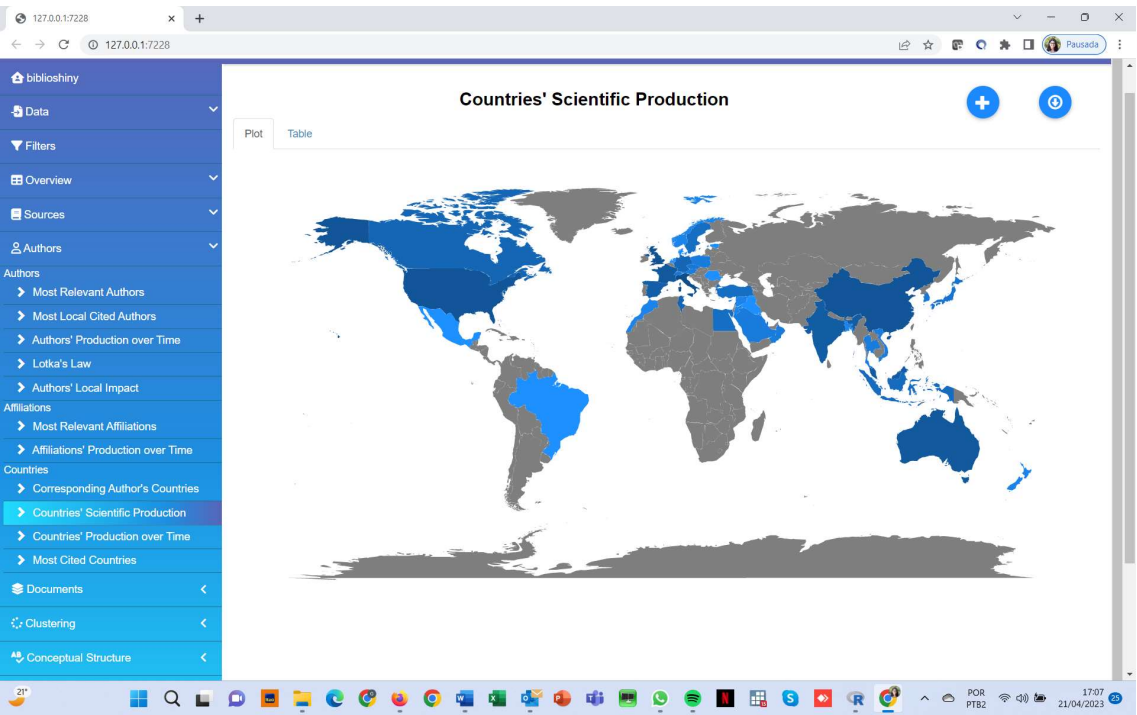


Authors / Countries / Corresponding Author's Country

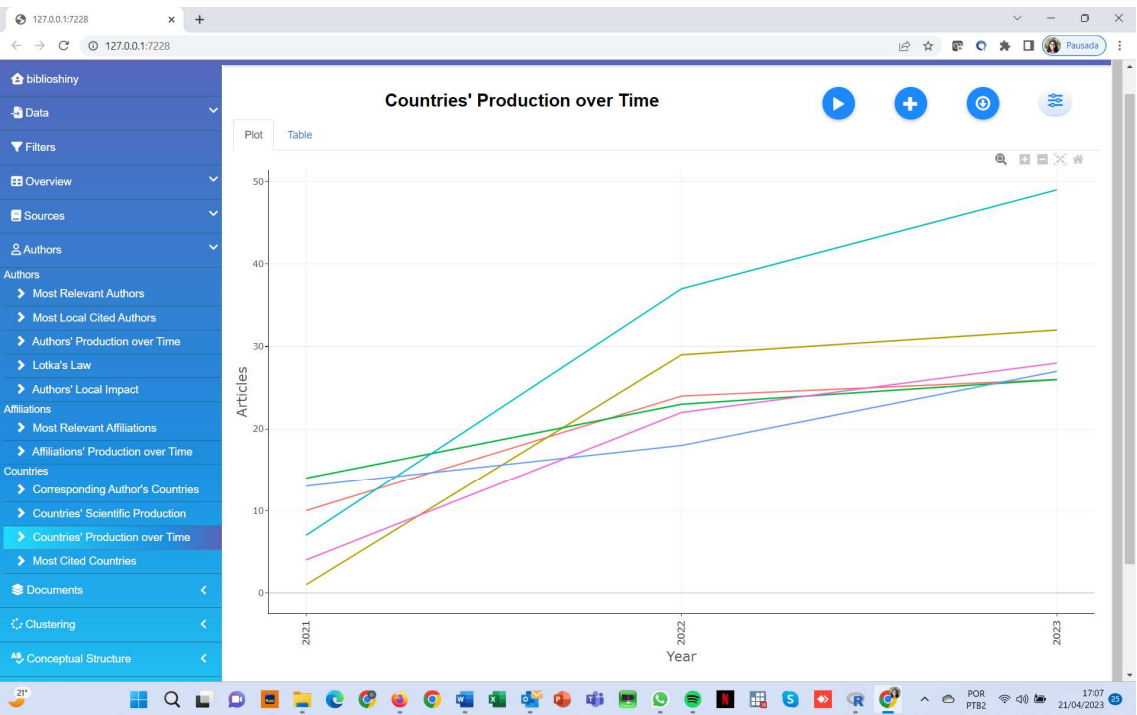


Obs: CountryCollaboration: the intra-country (SCP) and inter-country (MCP) collaboration indices

Authors / Countries / Country Scientific Production



Authors / Countries / Countries' Production over Time

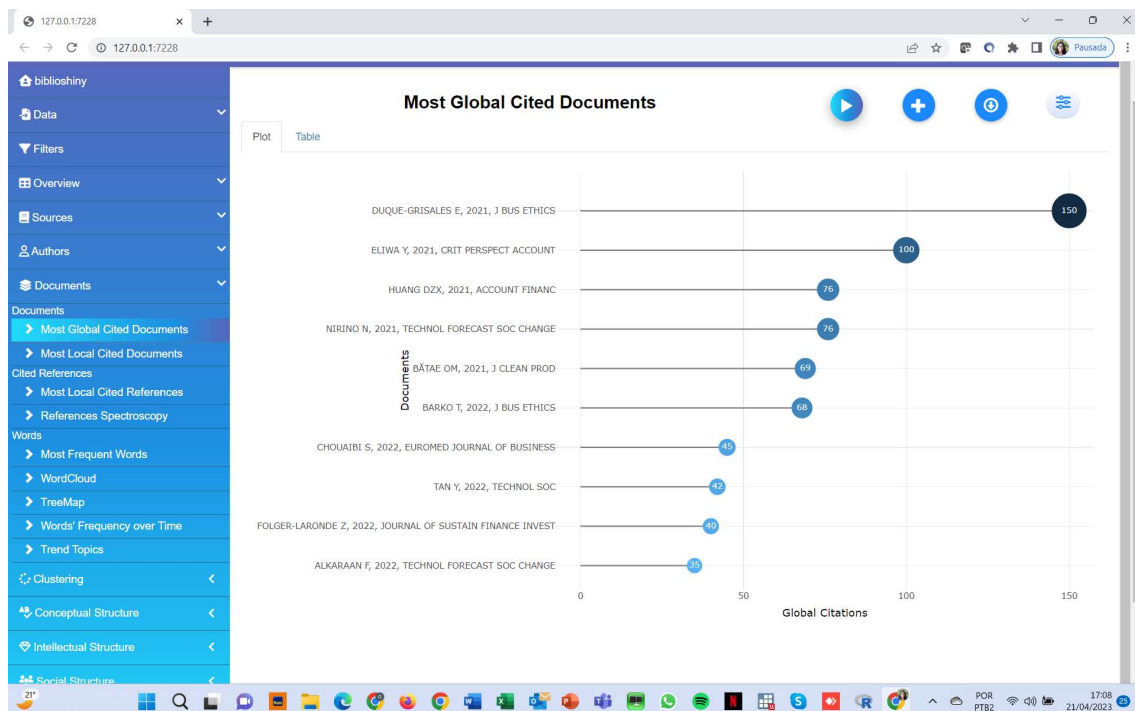


Authors / Countries / Most Cited Countries



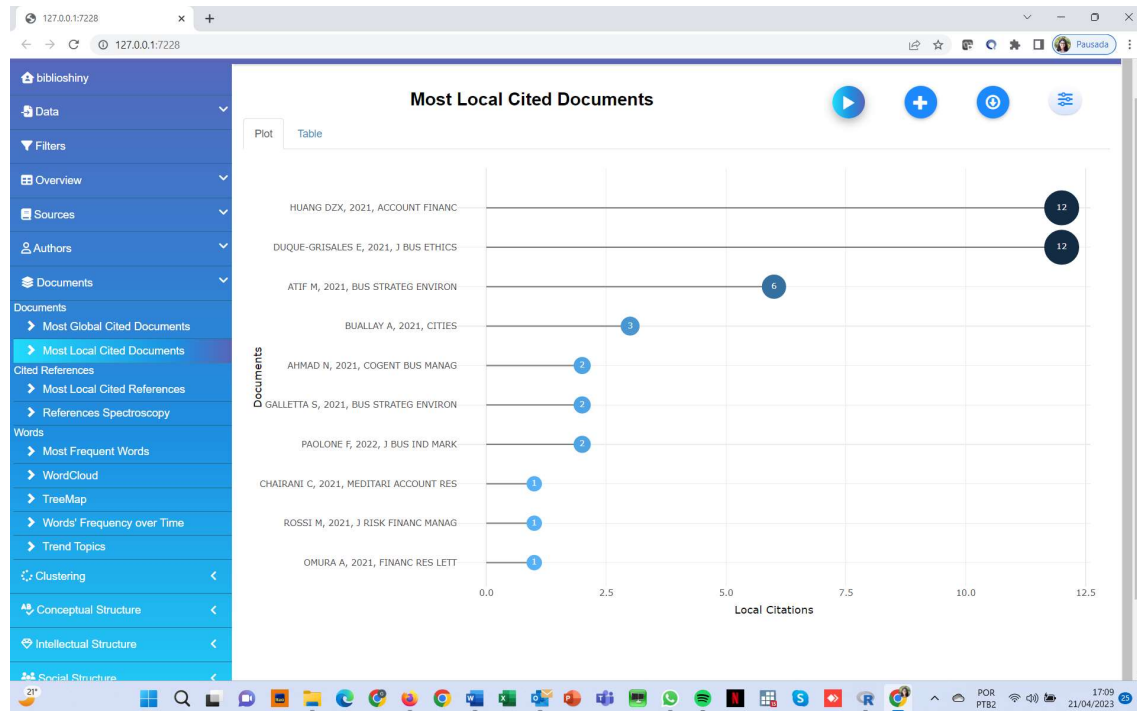
6.4 Análise dos artigos - documents

Documents / Most Global Cited Documents



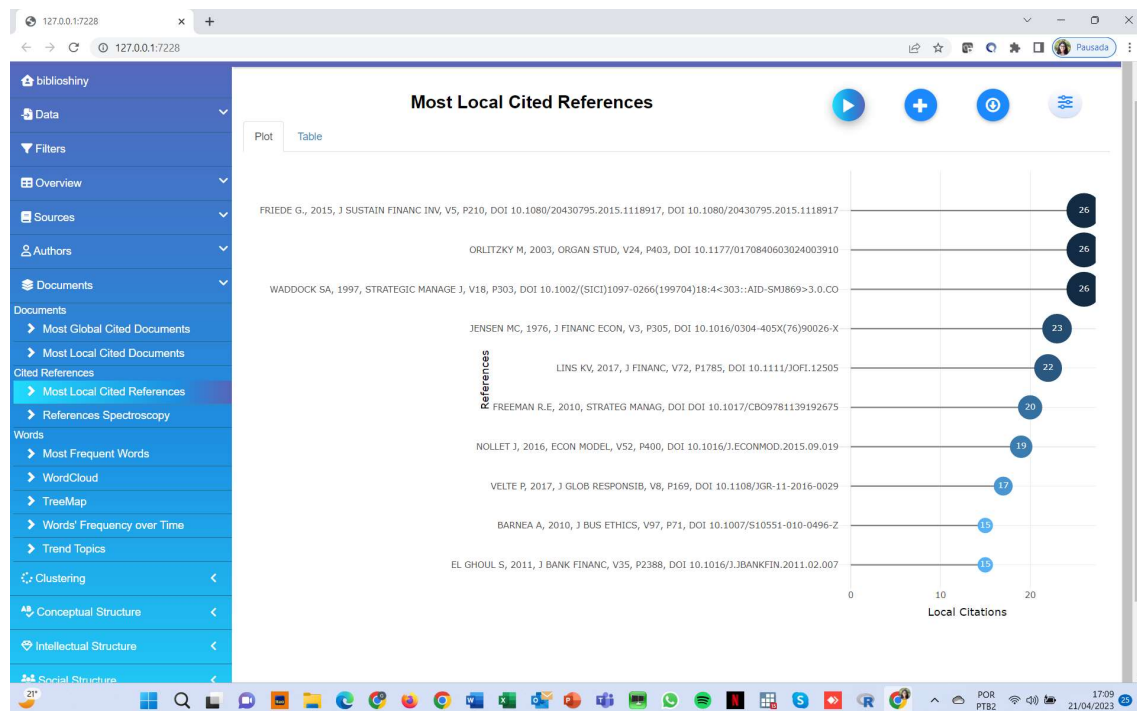
Obs: Artigos da amostra citados por outros artigos fora da amostra

Documents / Most Local Cited Documents



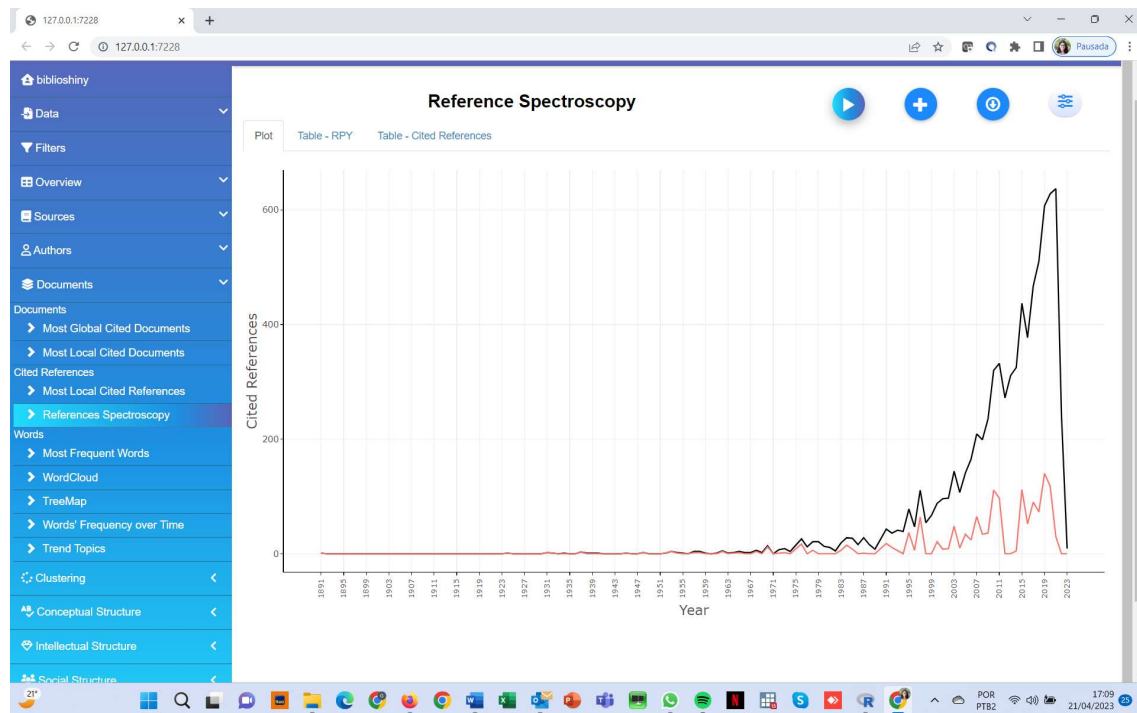
Obs: Artigos da amostra citados por outros artigos da amostra

Documents / Cited References / Most Local Cited References



Obs: Referências mencionadas nos artigos da amostra citadas pelos artigos da amostra

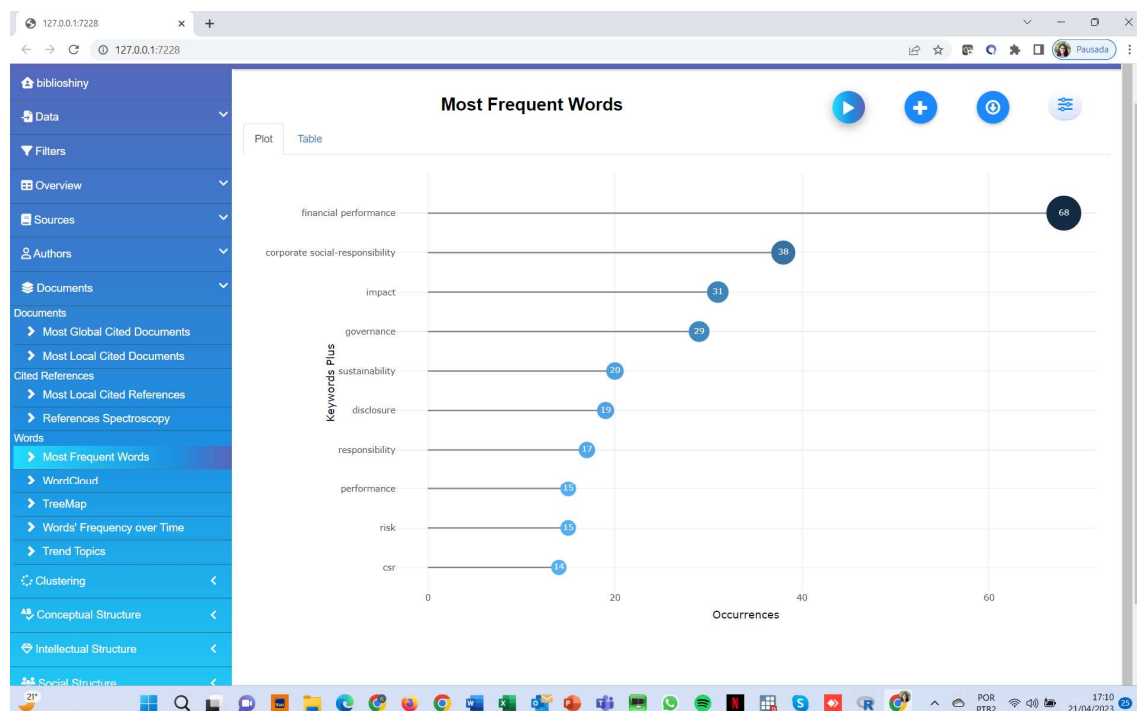
Documents / Reference Spectroscopy



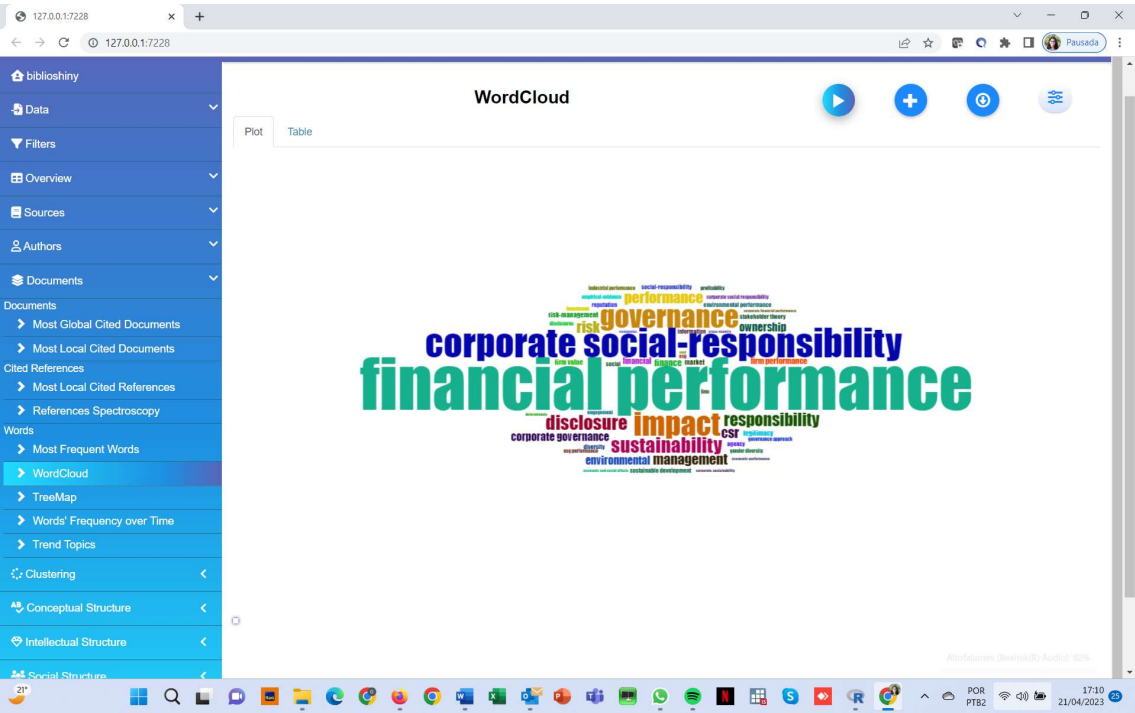
Obs: Espectroscopia das referências – Apresenta a evolução e concentração cronológica das referências mencionas nos artigos da amostra

Marx, W., Bornmann, L., Barth, A., & Leydesdorff, L. (2014). *Detecting the historical roots of research fields by reference publication year spectroscopy (RPYS)*. *Journal of the Association for Information Science and Technology*, 65(4), 751-764. <https://doi.org/10.1002/asi.23089>

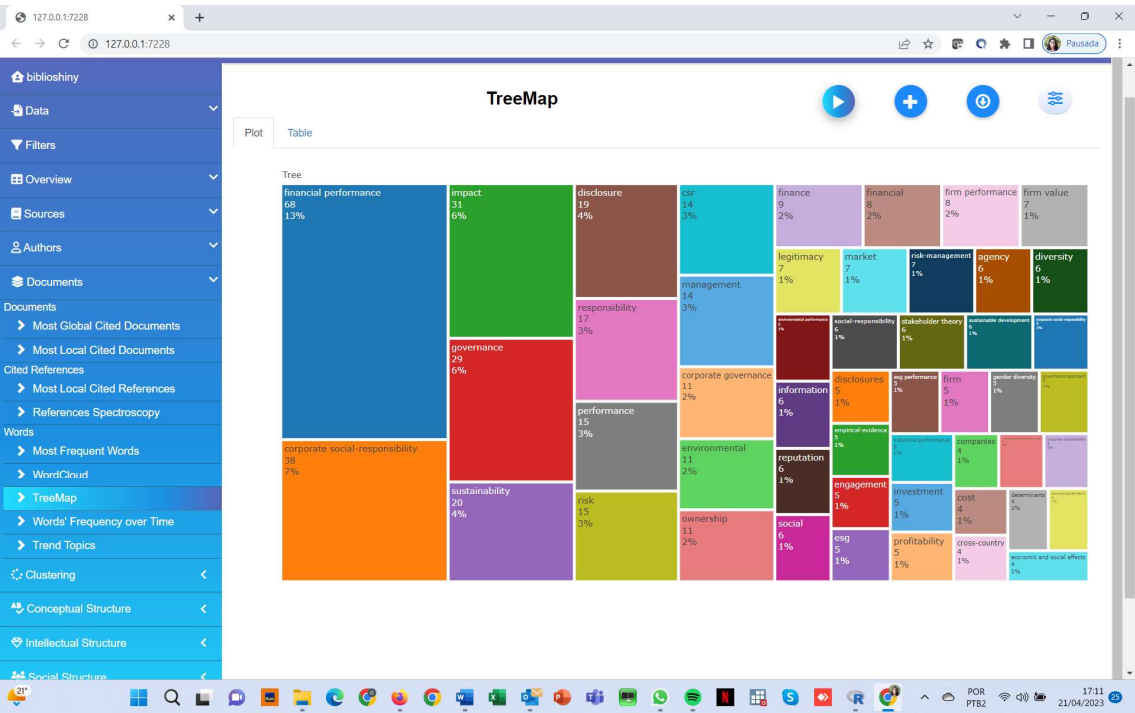
Documents / Words / Most Frequent Words



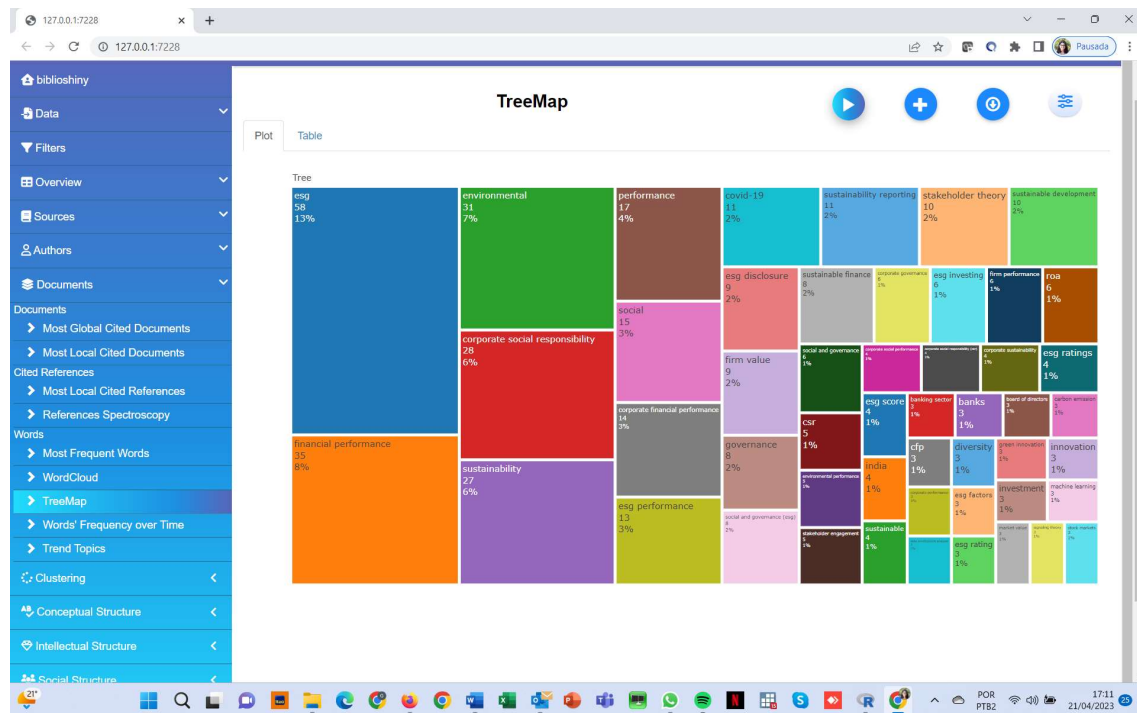
Documents / Words / WordCloud



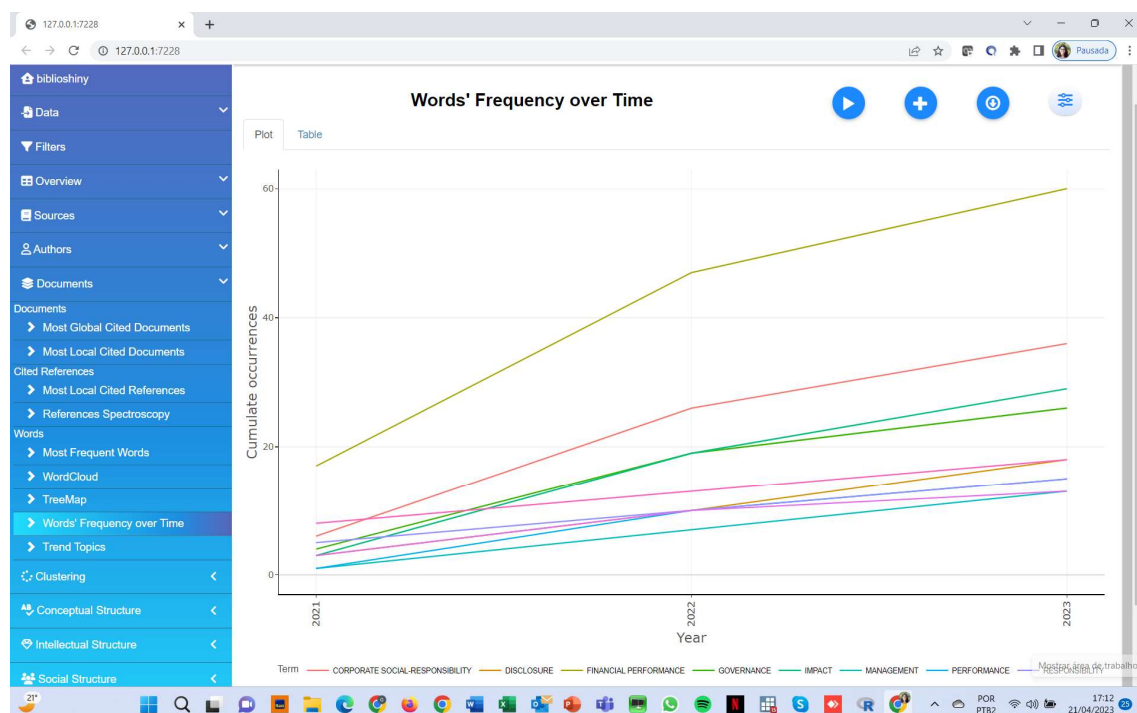
Documents / Words / Word Tree Map / Keywords Plus



Documents / Words / Word Tree Map / Author's keywords



Documents / Words / Words' Frequency over Time

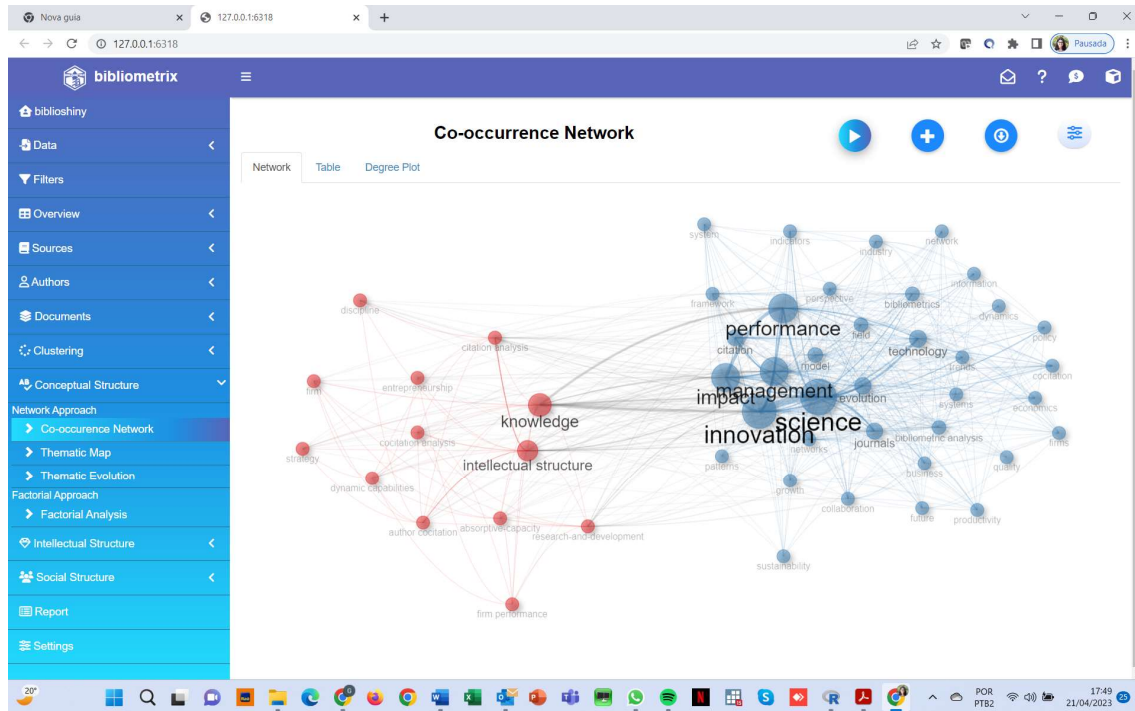


7. Outras opções de análises do Biblioshiny

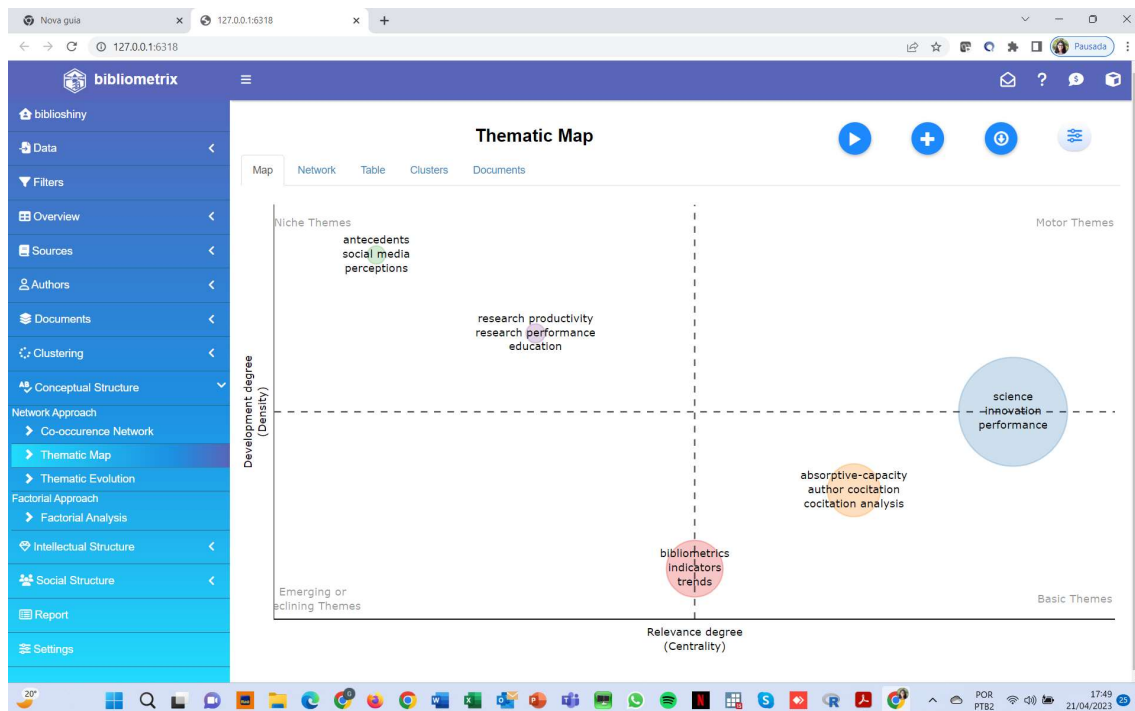
Data / Load data / Import or Load: Use a sample collection / Start

7.1 Conceptual structure

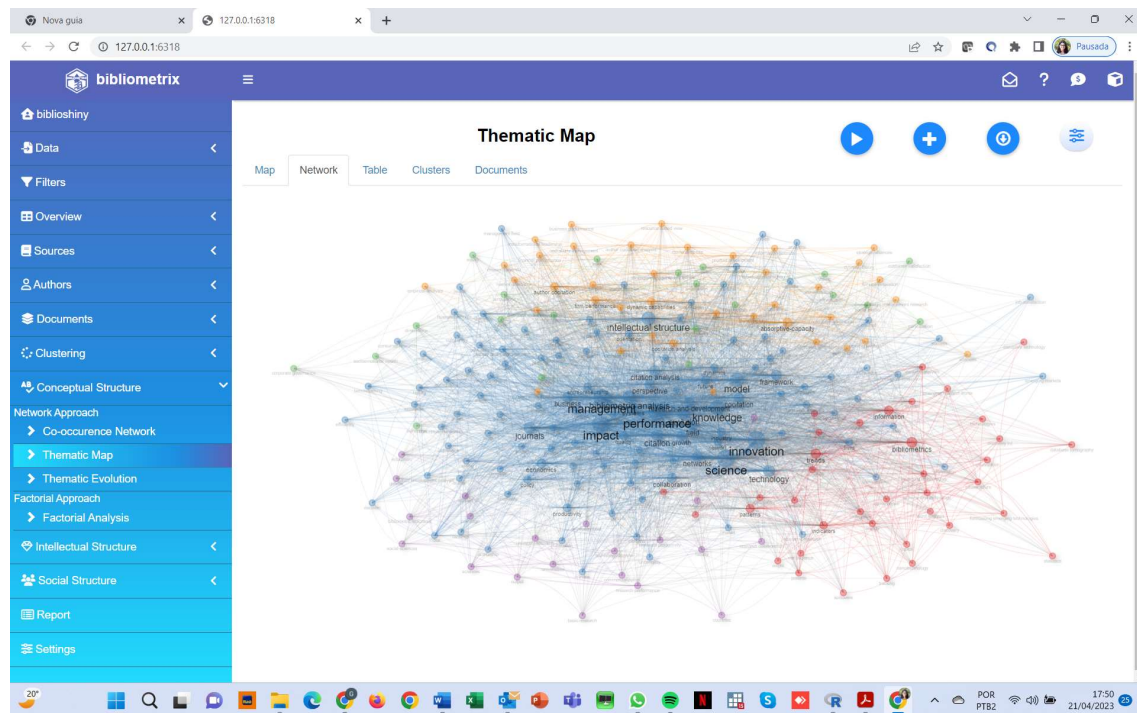
Conceptual Structure / Network approach / Co-occurrence network



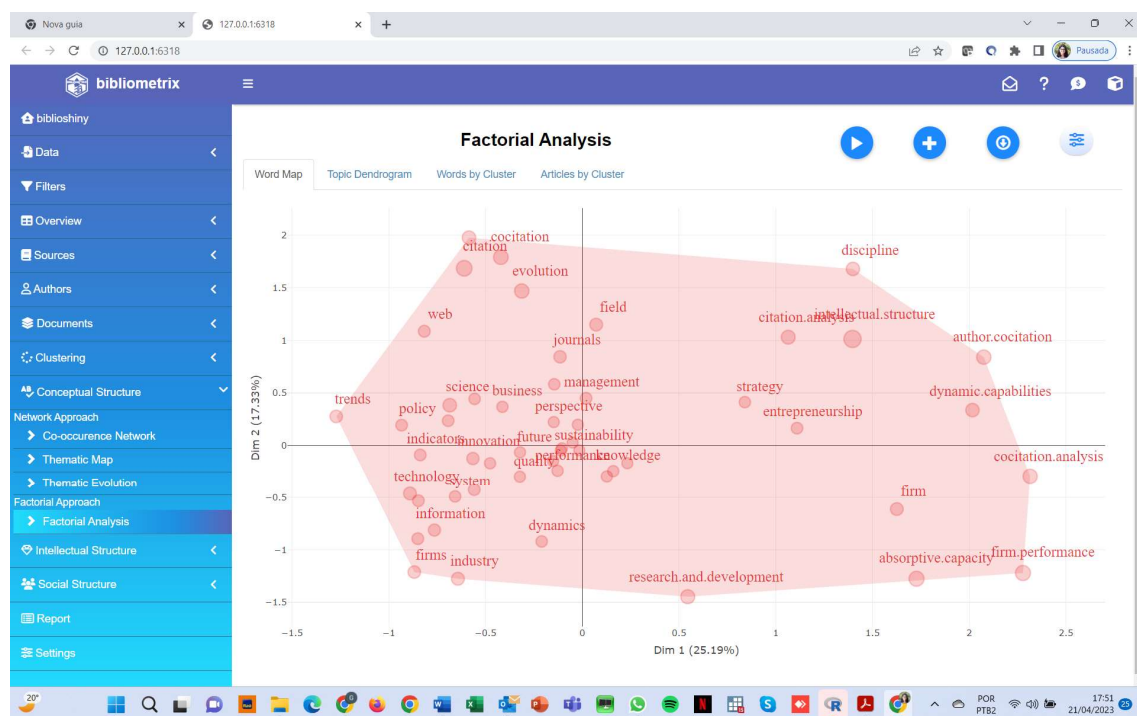
Conceptual Structure / Network approach / Thematic Map / Map



Conceptual Structure / Network approach / Thematic Map / Network

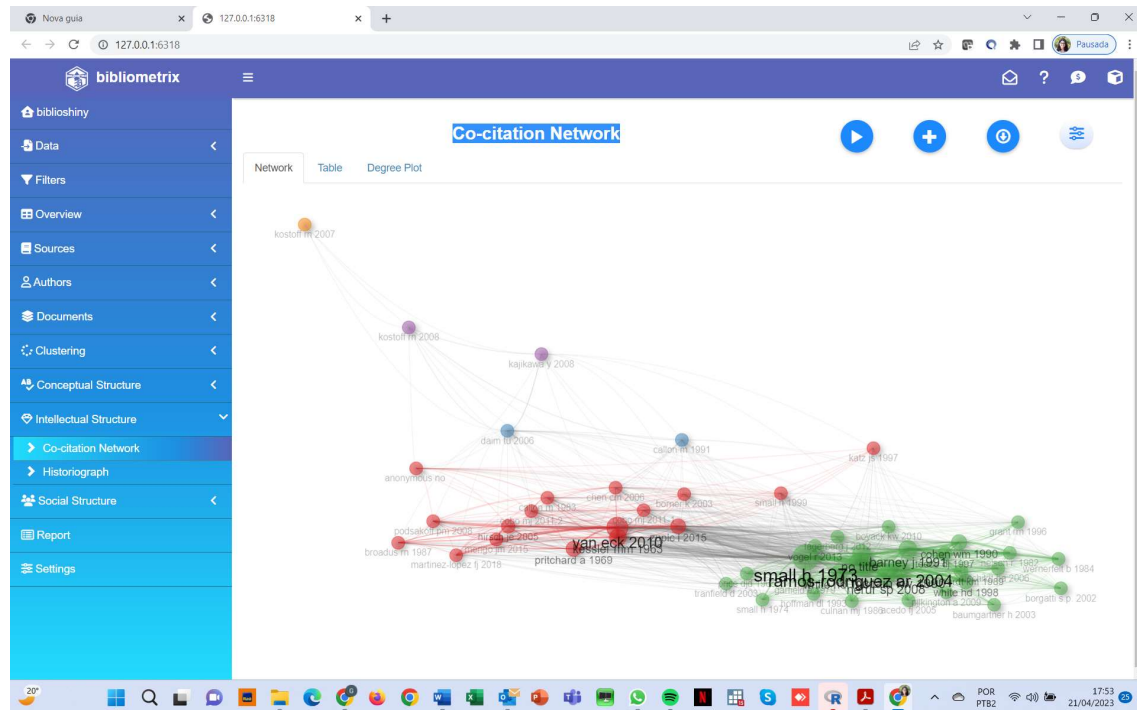


Conceptual Structure / Factorial Approach/ Factorial Analysis / Word map

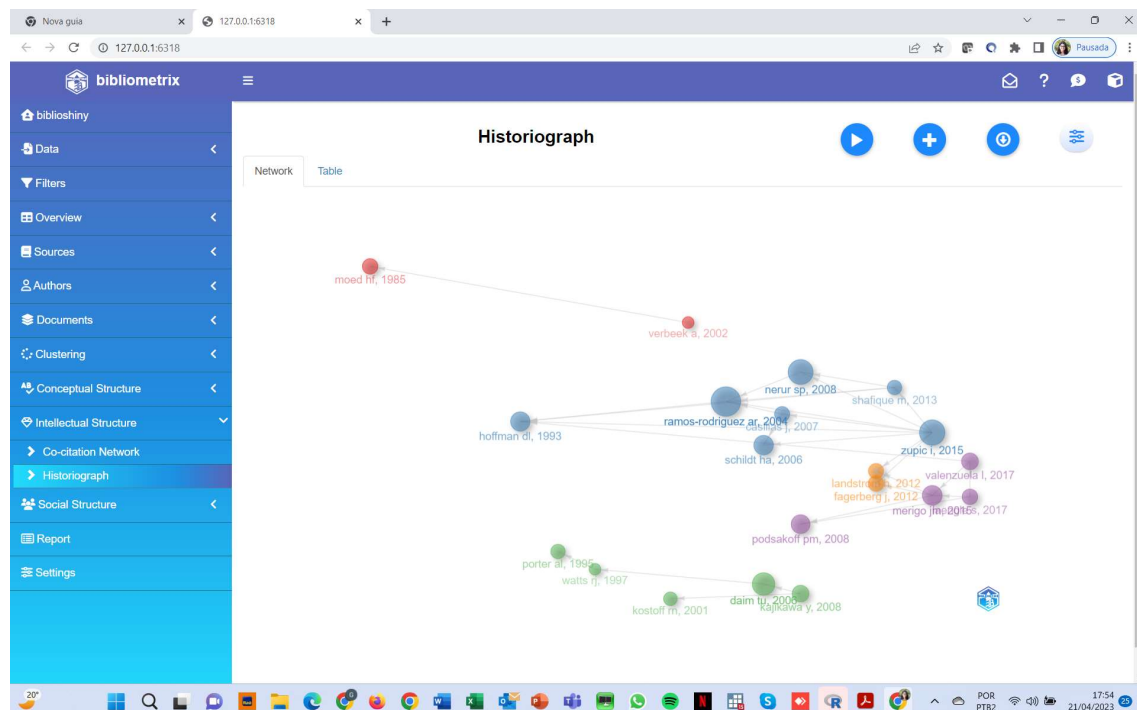


7.2 Intellectual Structure

Intellectual structure / Co-citation Network

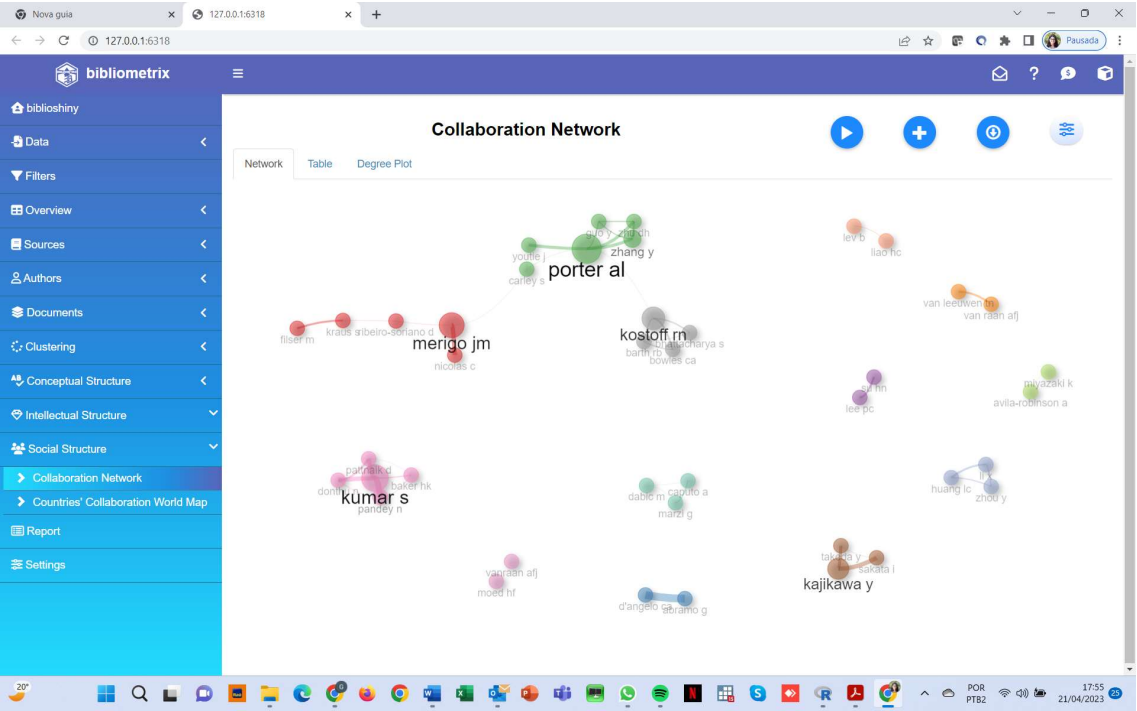


Intellectual structure / Historiograph



7.3 Social structure

Social structure / Collaboration Network



Social structure / Countries' Collaboration World Map

