

InTraders **International Trade Academic Journal** **(InTraders Journal)**

Editor-in-Chief

Asst. Prof. Dr. Ali YILDIZ

Editorial Board

Prof. Dr. Adriana BURLEA-SCHIOPOIU

Prof. Dr. Tulus SURYANTO

Assoc. Prof. Dr. Liza ALILI SULEJMANI

Asst. Prof. Dr. Ali YILDIZ

Dr. Instructor Sobia HASSAN

Secretary Board

Dr. Irina Raluca BADEA

Kürşat ÇAPRAZ

Şule ARABACI

Publisher

Kürşat ÇAPRAZ

Volume 8

Issue 2

December 2025

e-ISSN: 2667-4408

Publisher

Kürşat ÇAPRAZ

ORCID: <https://orcid.org/0000-0001-7133-6052>

**Address: Kırklareli University, Babaeski Vocational
School, Babaeski, Kırklareli/Türkiye**

www.intraders.org

intradersorg@gmail.com

WhatsApp+90 539 529 4288

InTraders International Trade Academic Journal

Volume 8, Issue 2

December 2025

**Open access, peer reviewed academic journal
e-ISSN: 2667-4408**

Editor-in-Chief

Asst. Prof. Dr. Ali YILDIZ

Editorial Board

Prof. Dr. Adriana BURLEA-SCHIOPOIU, University of Craiova, Romania

Prof. Dr. Tulus SURYANTO, Universitas Islam Negeri Raden Intan Lampung, Indonesia

Assoc. Prof. Dr. Liza ALILI SULEJMANI, International Balkan University, N. Macedonia

Asst. Prof. Dr. Ali YILDIZ, Muğla Sıtkı Koçman University, Türkiye

Dr. Instructor Sobia HASSAN, Lahore College For Women University, Pakistan

Field Editors

International Trade

Asst. Prof. Dr. Mustafa KAVACIK, Necmettin Erbakan University, Türkiye

Labor Economics

Assoc. Prof. Dr. Fatma FİDAN, Sakarya University, Türkiye

Tourism

Assoc. Prof. Dr. Eyüp Bayram ŞEKERLİ, Muğla Sıtkı Koçman University, Türkiye

Secretary Board

Dr. Irina Raluca BADEA, Independent Researcher, Romania

Kürşat ÇAPRAZ, Kırklareli University, Türkiye

Şule ARABACI, Sakarya University, Türkiye

Statistics Editors

Asst. Prof. Dr. Tahir BENLİ, Muğla Sıtkı Koçman University, Türkiye
Dr. Muhammad FARHAN, National University of Modern Languages, Islamabad, Pakistan
Assoc. Prof. Dr. Hamit ERDAL, Gendarmerie and Coast Guard Academy, Türkiye
Assoc. Prof. Dr. Hakan EYGÜ, Atatürk University, Türkiye

Last Reader Editors

Assoc. Prof. Dr. Asena BOZTAŞ, Sakarya University of Applied Sciences, Türkiye
Lect. Dr. Hina ZAHOR, İstanbul Gelişim University, Türkiye
Dr. Instructor Sobia HASSAN, Lahore College For Women University, Pakistan
Dr. Marinică Tiberiu ŞCHIOPU, Institute of Romanian Language, Romania

Advisory Board Members

Assoc. Prof. Ahu COŞKUN ÖZER, Marmara University, Türkiye
Assoc. Prof. Dr. Asena BOZTAŞ, Sakarya University of Applied Sciences, Türkiye

Issue Referee Board Members

(The members took duty for rejected and accepted articles)
(4 articles are rejected and 2 articles are accepted)

Prof. Dr. Berna BALCI İZGİ, Gaziantep University, Türkiye
Assoc. Prof. Dr. Ali TEHCI, Ordu University, Türkiye
Assoc. Prof. Dr. Cemalettin HATIPOĞLU, Bandırma Onyedi Eylül University, Türkiye
Assoc. Prof. Dr. Hasan BARDAKÇI, Harran University, Türkiye
Assoc. Prof. Dr. Hilal ALPDOĞAN, Sakarya University of Applied Sciences, Türkiye
Assoc. Prof. Dr. Volkan Han, Nevşehir Hacı Bektaş Veli University, Türkiye
Dr. Hüseyin USLU, Independent Researcher, Türkiye
Res. Assist. Dr. Şüheda BARAN SATILMIŞ, İstanbul Ticaret University, Türkiye

InTraders Journal

InTraders International Trade Academic Journal is peer reviewed academic journal, open access and accepts "PRINCIPLES OF TRANSPARENCY", follows the practice guidelines prepared by the Publication Ethics Committee (COPE).

About

InTraders, which started its publication period in 2018, offers open access. The journal is a publication type of the InTraders Academic Platform, which started its processes with trademark registration in 2017. Platform: It publishes in Congress, journal and book chapter types.

The journal's main subject is international trade. For 2024 and beyond, it accepts economy-based studies outside international trade and original studies on tourism issues.

Authors must upload plagiarism reports and copyright transfer forms to the system along with their work. The work uploaded to the system must be prepared by the journal writing rules. The uploads made outside the spelling rules will be returned at the pre-check stage. Obtaining necessary permissions from ethics committees or commissions for studies that require ethics committee permission (works that require a survey or scale application, contain interviews and observations, documents, pictures, questionnaires, etc., developed by others and require permission to use), specifying these in the study content or must be submitted in addition. Without these permissions, the publication is returned to the author at the preliminary examination stage.

InTraders runs all its processes through Dergipark.

Broadcast range: July-December

Manuscript language: English (Should not include abstracts in languages other than English.).

The authors allow the Publisher to publish this article under a Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license. Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license allows the work to be shared, copied, and reproduced in any size and format other than for commercial use, including re-editing, transforming, and building upon the original work, provided that it is properly cited.

InTraders International Trade Academic Journal, Volume 8 Issue 2, December 2025

www.intraders.org

e-ISSN-2667-4408

The author(s) holds commercial rights, patent rights, and intellectual property rights, including copyright, of the author(s) or, if any, of the author(s) employer, which are reserved. InTraders Journal allows authors to retain the copyright of their papers without restrictions.

InTraders accepts the Open Access Principles outlined in the Budapest Open Access Initiative (BOAI), and accordingly, the journal provides instant open access to its content, adopting the principle that making scientific publications accessible to researchers will increase the global sharing of knowledge. InTraders has accepted the Budapest Open Access Initiative, which allows readers to read, download, copy, distribute, print, and use the articles in the journal for any legal purpose.

*-English studies are accepted for 2024 and later. Studies in English should not include abstracts in languages other than English.

Aim

InTraders International Trade Academic Journal will be able to publish scientific studies of researchers; aims to create an international platform that can contribute to their academic development and increase the number of qualified academic studies.

Scope

InTraders International Trade Academic Journal is peer-reviewed by international referees and an international journal that publishes original scientific research in English, primarily in international trade.

The journal's main subject is international trade. For 2024 and beyond, it accepts economy-based studies outside international trade and original studies on tourism issues. The journal is available free and open access to all researchers. The language, scientific, legal, and ethical responsibilities of the articles published in the journal belong to the authors. The articles published in the journal can only be used when showing the source.

Review Process

1-Editor assignment is made for the field of the article uploaded to the system.

2-Editor: checks the files—checks whether the article is within the scope of InTraders Journal. If there are missing or incomplete files, send the article to the author and request the completion of the deficiencies. After the deficiencies are completed, the editor reads the article. Decide whether the article is suitable for evaluation. If the article is unsuitable for evaluation, the reason is detailed, and the editor rejects the article. If the article is suitable for evaluation, a secretariat is assigned to check the spelling and bibliography of the article.

2-Secretariat: receives the spelling-language report of the article with the paid Grammarly Program and uploads it to the additional files section of the system. The spelling-language report is expected to be 95% and above. A bibliography check is performed. If corrections are necessary in the article, the secretariat indicates the notes on the article. Uploads the correction request file to the additional files section in the system. Completes the process by directing the article to the editor.

3-Editor: According to the secretariat's report, if the study's spelling and grammar need to be corrected, the article is sent to the author. The author makes the necessary revisions and uploads the file to the system.

4-Editor: Sends the article back to the spelling and grammar secretariat.

5-The spelling and grammar secretariat checks whether the requested revision has been made and obtains a spelling and grammar report again with the Grammarly Program. If the report is 95% and above, it is accepted. If the deficiencies are completed, the secretariat completes the process. The study takes on the role of editor. If the necessary corrections are not completed, the editor is informed, and a recommendation is made to reject the study.

6-The editor runs a "two-blind peer referee" process for articles with completed deficiencies. The article is sent to two referees related to the field. The article with incomplete deficiencies is rejected by the editor with a reason as a result of the secretariat's recommendation decision or sent back to the author for correction.

7-Referees: They choose one of four options: rejection, acceptance, major revision, or minor revision. They fill out the evaluation form, and the reasoning for the decision is stated in detail in the report.

For the study to be published, it must be accepted by both referees.

7.1 The referees' reports are examined. The referees must detail their reports. The editor sends the article to new referees when he/she decides that the decisions of both or one of the referees are insufficient, even if both give a favourable decision. Referees who do a superficial review cannot be articleed with in the following periods and are removed from the journal board.

7.2. If one of the referees accepts and the other rejects, the editor may reject the study or send it to a third referee. The decision is the editor's choice.

7.3 If the referees make major/minor revisions to the article, they send them to the author, who makes the necessary corrections and uploads them to the system.

8. A "doi" assignment is made for the article whose processes are completed positively. After the doi is obtained, it is sent to the "final reader editor." The Final Reader Editor reads the study and may request the necessary corrections. If a correction is necessary, upload the report to the system. This completes the process.

9. If there is a correction request in accordance with the final reader editor report, the editor sends the study to the author. The author completes the necessary corrections. If the editor deems it necessary, the study is sent back to the final reader for control purposes.

10. The final reader checks again and completes the process if the corrections are complete. Sends the article to the editor.

11. The editor sends the completed study to the "layout editor," who prepares the article for publication.

12. The article, which has completed all processes positively, will be included in the earliest issue to be published.

*The editor reserves the right to reject all processes. The editor rejects the article for a reason. Reasons for rejection by the editor may be the author uploading incomplete files, not responding

to the necessary revision requests or not doing so within the given time, recommendations and justifications of the referees and the secretariat.

The articles submitted for publication in InTraders must have never been published before, not been accepted for publication, and not submitted for publication.

****The Editor has the right to reject the work/deem it unsuitable for publication at each stage.**

Publishing Periods

It is published twice a year. It is published in July and December. If it is deemed necessary, specific numbers / supplements may be issued for specific topics and for expanded notifications qualified by InTraders subject to conventions. Articles may always be accepted by InTraders.

Writing Rules

Preliminary Information

-English studies are accepted for 2024 and later. Studies in English should not include abstracts in languages other than English.

After the author/s have prepared the forms below, they should start uploading files.

-InTraders Journal Article Writing Format

-APA 7 Reference Style Sample File

-Author Information File (Refer to item 4). At the end of the page, it should be stated whether there is a conflict of interest, whether there is an institution from which financial support is received, and the contribution rates of the authors.

-Copyright Agreement Form

-Ethics Committee Permission (Ethics Committee approval is mandatory for studies sent from Turkey (researchers located within the borders of the Republic of Turkey). Ethics committee approval is the author's responsibility due to the country's own management and systems.). In studies that do not require ethics committee permission, the author must upload the signed document stating "I declare that the study does not require ethics committee permission" by stating the study title and author information on a form while uploading the article to the system.

-Declaration of Artificial Intelligence (Valid for 2025 studies)

InTraders International Trade Academic Journal, Volume 8 Issue 2, December 2025

www.intraders.org

e-ISSN-2667-4408

1. Only English articles are published in InTraders Journal for 2024 and later. Articles submitted to the journal must have yet to be published/presented or sent for publication/presentation elsewhere. Only studies presented orally at scientific events organized by the InTraders Academic Platform and whose full text has yet to be published in writing can be submitted for publication.

2. The APA 7 system should be used for article citations and source indication. The journal's rules will be followed for other article-writing rules.

3. Articles must be written on A4-sized paper with 1.5 spacing, in Times New Roman font, 12-point font, and not to exceed 25 pages. Submissions made from outside the DergiPark platform are strictly not accepted. Your article must be edited using the Article Writing Template. You can download the Article Writing Template here. (Author information should be excluded from the Article File).

4. Author Information File: The article should not contain any information about the author(s). (The file from the author is used to initiate the 2-blind referee process of the article. Therefore, the information about the author(s) should be specified on a separate Word page and uploaded to the system. The following information should be included on the separate Word page: (i) title of the article; (ii) author(s) name and academic title; (iii) ORCID ID numbers; (iv) address of the institution to which the author(s) is affiliated; (v) keywords and (vi) JEL codes of the study, (vii) e-mail address, (viii) telephone The number should be stated as +. The abstract should be at least 150 and at most 250 words.

5. Tables, figures and graphs should be given titles and numbers. Table titles should be placed above the tables, and titles of figures and graphs should be placed below the relevant figure or graph. References should be written below the tables, figures and graphs. Commas must separate decimal fractions in numbers. The sequence number to be given to the equations should be placed in parentheses at the far right of the page. If the derivation of equations is not clearly shown in the manuscript, the derivation process with all its steps should be given on a separate page for the referees' evaluation. Times New Roman type and 11-point font should be used in

table and figure titles and in-table text. If the table does not fit, 8-9-10 point size may be preferred.

6 Footnotes regarding the references made in the articles should be included at the bottom of the page.

7. At the end of the text, a list of sources used in the study is given under the heading REFERENCES. This bibliography lists the references used in the study and is prepared alphabetically according to the author's surname.

Example of creating a bibliography (justified on both sides, 1.5 spacing, Times New Roman, 12-point font)

"Baral, G. (2023). Kiracı Konumundaki Şirketlerin Finansal Kiralama İşleyişlerindeki Muhasebeleştirme Hataları veya Hileleri. In Traders International Trade Academic Journal, 6 (1), 26-43. DOI:10.55065/intraders.1288268"

8. References to sources should be made in the text, not in footnotes, including page numbers, as shown in the examples below.

9. The page layout of the articles to be added to the system must be made by the author and by the following values:

Paper Size: A4 Vertical (Landscape pages should not be included in the article)

Top Margin: 2.5 cm

Bottom Margin: 2.5 cm

Left Margin: 1.0 cm

Right Margin: 1.0 cm

Font: Times New Roman

Font Size: 12 and bold in the title, 12 in the text, 11 in abstracts and 8 in footnotes.

Paragraph Spacing: 6 pt before- 6 pt after, line spacing 1.5 in the text; In abstracts, first 6 pt - then 6 nk, line spacing - Single (The aim is for the abstracts to be easily read by the reader.)

10. There should be no paragraph beginnings (indentations) in the article text, and paragraph breaks should be made clear by leaving spaces (spacing before:6nk after:6nk, line spacing: 1.5 lines).

11. Section Headings: The article can use main, intermediate, and subheadings to ensure an orderly transfer of information; headings will not be numbered. Headings should be levelled according to case sensitivity as specified in the Article Writing Template.

12. Tables and Figures: Tables must have numbers and titles and be located where they should be in the text. Figures must be prepared for colour printing. Table numbers and titles should be written centred on the table, and figure numbers and names should be set just below the figure (See Article Writing Template).

13 Images: They should be included in the text in high-resolution, print-quality scans. When naming pictures, the rules in figures and tables must be followed.

14. Advice(Not compulsory): At least 3 sources each from WOS/Scopus and TR Index, at least 3 sources from journals in Dergipark that cannot be included in the TR Directory, sources from congress books and books must be used, and the Doi of the sources used must be stated in the bibliography section. Wos/Scopus sources should be included in the bibliography in red text, TR Index sources should be listed in orange, and sources not in the TR Index but in Dergipark should be included in the bibliography in blue text.

15. Articles that do not comply with InTraders Journal Publication Principles in any respect will not be evaluated.

Privacy Policy

Information such as names, titles and contact addresses shared through the InTraders website will only be used for the purposes set forth by InTraders; for any other purpose or for the use of third parties.

Copyright and Licensing

Copyright Holder: The author(s) holds commercial rights, patent rights, and intellectual property rights, including copyright, of the author(s) or, if any, of the author(s) employer, which are reserved. InTraders Journal allows authors to retain the copyright of their papers without restrictions.

The authors allow the Publisher to publish this article under a Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license. Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license allows the work to be shared,

copied, and reproduced in any size and format other than for commercial use, including re-editing, transforming, and building upon the original work, provided that it is properly cited.

The author(s) declare and undertake that the article submitted for consideration for publication in InTraders has not been previously published in any language, nor has it been accepted for publication and has not been sent to another journal for publication. InTraders aims to publish original research and audit it at every stage.

All legal and scientific responsibilities regarding the content of the articles published in InTraders belong to the author(s).

InTraders does not pay royalties for articles.

InTraders is licensed under a Creative Commons (CC) International License (CC BY NC). This license grants users the right to distribute, mix, tweak, or work on the work as long as they quote the original work. In other words, the articles published in InTraders can be cited by citing the source.

InTraders allows readers to read, download, copy, distribute, print and use the articles in the InTraders for legal purposes.

Ethical Principles and Publication Policy

1. General Ethical Principles

1. Obtaining the necessary permissions from the ethics committees or commissions for studies that require permission from the Ethics Committee (for studies that require the application of a questionnaire or scale, including interviews and observations; documents, pictures, questionnaires, etc., developed by others and require permission to use), and these should be stated in the article content. or as an addendum. Without these permissions, the publication is returned to the author at the preliminary examination stage. Ethics Committee approval is mandatory for studies sent from Turkey (researchers located within the borders of the Republic of Turkey). Ethics committee approval is the author's responsibility due to the country's own management and systems.

2. It is essential that the raw data regarding the research in the peer reviews be submitted when requested by the referees. It is obligatory to provide the data after the article's publication when necessary.

3. The authors accept that the contact information (mail, institution, ORCID) specified in their article will be included to be published/published in InTraders. InTraders agrees not to publish the authors' information anywhere other than the journal issues and not to share it with third parties for commercial and advertising purposes.

A. Ethical Principles for Authors

1. Authors guarantee that their work is original, and when they include ideas, languages, pictures, graphics and tables of other researchers in their work, they must indicate this as a quotation. Quoting without specifying the source is plagiarism.

2. Each author named in the study is equally responsible for the content of the study. It is unacceptable to not include the name of the researcher who contributed to the study or his name unjustly, even though he did not contribute.

3. Authors should stick to their research findings. It is out of the question to change the findings, make up findings and results, and conduct research based on them. Situations such as tampering with data and materials, deleting, removing, or skipping the interpretation of difficult data are distrustful.

4. Simultaneous submission of the study to journals is not possible. Authors cannot send their previously published works to the journal.

As of 2020, the TR Index-Journal Evaluation criteria have been updated. The articles related to the ethics committee permission, which should be in scientific research, have been detailed. The "documents and information requested for studies requiring ethics committee approval" is not expected to be applied to studies submitted in previous years, the evaluation process of which has been completed but has not yet been published, and for which research data before 2020 has been used, although the evaluation process is still ongoing. The process will start in 2020, and research data will be mandatory for articles starting in 2020. The articles for which the Ethics Committee Permission Document is required are explained below. EXPLANATION AND INFORMATION on the Ethical Rules Made by TR Index: The articles related to the Code of Ethics, which were included in the previous years' criteria, were detailed with explanations in 2020, and the issue of "includes information about the permission in the article" was added to the criteria, assuming that the permissions were obtained for the studies

Requiring ethics committee permission in the research field. QUESTION: Is ethics committee approval required for all articles? No. The criteria state that it applies to “articles that require the permission of the Ethics Committee.”

Studies that require the approval of the Ethics Committee are as follows:

- All kinds of research conducted with qualitative or quantitative approaches require data collection from the participants using surveys, interviews, focus group work, observation, experiments, and interview techniques.
- The use of humans and animals (including material/data) for experimental or other scientific purposes,
- Clinical studies on humans,
- Research on animals,
- Retrospective studies by the law on the protection of personal data,

Also;

- Indicating that an “informed consent form” was received in case reports,
- Obtaining and specifying permission from the owners for the use of scales, questionnaires, photographs belonging to others,
- Indication of compliance with copyright regulations for the intellectual and artistic works used

QUESTION: Should a retrospective Ethics Committee Permission be obtained for publications produced from studies and a thesis completed in previous years? Retrospective ethics committee approval is not required for articles published before 2020, produced from master's/doctoral studies (must be specified in the article), submitted an application for publication to the journal in the previous year, and accepted but not published. QUESTION: Are there any restrictions on publications made outside universities with these rules of the TR Directory?

No. Non-university researchers can also apply to the Ethics Committees in their regions.

Also;

In articles to be published in journals, it should be stated in the article whether ethical committee permission and/or legal/special permission is required. If it is necessary to obtain these permissions, it should clearly state from which institution, on what date, and with which decision or number the permission was obtained.

If the study requires the use of human and animal subjects, an international declaration, guide, etc., should be declared appropriate.

B. Ethical Principles for Referees

1. Referees should know that the evaluation process is confidential and should not be shared with third parties.
2. The referees must submit an objective, impartial, scientific, understandable and constructive evaluation report about the study within the specified time.
3. Referee reports will also include an assessment of the scientific nature of the article (the subject covered, the method used, or the appropriate use of the relevant literature). This evaluation must be made about the content, whether positive or negative.
4. It is not recommended or considered unethical for the reviewer to request citations for their work. If the referee's studies are related to the study he is examining, he can specify one or two studies, but the studies mentioned are advisory, and it is up to the author whether to use the specified studies or not.
5. When it is understood that the work is plagiarized or has been previously published elsewhere, the referees should notify the editor.

2. Publication Policy

1. InTraders International Trade Journal (InTraders) is an international, peer-reviewed and scientific journal. It is published using the publication principles listed below.
2. InTraders aims to contribute to developing science at the national and international levels by creating a platform for publishing scientific studies.
3. InTraders publishes original scientific research in international trade, economics, business, supply chain management, law, and international relations, presenting congress papers, book reviews, and letters to the editor.

4. InTraders publishes scientific studies in English.
5. InTraders is published electronically twice a year, in the Summer (July) and Autumn (December) terms. It also publishes a special issue if deemed necessary.
6. InTraders does not accept articles for any issue, but articles can be submitted to the journal anytime.
7. InTraders publishes using the TÜBİTAK ULAKBİM DergiPark system. All transactions related to the article are carried out through the DergiPark system.
8. InTraders publishes at <https://dergipark.org.tr/tr/pub/intraders>. In addition, it offers all issues in the archive section of its congress pages free of charge to open access. www.intraders.org
9. The author/authors declare and undertake that the article submitted to InTraders for evaluation for publication has not been published, accepted for publication, or sent to another journal for publication, in Turkey and/or abroad, in Turkish or any other language before.
10. Copyright Holder: The author(s) holds Commercial rights, Patent rights, and intellectual property rights, including copyright, of the author(s) or, if any, of the author(s) employer are reserved. InTraders Journal allows authors to retain the copyright of their papers without restrictions.
11. All legal and scientific responsibilities regarding the content of the articles published in InTraders belong to the author(s).
12. InTraders does not pay royalties for work.
13. InTraders is free of charge for authors and readers.
14. InTraders published articles can be quoted by showing the source.
15. InTraders permits readers to read, download, copy, distribute, print, and use the articles in the journal for any legal purpose by citing the source.

16. InTraders undertakes not to publish in violation of publication ethics, and all articles submitted to the journal are subject to plagiarism/similarity control by the editor.
17. Whether the article submitted to InTraders is covered by the journal; the editor checks whether it is uploaded to the system correctly and completely and is prepared properly.
18. InTraders uses a double-blind referee evaluation system. The "positive" opinion of at least two referees is sought for the article's acceptance for publication. If one of the referees gives a "positive" opinion and the other a "negative" opinion, the article is sent to a third referee. The editor completes the referee evaluation process by sending two “positive” referee opinions to the Editorial Board.
19. The Editorial Board decides to publish all articles with two “positive” referee opinions.
20. For articles accepted for publication, the editor sends a “Certificate of Acceptance for Publication” signed by the author upon the author's request.
21. Uses information such as names, titles and e-mail addresses shared on the journal website only for the stated purposes of this journal; It is not used for any other purpose or made available to other people.
22. InTraders accepts the Open Access Principles outlined in the Budapest Open Access Initiative. The journal has accepted the [Budapest Open Access Initiative](#).
23. InTraders is committed to applying publication ethics to the highest standards and following the practice guide prepared by the [Committee on Publication Ethics \(COPE: Committee on Publication Ethics\)](#).
24. Articals in InTraders are archived with the Dergipak system.
25. InTraders is licensed under a Creative Commons (CC) Attribution 4.0 International License.

Archive

The archiving system is provided by DergiPark and InTraders' own web pages.

<https://dergipark.org.tr/en/pub/intraders/archive>

<https://intraders.org/archive/>

Indexes

[TRDİZİN \(2024,2025\)](#)

[EBSCOhost \(Contract Date: June 13,2022\)](#)

[Index Copernicus \(2022, 2024\)](#)

[ERIH PLUS \(Approved 2024-01-03\)](#)

[Sherpa Romeo \(Approved 2024-02-15\)](#)

[Index of Academic Documents](#)

For questions, suggestions and comments, you may contact to intradersorg@gmail.com

Appreciation

I am gratified to have the honor to put forward the vote of thanks to all the InTraders Journal Committees and Authors who provided the intensive work performance for the [InTraders Journal](#) under the name of [InTraders Academic Platform](#).

The journal's main subject is international trade. For 2024 and beyond, it accepts economy-based studies outside international trade and original studies on tourism issues. In upcoming next issue, waiting your studies.

Wish to meet you all in this new international conferences...

Kürşat ÇAPRAZ

Publisher of InTraders Journal

www.intraders.org

Contents

Research Article

Assessing Scientific Output and Collaborative Networks in Halal Supply Chain Management Research: An R-Biblioshiny Analysis 92-114

Bekir Çınar

Investigating the Effects of Crises and Bilateral Agreements on Moldova's Economic Integration into the European Union Using the Trade Intensity Index Method 115-126

Fuad Selamzade

Alig Baghirov

Ahmed Ahmedov

Tural Rustamov



Assessing Scientific Output and Collaborative Networks in Halal Supply Chain Management Research: An R-Biblioshiny Analysis

Bekir ÇINAR¹

Abstract

Today, the demand for halal products from the Muslim population, which is approaching 2 billion, underscores the critical importance of halal supply chain management in the global business environment. Identifying the requirements, principles, and gaps in the implementation of halal supply chain management—and examining not only the active participants in the chain but also the theoretical foundations from an academic perspective—is essential for enhancing process efficiency. This study aims to conduct a bibliometric analysis of research published in internationally indexed journals on halal supply chain management. The analysis covers 630 publications retrieved from the Web of Science database between 1997 and 2025 and includes various indicators such as the distribution of papers by year, keyword analysis, author profiles, co-authorship collaborations, citation analysis, thematic mapping, publication counts by country, and country-based clustering analysis. The findings reveal that the *Journal of Islamic Marketing* has the highest number of publications in this field. Additionally, the most cited researcher is *Marco Tieman*. The top three researchers with the most publications are, in order, *Mohamed Syazman Ab Talib*, *Abid Haleem*, and *Mohd Imran Khan*. Furthermore, *Malaysia*—the first country to implement halal logos and certification practices—has been identified as the most productive country in this field. *The research identifies Malaysia and Indonesia as the countries with the highest levels of international collaboration*. However, the analysis of scientific productivity distribution shows that the literature in this field is still not mature enough, underscoring the need for further research.

Keywords: *Halal, Supply Chain, Logistics, Bibliometric, Biblioshiny.*

JEL Codes: *L97, L99.*

INTRODUCTION

In today's environment of increasing global competition, all companies share common, enduring objectives, including producing goods or services and generating profit from these activities. Within this context, the integration of innovative products and production variables into daily life and nearly all economic activities—driven by the demands of the digital age—requires attention not only to the development of new products but also to the growing diversity of consumer demands. Furthermore, considering the influence of cultural, social, economic, demographic, situational, and psychological factors on consumers, it is clear that consumer expectations regarding the acquisition of goods and services have become increasingly varied. Among these

¹Res. Assist. Dr. Alanya Alaaddin Keykubat University E-Mail: bekir.cinar@alanya.edu.tr OI: 0000-0002-9976-2392 Contribution rates to the study 100 %

distinctions, the concepts of the halal supply chain and halal logistics have become increasingly prominent, driven largely by the growing global demand for halal products among Muslim consumers. These concepts consider halal sensitivity within the value chain approach, encompassing the flow of goods, services, and information from raw material procurement to the delivery of the final product to the end customer.

The concept of halal refers to conformity with the doctrinal standards established by religion (TDK, 2025) and Islamic principles. According to Tieman and Ghazali (2013), halal is a dietary obligation for Muslims. Halal products are those that fully comply with Islamic religious laws and are considered lawful and permissible (Kurtoğlu & Çiçek, 2013, p.181). Sharia law considers all materials to be halal unless they are explicitly restricted or prohibited.

The concept of halal products encompasses not only food products, but also numerous products across various sectors, including cleaning products, cosmetics, medicines, and clothing (Ngah et al., 2014). Moreover, a halal product requires not only that the raw materials used are halal but also that the production process complies with halal principles. A halal product must be made in accordance with these standards, with no haram ingredients or contact during production. In other words, the product's halal integrity must be maintained throughout the entire process. This requirement has led to the introduction of the concept of "halal production" in the literature. For meat, poultry, and related products, experts emphasize the need to establish a comprehensive framework to supervise halal production (Chaudry et al., 2000, p.3).

In all halal production processes, consumers are expected to have confidence that every stage—from production and processing to distribution—complies with Shariah law. Moreover, the producers' ability to monitor and track each stage of the production process is essential for maintaining consumer trust (Shafii & Khadijah, 2012, p.1). In this context, halal supply chain management becomes a critical process, overseeing and coordinating every stage of a product's journey from raw materials to final consumption in accordance with Islamic principles.

When considered as a whole, producing a final halal product requires managing halal sensitivities, such as attitudes and behaviours, and minimizing contamination and contact risks throughout the production process. Additionally, it involves the proper management of halal storage and distribution processes, commonly referred to as halal logistics. Together, these processes form the fundamental elements of halal supply chain management.

On the other hand, as of 2025, Muslims constitute approximately 24.1% of the global population (Islamicity 2025), making them the second-largest demographic group after Christians, with a population of 2 billion (Wasserman, 2024). This situation highlights the significant demand for halal products and underscores the need for authorities to raise awareness about halal supply chain management. Ensuring compliance and efficiency in halal supply chain management, while addressing existing shortcomings, requires not only the involvement of institutional authorities but also comprehensive academic research. Research of this kind will contribute to

improving halal supply chain processes at both theoretical and practical levels, enhancing industry efficiency and facilitating the safer and more effective global supply of halal products.

In this context, the study comprehensively examines trends identified in relevant research within the Web of Science (WoS) database by conducting searches using key terms such as “halal industry”, “halal logistics”, “halal certification” and “halal supply chain management”. This review aims to examine academic studies in the sub-discipline of halal supply chain management, highlighting the development of scientific literature in the field and identifying existing research gap. The primary objective is to assess scientific productivity in halal supply chain management and highlight the main trends. Additionally, this study aims to serve as a resource for researchers in halal supply chain management and related fields, helping them stay informed about the latest innovations and developments in the industry. In doing so, it provides an opportunity to gain insights into emerging trends, practical innovations, and theoretical advancements in the field. Moreover, this study aims to contribute to achieving more accurate and objective results in future research by minimising potential biases. To achieve this goal, bibliometric analysis examines the information density of scientific publications from a holistic perspective and systematically summarises this information using quantitative methods. Consequently, this bibliometric review will serve as a vital resource for developing strategies to enhance the management of halal supply chains at both academic and industrial levels.

HALAL SUPPLY CHAIN MANAGEMENT

The global Muslim market, valued at 2 trillion USD in 2021, is expected to grow by 40% to reach 2.8 trillion USD by 2025 (Davies, 2025). This situation demonstrates that the halal industry is a sector that has experienced significant global growth, as emphasised by Mahalle et al. (2020, p.67). Halal supply chain management underpins the central concept, integrating the halal industry including sourcing and production with halal logistics, such as distribution, storage, packaging, and inventory management. In addition, halal certification plays a central role in the value chain, assuring Muslim countries that products meet Shariah standards in international trade (Sapa & Muthiadin, 2024, p.25). The Halal certification, first introduced by Malaysia in the 1980s, is now issued by more than 400 organisations (Khan & Haleem, 2014, p.36). Although different Halal standards are applied by certification bodies, the packaging of products manufactured by a producer with a Halal certificate bears the HCO (Halal Certification Organization) logo.

When examining the literature on Halal supply chain management, it becomes evident that there is no single, universally accepted definition of the concept:

Halal supply chain management aims to prevent direct contact with haram substances, mitigate contamination risks, and ensure alignment with the expectations and perceptions of Muslim consumers (Tieman, 2011, p.186).

Tieman et al. (2012, p.218) define halal supply chain management as the management of a halal network that

preserves halal integrity from the source to the point of consumer purchase.

According to Zulfakar et al. (2014, p.59), all components of the halal supply chain must assume both individual and collective responsibilities to prevent intentional or unintentional cross-contamination of halal products throughout the entire process, from start to finish.

Khan et al. (2022, p.2794) emphasize that halal supply chain management prioritizes maintaining halal integrity.

Tieman (2020, p.9) addresses the dynamic transformation of Halal, illustrating how it begins with Muslim companies and evolves into a Halal value chain, as shown in Figure 1.

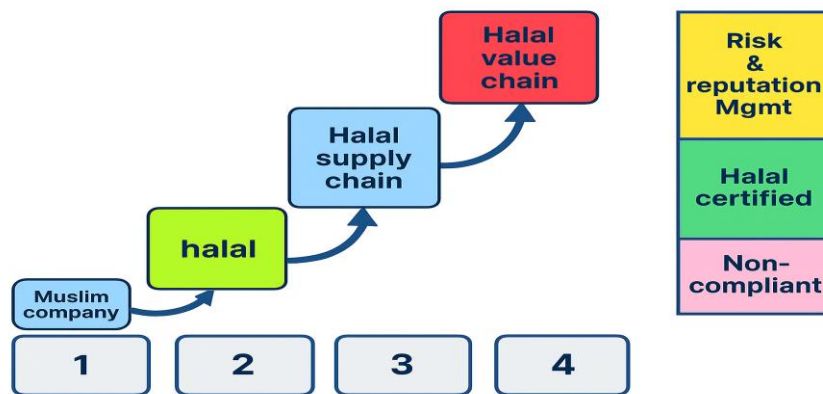


Figure 1: Transformation from Halal-to-Halal Supply Chain

Source: “Evolution of Halal” (Tieman, 2020, p.9). Adapted from “The Halal Industry: Processes, Products, and Perspectives” by M. Tieman, 2020, Routledge. © 2020 by Routledge.

According to Figure 1, initially, trade relies solely on mutual trust among Muslim companies, representing the most primitive phase of the process. The halal certification process begins at Level 2, known as the halal product stage. With the introduction of certification procedures in the third stage, the concept of halal extends beyond the product itself to encompass halal supply chain management, ensuring halal integrity throughout all processes. The final stage, the halal value chain, emphasizes maintaining complete halal integrity and ensuring full compliance across all systems, including supply, production, distribution, marketing, and finance (Tieman, 2020, pp.9-10).

Today, Muslims do not live exclusively in Muslim-majority countries; therefore, in trade between Muslim and non-Muslim countries, as well as in businesses from non-Muslim countries that provide services to Muslims, the importance of a halal supply chain that ensures full compliance with halal integrity is growing. This process continues to evolve through its own dynamics.

METHODOLOGY: BIBLIOMETRIC ANALYSIS

The term “bibliometric”, first introduced by Pritchard in 1969, refers to the application of mathematical and statistical methods to books and other communication media (Pritchard, 1969, p.348). Bibliometric analyses

examine the characteristics and trends of recorded knowledge, analyse the structures of scientific and research fields, evaluate research activities, and manage scientific information (Patra et al., 2006, pp.27–28).

Bibliometric studies, amid the overwhelming volume of new knowledge, conceptual developments, and data, serve to identify researchers' trends over time, explore themes, and shifts in disciplinary boundaries. They also reveal the most productive scholars and institutions within a given field, thereby presenting a comprehensive overview of ongoing research (as cited in Aria & Cuccurullo, 2017, p.959).

Such bibliometric studies or analyses reveal specific characteristics of documents or publications, enabling the quantification of relevant literature, the evaluation of emerging concepts, and the identification of current trends in the field (Kasemodel et al., 2016, p.82; Guzeller & Celiker, 2017, p.89).

Bibliometric studies pinpoint the most influential research on a given topic and map the collaborations among researchers (Subramanyam, 1983, p.33). Bibliometric analyses examine information using various indicators, such as publications, cited references, keywords, phrases, quotations, familiar citations, authorship, and other relevant features, to uncover hidden patterns in structured data (Daim et al., 2005, p.112). Bibliometric analyses, which extract patterns from vast databases and provide insights into past research, are quantitative methods that generate science maps based on the relationships among relevant scientific publications within a field, discipline, or area of expertise (Zupic & Čater, 2014, p.429). Researchers create science maps by analysing citations at the journal or country level, or by examining article and author co-citations (Osareh, 1996, p.149).

While bibliometric analyses based on extensive databases are increasingly encompassing nearly all disciplines today, various commercially licensed analysis and mapping software are employed to manage the complexity of the analytical process (Guler et al., 2016, p.385).

In the international literature, bibliometric studies have addressed topics such as halal (Haleem et al., 2020), halal production (Masudin et al., 2022), halal suppliers (Handayani et al., 2021), halal products (Wahyuni et al., 2019; Agrawal et al., 2021; Priantina & Sapian, 2021; Rejeb et al., 2021; Anam, 2022), halal cosmetics (Azmi et al., 2021; Zakaria et al., 2022), halal logistics (Rusydia et al., 2021), halal certification (Agrawal et al., 2021; Yanti et al., 2022), halal blockchain (Yanti et al., 2022), and halal supply chains encompassing all these processes (Antonio et al., 2020; Omar et al., 2020; Rusydia et al., 2023; Hanoum et al., 2023; Hasnan et al., 2024).

Antonio et al. (2020) examined the role of Islamic economics and finance in the halal value chain from a bibliometric perspective, analysing more than 163 publications. Omar (2020) examined the halal supply chain by conducting a bibliometric analysis of 104 publications indexed in the Scopus database from 2008 to 2018. Rusydia et al. (2023) analysed 228 publications on halal supply chain management in the Scopus database using R-Biblioshiny software as of 2021. Hanoum et al. (2023) conducted a bibliometric analysis of 149 publications on halal supply chain management using both the Scopus and Web of Science (WoS) databases.

Finally, Hasnan et al. (2024) presented bibliometric findings on halal supply chain management based on 290 publications from the Scopus database covering the years 2009–2022.

In general, the relatively small number of publications included in these studies is noteworthy. Additionally, Antonio et al. (2020) limited their focus by analysing publications confined to a specific area or perspective.

ANALYSIS AND RESULTS

Data Set

In this study, searches were conducted using the keywords “halal logistics”, “halal certification”, “halal industry”, “halal supply chain”, and “halal supply chain management”. Terms such as “halal food”, which do not directly pertain to supply chain management, were intentionally excluded to maintain the study’s focus on the supply chain perspective. A total of 630 academic studies published in the Web of Science (WoS) database between 1997 and 2025 were examined. The R-Studio Biblioshiny program was used for the analysis. The study included various document types from the WoS database, namely: articles (402), book chapters (31), early access articles (30), proceedings papers (102), books (2), book reviews (3), editorial materials (7), letters (1), news items (1), and reviews (51). Table 1 presents the types and numbers of documents in detail.

Table 1: Main Information about the Documents

Category	Metric	Value
General Information	Timespan	1997–2025
	Sources (Journals, Books, etc.)	282
	Total Documents	630
	Annual Growth Rate (%)	16.98
	Average Document Age	4.75
	Average Citations per Document	12.88
	Total References	22,296
Document Contents	Keywords Plus (ID)	742
	Author’s Keywords (DE)	1,655
Authors	Total Authors	1,593
	Authors of Single-Authored Docs	65
Document Types	Article	402
	Article; Book Chapter	31
	Article; Early Access	30
	Article; Proceedings Paper	3
	Book	2
	Book Review	2
	Book Review: Early Access	1
	Editorial Material	4
	Editorial Material; Book Chapter	3
	Letter	1
	News Item	1
	Proceedings Paper	99
	Review	44
	Review: Book Chapter	2
	Review: Early Access	5

Source: Created by author.

The analysis of the parameters related to the scientific publications listed in Table 1 shows that the annual average growth rate of publications is 16.98%, and the average number of citations per publication is 12.88. Additionally, a total of 1,593 researchers authored these scientific publications. While 65 of these authors published their work as sole authors, the majority representing 95.9% published collaboratively. Examination of the types of studies shows that most publications are articles. Figure 2 illustrates the annual development in the number of publications.

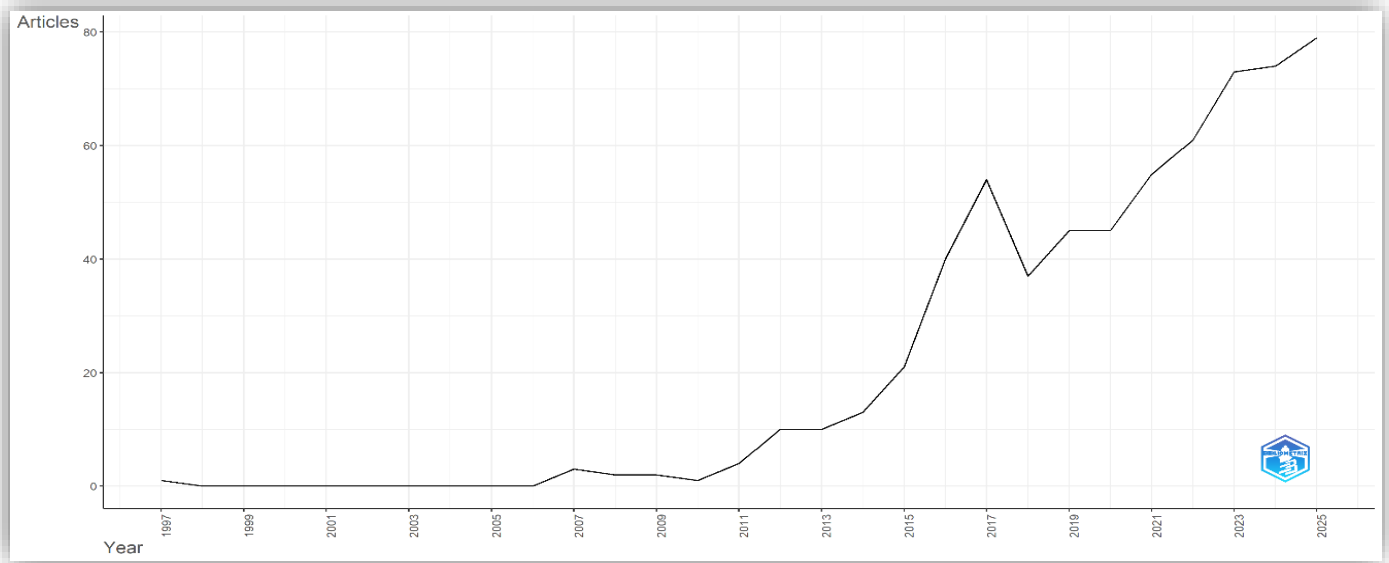


Figure 2: Annual Growth Rate

Source: Created by author.

Examination of the graph in Figure 2, which depicts the number of articles published each year, shows that the first publication occurred in 1997, followed by a gap with no publications until 2006. Publications resumed in 2007, and the number of publications exhibits a noticeable upward trend after 2011.

Figure 3 presents a three-field plot depicting the relationships among keywords (KW-Merged), authors (AU), and the journals (SO) in which the studies were published. This figure highlights the journals with the highest number of publications on halal supply chain management and its related sub-keywords, the authors who have contributed most to these journals, and the keywords or themes most frequently used by these authors. The relationships among these variables are illustrated by a gray connecting line. The size of the rectangles in the graph reflects the volume of publications associated with each element.

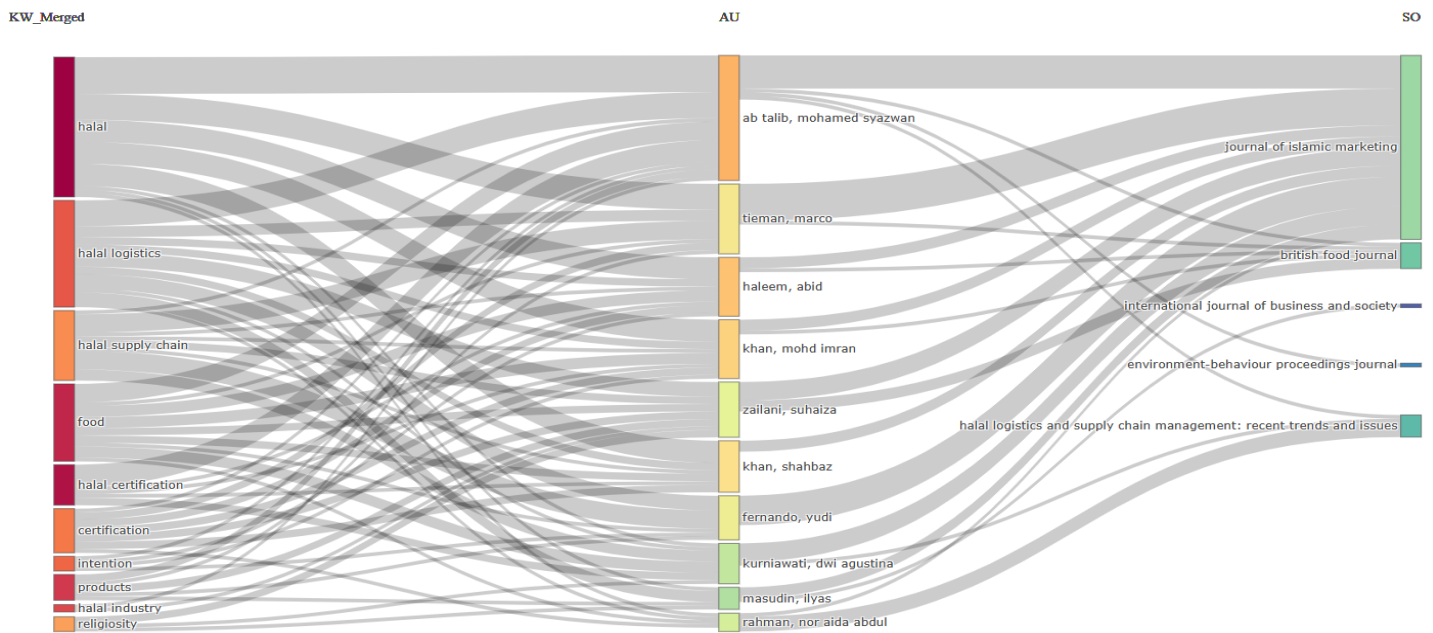


Figure 3: Three Field Plot

Source: Created by author.

According to Figure 3, the keywords “halal,” “halal logistics” and “halal supply chain” stand out prominently. These terms reflect the primary research focus areas within the field of halal logistics. In addition, terms like ‘halal certification’ and ‘halal industry’ are among the most prevalent in the field. At the centre of the graph, the authors with the highest number of publications are, in descending order, Mohamed Syazwan Ab Talib, Marco Tieman, Abid Halem, and Mohd Imran Khan. These authors have made significant contributions to the fields of halal logistics and supply chain management. Finally, according to the journal rankings displayed on the left side of the graph, the journal with the most publications on halal logistics is, by far, the “*Journal of Islamic Marketing*”. Researchers regard this journal as one of the most significant for publications on this topic.

Table 2 lists the most relevant sources and the number of studies they published during the research period.

Table 2: Most Relevant Sources

Sources	Articles
Journal of Islamic Marketing	168
Global Journal Al-Thaqafah	15
British Food Journal	14
Halal Logistics and Supply Chain Management: Recent Trends and Issues	14
Pertamina Journal of Social Science and Humanities	12
Advanced Science Letters	11
Environment Behavior Proceedings Journal	7
International Food Research Journal	7
International Journal of Business and Society	7
Handbook of Halal Food Production	6

Source: Created by author.

This trend is also evident in the most frequently cited sources presented in Table 3. The Journal of Islamic Research ranks first with 3,623 citations. The British Food Journal is the second cited source, with 801 citations, followed by Meat Science in third place, with 311 citations.

Table 3: Most Cited Sources

Sources	Articles
Journal Of Islamic Marketing	3623
British Food Journal	801
Meat Science	311
Food Control	285
Sustainability-Basel	249
J Bus Res	208
Trends In Food Science Technology	199
Journal Of Agribusiness in Developing and Emerging Economies	198
Procedia Social and Behavioural Sciences	194
International Journal of Islamic and Middle Eastern Finance and Management	179

Source: Created by author.

Another bibliometric output related to the sources in the field is Bradford's Law. Figure 4 illustrates the application of this law in identifying the core sources related to halal supply chain management.



Figure 4: Bradford's Law

Source: Created by author.

Bradford's Law highlights the concentration of core articles within a subject area: approximately one-third of the articles are published by a specific group of journals, another third by a different group, and the remaining articles are distributed across a broader range of journals (Garfield, 1980, p.477). On the other hand, this law defines the core sources of the most relevant journals in a particular field (Venable, et al. 2016, p.56). In light of this information, an examination of Figure 4 reveals that the core sources for publications related to halal supply chain management and its sub-keywords are the *Journal of Islamic Research*, *Global Journal Al-Thaqafa*, and *Halal*

The Three-Field Plot in figure 3 highlights parallel findings for the most relevant authors in the field. Table 4 lists the top 10 most relevant authors.

Table 4: Most Relevant Authors

Authors	Articles	Articles Fractionalized	Total Citation	h-index	Citation/Publication
Ab Talib, Mohamed Syazwan	15	6.50	232	10	15.46
Haleem, Abid	13	4.12	185	10	14.23
Khan, Mohd Imran	13	4.12	185	10	14.23
Khan, Shahbaz	12	3.62	148	9	12.33
Tieman, Marco	12	6.25	377	9	31.42
Fernando, Yudi	10	3.39	51	4	5.1
Zailani, Suhaiza	10	2.60	161	9	16.1
Rahman, Nor Aida Abdul	9	2.83	<20	1	<2.22
Kurniawati, Dwi Agustina	8	3.17	34	4	4.25
Masudin, Ilyas	8	1.90	50	7	6.25

Source: Created by author.

Table 4 shows that Ab Talib is the most relevant author in the field with 15 publications, followed by Halem and Khan, who tie for second place with 13 publications each. However, in the Three-Field Plot (Figure 3), although *Tieman* appears more relevant based on the relationship between keywords and sources shown in the graph, he ranks behind Halem and Khan with 12 publications. On the other hand, *Tieman*, with 12 publications in the field, is the most cited author. *Tieman* has 377 citations across 12 publications. Despite the relatively limited number of publications, *Tieman*'s research has had a significant impact and can be considered the most influential in the field. The high citation count of his work indicates widespread recognition by the scientific community and underscores his important contributions. Therefore, *Tieman*'s influence is measured not only by the quantity of his publications but also by their acceptance and impact within the academic community. Table 5 presents the most-cited publications in the field. Notably, *Tieman* authored both the first and second most-cited publications. The top-cited publication, with 171 citations, is *Tieman*'s inaugural paper “*The application of Halal in supply chain management: in-depth interviews*” in this area, published in 2011. This research focuses on the halal food supply chain, aiming to clarify the guidelines and principles that govern it and to identify its specific requirements. The research explores the concept of halal and discusses the proper implementation of halal supply chains. *Tieman et al.* (2012), in their study “Principles in Halal Supply Chain Management”, present the “Halal Supply Chain Model” to optimise the design of halal food supply chains; this publication is the second most-cited in the field. The study, based on focus group discussions in Malaysia, the Netherlands, and China, aims to identify halal control and assurance activities in logistics business processes. The findings indicate that this model can serve as a valuable tool for effective supply chain management. Both studies can thus be considered foundational works in the field. The first emphasises the importance of understanding specific requirements and guidelines. In

contrast, the second fills an important gap in halal logistics and supply chain management, making valuable contributions to academic literature in this field.

The third most-cited study is by Awan et al. (2015), titled '*Factors affecting Halal purchase intention—evidence from Pakistan’s Halal food sector*'. This study focuses on the Pakistani market and provides explanations for strategies based on Islamic Marketing philosophy, followed by Halal food producers and marketers. Additionally, it provides a comprehensive understanding of the behavioural, social, and marketing factors that influence customers’ purchase intentions.

Ab Talib et al.'s most-cited work is the 2015 publication titled “*Halal Supply Chain Critical Success Factors: A Literature Review*”. In this study, Ab Talib et al. (2015) aimed to identify the critical success factors for stakeholders in halal supply chain management. In this context, the study highlights factors such as government support, transportation planning, information technology, human resource management, collaborative relationships, halal certification, and halal traceability. This study addresses a more specific area in comparison than Tieman’s works.

The most frequently cited studies primarily focus on the fundamentals, principles, requirements, and growing market dynamics of halal supply chain management. However, halal certification (Rajagopal et al., 2011; Marzuki et al., 2012), halal verification (Man et al., 2007), and the integration of digital technologies into the halal supply chain (Hew et al., 2020) have also received significant attention and have been the subject of numerous studies.

Table 5: Most Global Cited Documents

Paper	DOI	Total Citations	TC per Year
Tieman, M. (2011). The application of Halal in supply chain management: in-depth interviews. <i>Journal of Islamic Marketing</i> , 2(2), 186-195.	10.1108/17590831111139893	171	11.40
Tieman, M., Van der Vorst, J. G., & Che Ghazali, M. (2012). Principles in halal supply chain management. <i>Journal of Islamic Marketing</i> , 3(3), 217-243.	10.1108/17590831211259727	146	10.43
Awan, H. M., Siddiquei, A. N., & Haider, Z. (2015). Factors affecting Halal purchase intention—evidence from Pakistan’s Halal food sector. <i>Management Source: Created by author.</i>			
<i>Research Review</i> , 38(6), 640-660.	10.1108/MRR-01-2014-0022	139	12.64
Lever, J., & Miele, M. (2012). The growth of halal meat markets in Europe: An exploration of the supply side theory of religion. <i>Journal of Rural Studies</i> , 28(4), 528-537.	10.1016/j.jrurstud.2012.06.004	119	8.50
Soon, J. M., Chandia, M., & Regenstein, J. M. (2017). Halal integrity in the food supply chain. <i>British Food Journal</i> , 119(1), 39-51.	10.1108/BFJ-04-2016-0150	100	11.11
Hew, J. J., Wong, L. W., Tan, G. W. H., Ooi, K. B., & Lin, B. (2020). The blockchain-based Halal traceability systems: a hype or reality? <i>Supply Chain Management: An International Journal</i> , 25(6), 863-879.	10.1108/SCM-01-2020-0044	96	16.00
Ab Talib, M. S., Abdul Hamid, A. B., & Zulfakar, M. H. (2015). Halal supply chain critical success factors: a literature review. <i>Journal of Islamic Marketing</i> , 6(1), 44-71.	10.1108/JIMA-07-2013-0049	92	8.36
Marzuki, S. Z. S., Hall, C. M., & Ballantine, P. W. (2012). Restaurant managers’ perspectives on halal certification. <i>Journal of Islamic Marketing</i> , 3(1), 47-58.	10.1108/17590831211206581	91	6.50

Man, Y. C., Aida, A. A., Raha, A. R., & Son, R. (2007). Identification of pork derivatives in food products by species-specific polymerase chain reaction (PCR) for halal verification. <i>Food control</i> , 18(7), 885-889.	10.1016/j.foodcont.2006.05.004	88	4.63
Rajagopal, S., Ramanan, S., Visvanathan, R., & Satapathy, S. (2011). Halal certification: implication for marketers in UAE. <i>Journal of Islamic Marketing</i> , 2(2), 138-153.	10.1108/17590831111139857	85	5.67

Source: Created by author.

Figure 5 illustrates the authors' productivity over time. The size and colour intensity of the circles in Figure 5 correlate with the number of studies in the field. In other words, as the number of studies increases, the circles grow larger, and their colour intensity becomes stronger. Accordingly, it can be observed that Tieman has continued to publish from 2011 to 2025, though not regularly every year, with a maximum of 3 publications in a year (in 2019). M. Khan, Halem, and S. Khan each contributed four publications to the field in 2020, and these researchers have consistently published every year from 2017 to 2025. This situation supports the assertion that these researchers are among the most influential and active scholars in the field (See Table 4).

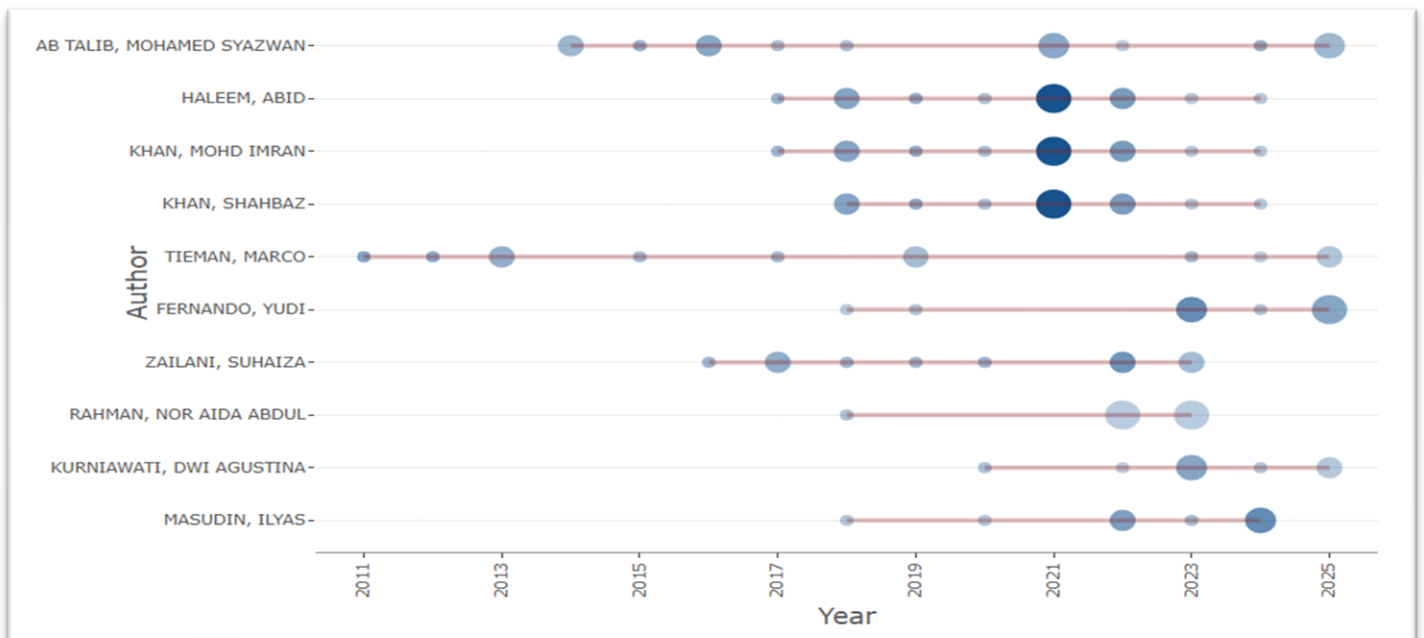


Figure 5: Authors' Production over Time

Source: Created by author.

The countries of the authors in the field and international collaborations between countries also constitute another important output of bibliometric analysis. Such an analysis reveals global collaborations and interactions within the research field. Collaborations between countries demonstrate international research networks and specialisation on a specific topic. Figure 6 presents the graph illustrating collaborations between the countries of the corresponding authors.

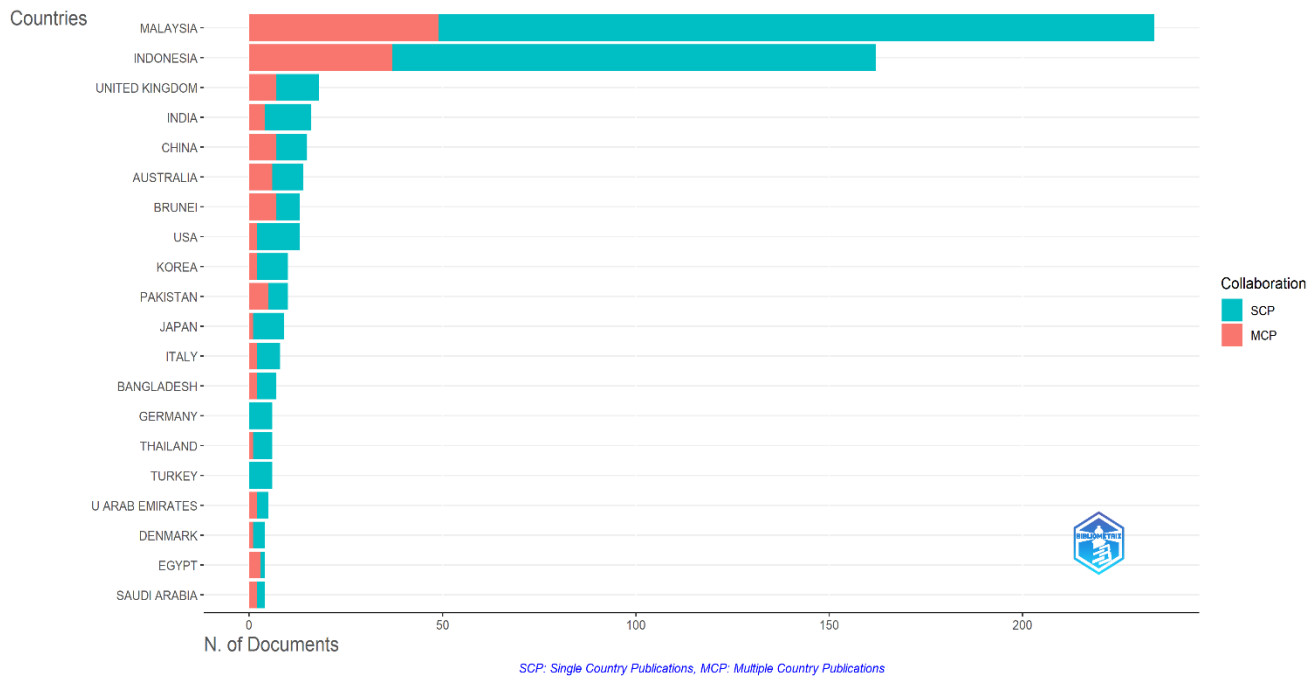


Figure 6: Corresponding Author's Countries

Source: Created by author.

According to Figure 6, Malaysia has produced the highest number of publications. It not only leads in total research output but also demonstrates the highest level of multiple-country collaboration (MCP). This suggests that Malaysian researchers are well-integrated into global research networks and are active to participate in multinational projects. Indonesia ranks second in publication volume and also demonstrates a relatively strong level of international collaboration. In contrast, countries such as the United Kingdom, India, China, and Australia show lower levels of both total publications and international collaboration. Overall, these findings highlight Malaysia’s dominant position in research productivity and international engagement within the region. A noteworthy observation concerns Turkey. The graph shows that Turkey’s publications are produced exclusively through single-country authorship (SCP), indicating limited international collaboration and suggesting that most research is conducted at the national level. This lack of multinational co-authorship may restrict Turkey’s scientific visibility and representation within global research networks.

Figure 7 presents a world map illustrating cooperation among countries in this field. Collaborative activity is concentrated primarily in Malaysia and Indonesia.

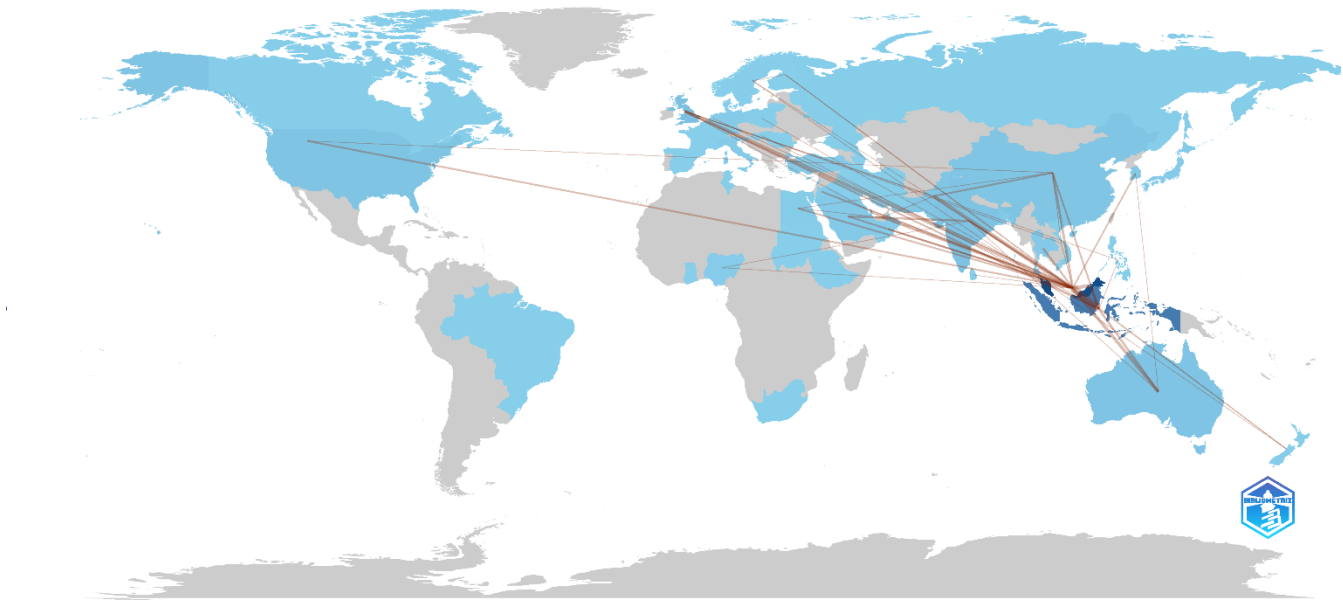


Figure 7: Countries' Collaboration World Map

Source: Created by author.

The citation counts for the countries further support these findings. Malaysia has the highest number of citations, with a total of 3,272, followed by Indonesia with 1,258 citations. Table 6 presents information on the top 10 most cited countries.

Table 6: Most Cited Countries

Country	Total Citations	Average Article Citations
Malaysia	3273	14.00
Indonesia	1258	7.80
India	563	35.20
United Kingdom	492	27.30
U Arab Emirates	261	52.20
Pakistan	197	19.70
China	196	13.10
USA	185	14.20
Brunei	181	13.90
Australia	156	11.10

Source: Created by author.

According to this, Asian countries such as Malaysia, Indonesia, Pakistan, and Saudi Arabia stand out as the leading contributors to research in the field of halal logistics. Additionally, the United Kingdom, the United States, and Australia are also among the countries hosting significant scientific studies with highly cited publications in this area.

When examining the most relevant keywords in the field, as shown in Table 7, the most frequently used word is “halal” (133 occurrences), followed by “halal certification” (90), “food” (86), and “product” (58). This suggests that the primary focus is on understanding and standardizing the concept of “halal”, with studies mainly

concentrating on the food sector, followed by other product categories.

Table 7: Most Frequent Words

Words	Occurrences
halal	133
halal certification	90
food	86
products	58
halal industry	54
halal logistics	51
intention	50
certification	49
halal supply chain	49
religiosity	48

Source: Created by author.

However, trending keywords differ slightly from the most frequently used keywords. Figure 8 presents the trending topics for all keywords in the field. The figure visualises the keywords that have trended over the years, with the size of each circle indicating the frequency of its use in a given year.

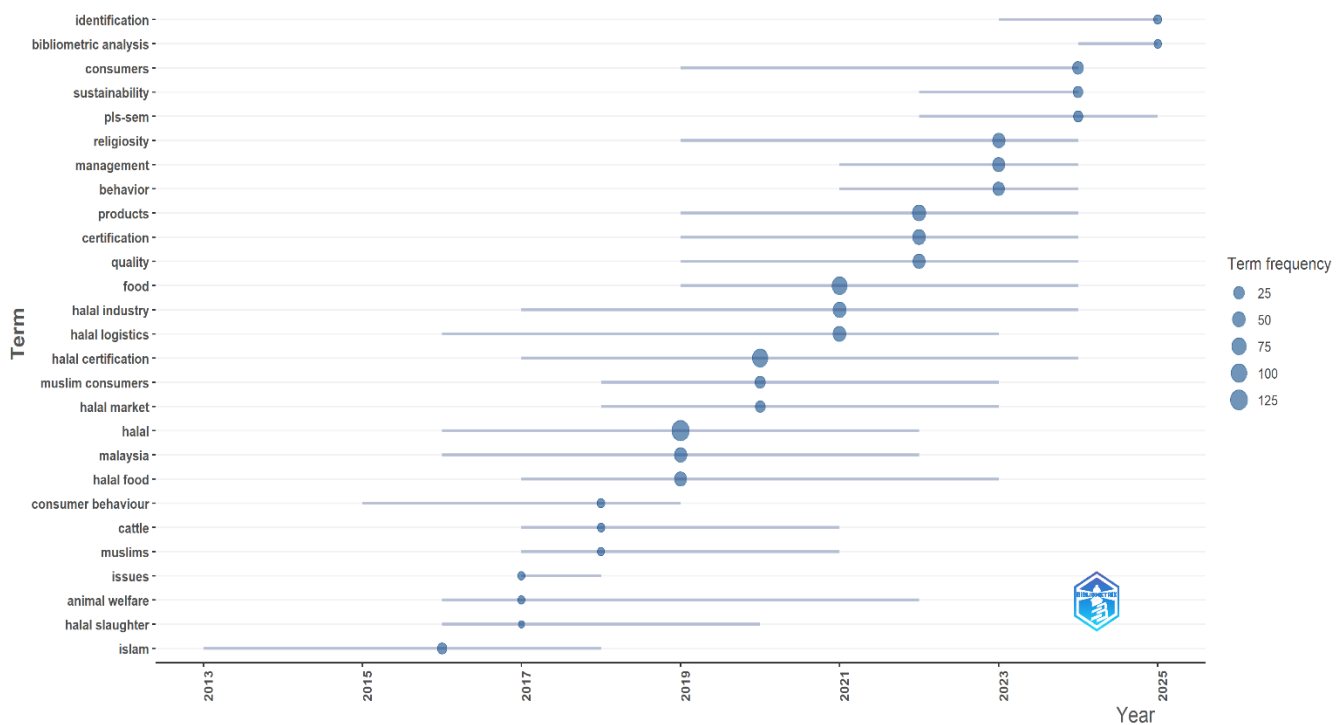


Figure 8. Trend Topics about Halal Supply Chain Management Literature in WoS

Source: Created by author.

Accordingly, the analysis identifies halal, Malaysia, halal certification, halal logistics, and halal industry as the most frequently used keywords over the years. In recent periods, *sustainability* has also emerged as one of the commonly used keywords.

Biblioshiny offers a unique feature for creating thematic maps, which is typically not available in other bibliometric software (Oztemiz & Vatansever, 2025, p.36). Figure 9 presents the thematic map for halal supply chain management

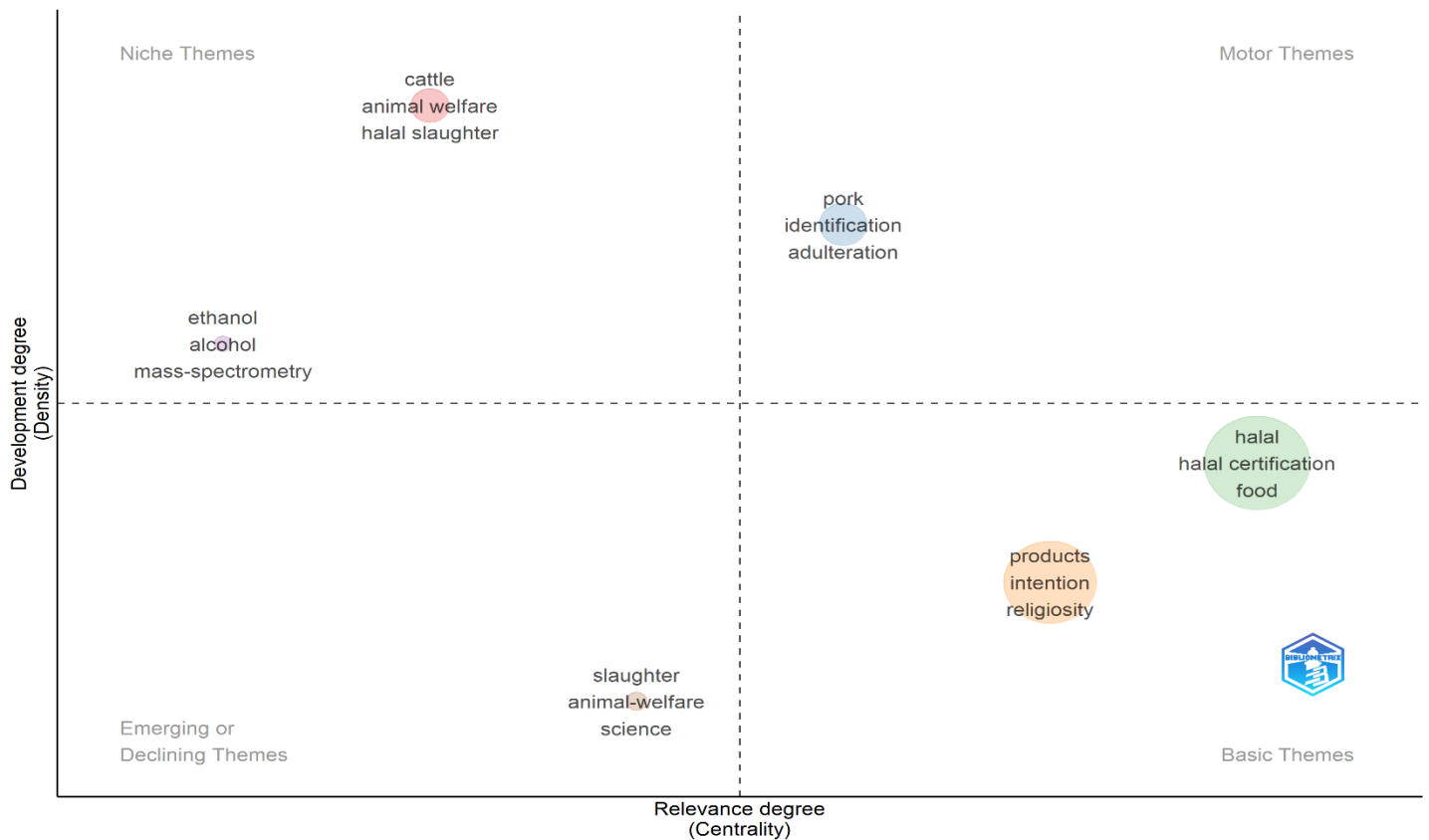


Figure 9. Thematic Map

Source: Created by author.

The horizontal axis of the thematic map represents the centrality of clusters formed by keywords, while the vertical axis indicates their density. According to Callon et al. (1991, pp.164–165):

- Centrality degree refers to the strength of connections between a particular cluster and other clusters. Stronger connections increase a cluster’s centrality, indicating that it plays a significant role in highlighting research problems considered highly important by the scientific or technological community
- Density degree reflects the strength of the connections between keywords within a cluster. A higher density indicates that the research problems within the cluster are more cohesive and integrated. The thematic map, which illustrates clusters of keywords based on their centrality and density, is divided into four main categories: Basic themes, Motor themes, Emerging/Declining themes, and Niche themes.

Accordingly, the analysis identifies “halal”, “halal certification”, “food”, “product”, “intention”, and “religiosity” as the basic themes in the field. These themes constitute the foundation of the field, with the first three concepts

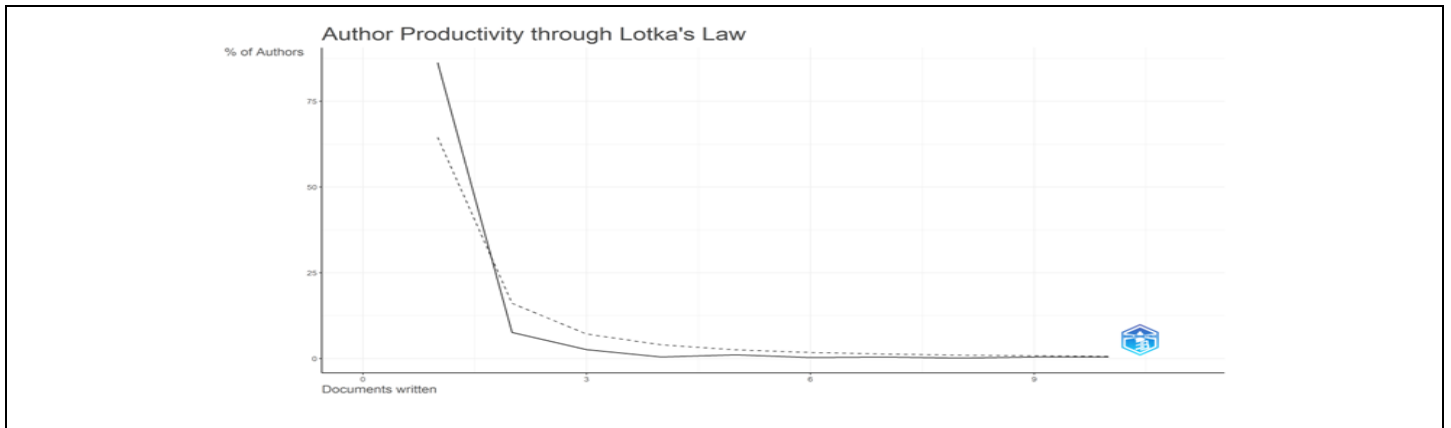
also falling within the boundary of motor themes. In this context, “halal”, “halal certification”, and “food” are expected to continue being developed and emphasized in the halal supply chain domain.

When examining the motor themes, it is evident that the themes of "pork", which is not acceptable from an Islamic perspective, “identification”, and “adulteration”. The theme of “pork” is significant because Islam forbids it, prompting strict controls and regulations within halal supply chains. The theme of “identification” pertains to the accurately labelling of products and ensuring they comply with halal standards. The theme of 'adulteration' is crucial because it ensures the purity of halal products by preventing the introduction of additives or prohibited substances. These findings suggest that researchers will place greater emphasis on these themes, continuing to prioritise them in the development of more precise solutions within the halal supply chain.

The emergence of the themes “slaughter”, “animal welfare”, and “science” in the Emerging/Declining Themes area indicates that the ethical and scientific aspects of the halal supply chain are still evolving. These themes, particularly those concerning slaughtering processes and ethical considerations for animal welfare, highlight the sensitivities related to animal rights and well-being. Additionally, the “science” theme emphasises the need to ground these issues in scientific principles and suggests that research should be more methodical and structured.

The niche themes “cattle”, “animal welfare”, “halal slaughter”, “ethanol”, “alcohol”, and “mass spectrometry” highlight specialized and specific topics within the halal supply chain. These themes correspond to well-developed research problems and, although they were central themes in earlier stages, they have gradually become less prominent and are now considered marginalized clusters. They also represent expertise that is isolated from other sub-networks.

Finally, the analysis indicates that author productivity plays a significant role in the scientific output on halal supply chain management. As shown in Table 1, there are 1,593 authors in the field, contributing to 630 publications. These publications have appeared in 282 different journals and sources. This indicates a substantial number of researchers interested in the topic and a considerable diversity of journals contributing to the published works. However, it also suggests a particular concentration of scientific productivity. This concentration should be analysed in terms of scientific activity within the field using Lotka's Law. Lotka's Law, proposed to describe the distribution of scientific productivity among researchers in any field, states that the proportion of researchers who contribute a single publication should be approximately 60% of the total number of researchers; the proportion of researchers who contribute two publications should be 25% of those who contribute a single publication; and the proportion of researchers who contribute three publications should be 11.1% (Lotka, 1926, p.323).



<i>Documents written</i>	<i>Number of Authors</i>	<i>Proportion of Authors</i>	<i>Theoretical</i>
1	1430	0.859	0.638
2	149	0.09	0.16
3	45	0.027	0.071
4	13	0.008	0.04

Figure 10: Distribution of Scientific Productivity According to Lotka's Law

Source: Created by author.

Figure 10 shows that 85.9% of researchers in the field have published only one paper, and researchers with two publications account for just 9% of those with a single publication. The remaining approximately 5.1% consists of researchers who have published three or more single-author papers on the subject. These findings indicate that the scientific productivity in the field deviates from Lotka's Law. This deviation, rather than representing a deficiency, suggests that the field is in its initial or developmental stage and has not yet formed a broad core of productive authors.

CONCLUSION AND DISCUSSION

This study analyses publications in the field of halal supply chain management using bibliometric methods, focusing on documents, sources, authors, universities, and countries. This comprehensive compilation aims to provide readers and researchers with a foundational literature review. As part of the study, the concepts of "halal supply chain management" and its sub-concepts – "halal supply chain", "halal logistics", "halal certification", and "halal industry" were searched in the Web of Science (WoS) database, which includes the most prestigious internationally indexed resources. The study examined a total of 630 sources published between 1997 and 2025.

The study finds that the first publication in the field appeared in 1997, but researchers did not conduct further studies until 2006. Academic interest in the topic began to increase from 2011 onwards. In this context, 630 works from 282 sources were authored by 1,593 researchers, with an average annual publication growth rate of 17%. Most works were published as journal articles, although a considerable number also appeared as conference proceedings. It has been observed that only two documents have been published as books in this field. Additionally, a few studies have been published as book reviews. The high volume of article-format publications indicates that research in the field predominantly focuses on addressing practical, short-term problems. This

indicates that the research community tends to prioritise quick results and application-oriented studies. The researchers who stood out in the study, ranked by publication count, were *Ab Talip*, *Halem*, *M. Khan*, and *Tieman*. However, in terms of citations, *Tieman* was identified as the most influential scientist in the field, significantly surpassing the other authors. Another notable finding in the study is that the primary source for publishing documents in the field is the *Journal of Islamic Research*. In addition, the *Global Journal Al-Thagafah*, *British Food Journal*, and *Halal Logistics and Supply Chain Management: Recent Trends and Issues* also serve as core sources in the field. These journals have become key reference points in the literature by publishing significant research on halal supply chain management and related topics. In this context, it would be a highly strategic and appropriate step for researchers interested in the field to first consult the authors in question and these fundamental sources.

On the other hand, researchers in Malaysia produce the highest number of publications, followed by those in Indonesia. In areas such as halal, halal logistics, halal certification, and the value chain, Malaysia leads the research in this field. In addition, *Malaysia* and *Indonesia* stand out in terms of citation count, and these two countries play a significant role in international collaboration.

Bibliometric analysis of the halal supply chain field reveals that research has predominantly focused on concepts such as “halal”, “halal certification”, “food”, “product”, “intention”, and “religiosity”. This suggests that the field is still in the process of solidifying its conceptual foundations and remains more centred on theoretical definitions than on practical applications. Notably, the increasing use of the term “sustainability” in recent years reflects a growing intersection between the halal supply chain and global ethical and environmental concerns. However, the prominence of themes such as “pork”, “identification” and “adulteration” among the motor themes indicates that research continues to emphasise maintaining the fundamental religious boundaries of the halal concept. In contrast, researchers have yet to sufficiently integrate innovative and digital transformation themes. Themes like “slaughter”, “animal welfare” and “science” are identified as emerging but immature areas, suggesting that the ethical and scientific dimensions of the halal supply chain are still undergoing institutionalisation. Conversely, research on topics like “cattle”, “ethanol”, and “mass spectrometry” was once prominent but has gradually declined in scholarly attention, becoming increasingly marginal and seldom explored. In this context, scholars have largely shaped the existing literature to preserve religious conformity, highlighting the need for more comprehensive studies that integrate sustainability, ethics, technology, and global trade dimensions. The rise of the sustainability theme presents significant opportunities for halal supply chain managers to develop strategies that reduce environmental impacts, optimize energy and raw material use, improve waste management, and strengthen ethical standards. Furthermore, this trend encourages policymakers to integrate sustainability criteria into halal certification processes by establishing regulations and guidelines. In doing so, both environmental and ethical responsibility in production processes can be enhanced, while companies’ competitive advantage is

strengthened in line with consumers' conscious preferences. Therefore, for researchers and practitioners in the field, developing integrated approaches that incorporate sustainability emerges as a critical strategic step to make the halal value chain more economically and socially efficient, as well as more competitive at the international level. From a technological perspective, innovations such as digital traceability systems, blockchain applications, automation, and data analytics enhance the transparency of the halal supply chain, supporting compliance with religious and ethical standards throughout the entire process from production to consumption, thereby providing a more reliable value chain. From a global trade perspective, integrating sustainability and digitalization themes into the halal supply chain provides businesses with significant strategic advantages. The integration of sustainability and digitalization can play a pivotal role in reinforcing halal certification processes by employing environmentally and technologically advanced methods, thereby enhancing access to new international markets, expanding export capacity, facilitating adherence to global standards, and strengthening the overall competitiveness of enterprises.

Finally, when examining the scientific productivity of authors, it was found that 86% of them published only a single article in the field and did not continue publishing. This suggests that researchers need to further develop the field and enhance specialisation in scientific productivity. To enhance the effectiveness of the halal value chain, addressing this issue requires continuous and in-depth research. It is important for the authors to further develop their expertise in the field. Such studies will strengthen the knowledge base and play a crucial role in transforming the initial halal process into an efficient and effective halal value chain. This will also help make the field more competitive and effective at the international level.

REFERENCES

- Ab Talib, M.S., Abdul Hamid, A.B. & Zulfakar, M.H. (2015). Halal supply chain critical success factors: a literature review, *Journal of Islamic Marketing*, 6(1), 44-71. <https://doi.org/10.1108/JIMA-07-2013-0049>
- Agrawal, N., & Tripathi, A. P. (2021). A bibliometric analysis of halal food and certification: Existing research & future directions. *Delhi Business Review*, 22(2), 9-20. <https://doi.org/10.51768/dbr.v22i2.222202102>
- Anam, M. S. (2022). Analisis bibliometrik perkembangan penelitian halal food. *Journal of Halal Industry Studies*, 1(1), 21-31. <https://doi.org/10.53088/jhis.v1i1.195>
- Antonio, M. S., Rusydiana, A., Laila, N., Hidayat, Y. R., & Marlina, L. (2020). Halal value chain: A bibliometric review using R. *Library Philosophy and Practice (e-journal)*, 4606. <https://digitalcommons.unl.edu/libphilprac/>
- Aria, M. & Cuccurullo, C. (2017). Bibliometrix: An R- tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11 (2017), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Azmi, N. A. N., Noor, N. A. M., & Elgharbawy, A. A. (2021). A Bibliometric Analysis on Halal Cosmetics Over Twenty Years. *Halalpsphere*, 1(1), 53-71. <https://doi.org/10.31436/hs.v1i1.9>
- Callon, M., Courtial, J., & Laville, F. (1991). Co-word analysis as a tool for describing the network of interactions between basic and technological research: The case of polymer chemistry. *Scientometrics*, 22(1), 155–205.

- Chaudry, M. M., Jackson, M. A., Hussaini, M. M., & Riaz, M. N. (2000). Halal industrial production standards. Illinois: *J&M Food Products Company*, 1-15.
- Daim, T. Ü., Rueda, G. R. & Martin, T. (2005). Technology Forecasting Using Bibliometric Analysis and System Dynamics, Timothy R. Anderson- Tuğrul Ü. Daim- Dünder F. Kocaoğlu (Ed.), *Technology Management: A Unifying Discipline for Melting the Boundaries* in (s. 112-122). IEEE, ABD. <https://doi.org/10.1109/PICMET.2005.1509681>
- Davies, K. (2025). Global Muslim market size in 2021 and 2025 <https://www.statista.com/statistics/796103/global-muslim-market-size/> Access date: 20.10.2025.
- De Bellis, N. (2009). *Bibliometrics and citation analysis: from the science citation index to cybermetrics*. Bloomsbury Publishing PLC.
- Garfield, E. (1980). Bradford's Law and related statistical patterns. *Essays of an Information Scientist*, 4(19), 476-483.
- Guler, A.T., Waaijer, C.J.F. & Palmblad, M. Scientific workflows for bibliometrics. *Scientometrics* 107, 385–398 (2016). <https://doi.org/10.1007/s11192-016-1885-6>
- Guzeller, C. O., & Çeliker, N. (2018). Bibliometric analysis of tourism research for the period 2007-2016. *Advances in Hospitality and Tourism Research (AHTR)*, 6(1), 1-22. <https://doi.org/10.30519/ahtr.446248>
- Haleem, A., Khan, M.I., Khan, S. & Jami, A.R. (2020), Research status in Halal: a review and bibliometric analysis, *Modern Supply Chain Research and Applications*, 2(1), 23-41. <https://doi.org/10.1108/MSCRA-06-2019-0014>
- Hanoum, S., Sugihartanto, M. F., & Zuhriya, H. (2023). Halal supply chain management: a bibliometric study. *Halal Research Journal*, 3(2), 99-117. <https://doi.org/10.12962/j22759970.v3i2.734>
- Handayani, D. I., Masudin, I., Haris, A., & Restuputri, D. P. (2021). Ensuring the halal integrity of the food supply chain through halal suppliers: a bibliometric review. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-10-2020-0329>
- Hasnan, N., Kohda, Y., & Saad, S. (2024). Mapping the future of halal supply chain management: a biblioshiny R application. *PaperASIA*, 40(1b), 39-50. [https://doi.org/10.59953/paperasia.v40i1\(b\).46](https://doi.org/10.59953/paperasia.v40i1(b).46)
- Hew, J. J., Wong, L. W., Tan, G. W. H., Ooi, K. B., & Lin, B. (2020). The blockchain-based Halal traceability systems: a hype or reality? *Supply Chain Management: An International Journal*, 25(6), 863-879. <https://doi.org/10.1108/SCM-01-2020-0044>
- Islamicity (2025, December 21). Muslim Population By Country 2025. <https://www.islamicity.org/104639/muslim-population-by-country-2025/#:~:text=%C4%B0slam%2C%20d%C3%BCnyan%C4%B1n%20en%20h%C4%B1z%C4%B1%20b%C3%BCy%C3%BCen,toplam%20n%C3%BCfuslar%C4%B1%20yakla%C5%9F%C4%B1k%20%20milyar%20%20> Access date:12.10.2025
- Kasemodel, M. G. C., Makishi, F., Souza, R. C., & Silva, V. L. (2016). Following the trail of crumbs: A bibliometric study on consumer behaviour in the Food Science and Technology field. *International Journal of Food Studies*, 5(1), 73-83. <https://doi.org/10.7455/ijfs/5.1.2016.a7>
- Khan, M. I., & Haleem, A. (2016). Understanding “halal” and “halal certification & accreditation system” a brief review. *Saudi Journal of Business and Management Studies*, 1(1), 32-42.
- Khan, M. I., Haleem, A., & Khan, S. (2022). Examining the link between Halal supply chain management and sustainability. *International Journal of Productivity and Performance Management*, 71(7), 2793-2819. <https://doi.org/10.1108/IJPPM-07-2019-0354>
- Kurtoğlu, R., & Çiçek, B. (2013). Tüketicilerin helal ürünler hakkındaki algılama, tutum ve beklentilerini tespit etmeye yönelik bir araştırma. *Eskişehir Osmangazi Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 8(3), 181-205.
- Lever, J., & Miele, M. (2012). The growth of halal meat markets in Europe: An exploration of the supply side theory of religion. *Journal of Rural Studies*, 28(4), 528-537. <https://doi.org/10.1016/j.jrurstud.2012.06.004>
- Lotka, A. J. (1926). The frequency distribution of scientific productivity. *Journal of the Washington academy of sciences*, 16(12), 317-323. <https://www.jstor.org/stable/24529203>

-
- Mahalle, H. N. H., Aghwan, Z. A. A., & Ab Talib, M. S. (2020). The premier of halal logistics in Brunei Darussalam. In N.A.A.Rahman, A. Hassan & M.F. Mohammad (Eds). *Halal logistics and supply chain management in Southeast Asia* (pp. 67-73). Routledge.
- Man, Y. C., Aida, A. A., Raha, A. R., & Son, R. (2007). Identification of pork derivatives in food products by species-specific polymerase chain reaction (PCR) for halal verification. *Food control*, 18(7), 885-889. <https://doi.org/10.1016/j.foodcont.2006.05.004>
- Marzuki, S. Z. S., Hall, C. M., & Ballantine, P. W. (2012). Restaurant managers' perspectives on halal certification. *Journal of Islamic Marketing*, 3(1), 47-58. <https://doi.org/10.1108/17590831211206581>
- Masudin, I., Rahmatullah, B. B., Agung, M. A., Dewanti, I. A., & Restuputri, D. P. (2022). Traceability System in Halal Procurement: A Bibliometric Review. *Logistics*, 6(4), 2-17. <https://doi.org/10.3390/logistics6040067>
- Ngah, A. H., Zainuddin, Y. & Thurasamy, R. (2014). Barriers And Enablers in Adopting Halal Transportation Services: A Study of Malaysian Halal Manufacturers. *International Journal of Business and Management*, 11(2), 49-70.
- Omar, W. M. W., Ismail, M. N., Ismail, M., Ahmad, G. O., & Ya, M. S. (2020). Visualising research literature in halal supply chain: a bibliometric analysis. *Malaysian Journal of Consumer and Family Economics*, 24(S2), 75-92.
- Osareh, F. (1996). Bibliometrics, Citation Analysis and Co-Citation Analysis: A Review of Literature I. *Libri*, 46(3), 149-158. <https://doi.org/10.1515/libr.1996.46.3.14>
- Oztemiz, H., & Vatansever, K. (2025). Global Plastic Waste Trade: An Analysis of Sources and Trends (1996-2024). *InTraders International Trade Academic Journal*, 8(1), 20-43. <https://doi.org/10.55065/intraders.1659575>
- Patra, S. K., Bhattacharya, P. and Verma, N. (2006). Bibliometric Study of Literature on Bibliometrics, *DESIDOC Journal of Library & Information Technology*, 26(1), 27-32.
- Priantina, A., & Sopian, S. M. (2021). The 3rd international halal management conference (3rd IHMC 2021). In *3rd International Halal Management Conference (3rd IHMC 2021)*.
- Pritchard, A. (1969). Statistical Bibliography or Bibliometrics? *Journal of Documentation*. 25: 348-349.
- Rusydia, A. S., Irfany, M. I., As-Salafiyah, A., & Tieman, M. (2023). Halal supply chain: a bibliometric analysis. *Journal of Islamic Marketing*, 14(12), 3009-3032. <https://doi.org/10.1108/JIMA-01-2022-0009>
- Rajagopal, S., Ramanan, S., Visvanathan, R., & Satapathy, S. (2011). Halal certification- implication for marketers in UAE. *Journal of Islamic Marketing*, 2(2), 138-153. <https://doi.org/10.1108/17590831111139857>
- Rejeb, A., Rejeb, K., & Zailani, S. (2021). Are halal food supply chains sustainable: a review and bibliometric analysis. *Journal of Foodservice Business Research*, 24(5), 554-595. <https://doi.org/10.1080/15378020.2021.1883214>
- Rusydia, A. S., Rahardjo, S., & Soeparno, W. S. (2021). Mapping Research on Halal Logistics using VoSviewer. *Library Philosophy and Practice (e-journal)*, 5895.1-14. https://digitalcommons.unl.edu/libphilprac/5895/?utm_source
- Sapa, NB& Muthiadin, C. (2024). Uluslararası Ticarete Helal Sertifikasyon. *Güneydoğu Asya İslami İşletme Ve Ekonomi Mezunlari Dergisi*, 3 (1), 25-30.
- Shafii, Z., & Khadijah, W. M. N. W. S. (2012). Halal traceability framework for halal food production. *World Applied Sciences Journal*, 17(12), 1-5.
- Soon, J. M., Chandia, M., & Regenstein, J. M. (2017). Halal integrity in the food supply chain. *British Food Journal*, 119(1), 39-51. <https://doi.org/10.1108/BFJ-04-2016-0150>
- Subramanyam, K. (1983). Bibliometric studies of research collaboration: A review. *Journal of Information Science*, 6(1), 33-38. <https://doi.org/10.1177/016555158300600105>
- TDK (2025). "Helal" <https://sozluk.gov.tr/> Access date: 10.10.2025
- Tieman, M. (2011), The application of Halal in supply chain management: in-depth interviews, *Journal of Islamic Marketing*, 2(2), 186-195. <https://doi.org/10.1108/17590831111139893>
- Tieman, M., Van der Vorst, J. G., & Che Ghazali, M. (2012). Principles in halal supply chain management. *Journal of Islamic Marketing*, 3(3), 217-243. <https://doi.org/10.1108/17590831211259727>

- Tieman, M., & Che Ghazali, M. (2013). Principles in halal purchasing. *Journal of Islamic Marketing*, 4(3), 281-293. <https://doi.org/10.1108/JIMA-01-2012-0004>
- Tieman, M. (2020). *Halal Business Management: A guide to achieving halal excellence*. Routledge. <https://doi.org/10.4324/9781003109853>
- Wahyuni, H., Vanany, I., & Ciptomulyono, U. (2019). Food safety and halal food in the supply chain: Review and bibliometric analysis. *Journal of industrial engineering and management*, 12(2), 373-391. <https://doi.org/10.3926/jiem.2803>
- Yanti, R., Febrianti, M. A., & Sulistio, J. (2022). Halal blockchain: Bibliometric analysis for mapping research. *Asian Journal of Islamic Management (AJIM)*, 72-85. <https://doi.org/10.20885/AJIM.vol4.iss1.art6>
- Venable, G. T., Shepherd, B. A., Loftis, C. M., McClatchy, S. G., Roberts, M. L., Fillinger, M. E., ... & Klimo, P. (2016). Bradford's law: identification of the core journals for neurosurgery and its subspecialties. *Journal of neurosurgery*, 124(2), 569-579. <https://doi.org/10.3171/2015.3.JNS15149>
- Wasserman, P. (2024, January 12). *World Population by Religion: A Global Tapestry of Faith*. Population Education. <https://populationeducation.org/world-population-by-religion-a-global-tapestry-of-faith/> Access Date:12.11.2025
- Zakaria, Z., Ramli, S. Q., Shoid, N. S. Z. M., & Sulaiman, A. (2022). Mapping halal cosmetics research: A bibliometric analysis. *Malaysian J. Syariah & L.*, 10, 63. <https://doi.org/10.33102/mjssl.vol10no1.384>
- Zulfakar, M. H., Anuar, M. M., & Ab Talib, M. S. (2014). Conceptual framework on halal food supply chain integrity enhancement. *Procedia-Social and Behavioural Sciences*, 121, 58-67. <https://doi.org/10.1016/j.sbspro.2014.01.1108>
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organisation. *Organisational research methods*, 18(3), 429-472. <https://doi.org/10.1177/1094428114562629>



Investigating the Effects of Crises and Bilateral Agreements on Moldova's Economic Integration into the European Union Using the Trade Intensity Index Method¹

Fuad SELAMZADE², Aliq BAGHIROV³, Ahmed AHMEDOV⁴, Tural RUSTAMOV⁵

Abstract

The main objective of this research is to evaluate the bilateral trade and economic relations between Moldova and the European Union (EU) from 2003 to 2023 using the trade intensity index analysis method. It also examines how external events such as the 2008 Global Financial Crisis and the COVID-19 pandemic, as well as bilateral agreements, have impacted Moldova's integration process into the European Union. According to the analysis results, the trade intensity score between the European Union and Moldova is above the world average, with the European Union having nearly twice the trade intensity score compared to Moldova. Positive agreements, such as the European Union Eastern Partnership Program initiated in 2009, have been found to have beneficial effects on Moldova's economic integration with the European Union. On the other hand, external events like the 2008 Global Financial Crisis and the COVID-19 pandemic have been determined to have negative impacts on Moldova's integration into the European Union and its bilateral trade and economic relations. The study indicates that while the EU Eastern Partnership Agreement has positively influenced Moldova's economic integration, the process remains vulnerable to financial crises and global disruptions, underscoring the need for resilient trade policies and strategies to revitalize economic cooperation amid declining trade volumes.

Keywords: *EU, Moldova, Trade Intensity Index, Covid-19, Economic Integration, Crises*

JEL Codes: *G10, N14, O11*

INTRODUCTION

Economic and trade relations between countries are influenced by various positive and negative effects arising from internal and external factors. External positive factors, such as Ricardo's theory of comparative advantage and free trade agreements, support the development of trade, while external negative factors, such as global financial crises, trade wars, and geopolitical tensions, complicate trade relations. Similarly, internal factors, such as a country's economic conditions and political stability, play a significant role in the sustainability of

¹ There is not a conflict of interest.

² Assoc. Prof. Dr. Muş Alparslan University, E-mail: f.salamov@alparslan.edu.tr OI: 0000-0002-2436-8948 Contribution rates to the study 30 %.

³ Dr. Azerbaijan State University of Economics (UNEC) E-Mail aliq.bagirov@unec.edu.az OI: 0000-0003-3016-165X Contribution rates to the study 30 %.

⁴ Lecturer, Azerbaijan Technological University E-Mail: a.ahmedov@atu.edu.az OI: 0000-0002-4230-231X Contribution rates to the study 20 %.

⁵ Lecturer, Azerbaijan Technological University E-Mail : t.rustamov@atu.edu.az OI: 0009-0004-5629-1756 Contribution rates to the study 20 %.

trade cooperation. Therefore, it is crucial for countries to consider these internal and external factors when formulating their foreign trade policies and to strengthen international cooperation accordingly (Spilker et al., 2018, p. 191). The introduction of the study presents the core concepts of international trade relations clearly and provides a sufficient theoretical foundation related to comparative advantage, external shocks, and institutional factors. The conceptual and theoretical background is adequately connected to the research topic, demonstrating how internal and external factors shape Moldova's economic integration into the European Union. Although the introduction offers relevant sources, expanding the literature with more recent empirical studies could further strengthen the academic grounding. The purpose, importance, and expected contribution of the research are evident, particularly in addressing how crises and bilateral agreements influence Moldova's integration process through trade intensity analysis. Overall, the introduction effectively positions the study within the broader academic literature and highlights the originality and relevance of the research (Erkisi & Ceyhan, 2019, p. 83).

Launched by the EU in 2009, the EPP includes six former Soviet republics, including Moldova (GUAM and Armenia, and Belarus). Moldova has made progress in negotiations for a FTA with the EU, similar to other EP countries (Georgia and Ukraine), and the trade volume between the EU and Moldova has consistently increased. The relationship between the EU and the Republic of Moldova is deep and multifaceted (Tabur, 2013, p. 58). In 2022, the European Council acknowledged Moldova's European perspective and granted it EU candidate status. The relationship between Moldova and the EU is anchored in the 2014 EU–Moldova Association Agreement, which encompasses a Deep and Comprehensive Free Trade Area (DCFTA) establishing the framework for political association and closer economic cooperation between the two parties. Additionally, the support provided by the EU to Moldova during this integration process has resulted in tangible benefits, such as democratic reforms, increased trade, and visa-free travel since 2014. Moldova has also experienced the effects of Russia's war against Ukraine due to its geographical proximity. Since October 2021, the EU has provided over EUR 1.09 billion in support to Moldova and continues to work towards strengthening energy security and reform processes (European Union, 2023). Due to its strategic geographical location, the Republic of Moldova has been deeply affected by Russia's ongoing aggression against Ukraine. The European Union has consistently reiterated its commitment to safeguarding Moldova's sovereignty and territorial integrity within its internationally recognized borders. In addition, the EU places strong emphasis on enhancing Moldova's resilience, particularly in the areas of energy security, security and defense cooperation, and the continuation of structural reforms (Selamzade, 2023, p. 452). In May 2023, during an official visit to Chişinău, President von der Leyen announced a comprehensive support package for Moldova. The package was designed with two primary goals: alleviating the consequences of Russia's war against Ukraine and advancing Moldova's path toward European Union integration. It establishes a set of priority measures that have already

begun to deliver concrete outcomes.

The plan prioritizes economic growth and connectivity through the implementation of the Priority Action Plan for trade under the DCFTA, which foresees substantial initiatives within the framework of the Economic and Investment Plan (EIP). These include targeted efforts to support small and medium-sized enterprises (SMEs), improve energy efficiency, strengthen human capital, and expand connectivity. Moldova is also set to benefit from projects linked to the Solidarity Lanes initiative, as well as from opportunities provided under the Connecting Europe Facility for transport development. Additionally, the EU is working toward a permanent roaming agreement, building on the progress achieved through the recent voluntary deal aimed at reducing roaming costs.

- Economic development and regional connectivity are being promoted through the DCFTA's Priority Action Plan for trade, which focuses on implementing major projects outlined in the Economic and Investment Plan (EIP). Key areas of intervention include supporting small and medium-sized enterprises (SMEs), boosting energy efficiency, fostering human capital development, and enhancing transport and digital connectivity. Moldova is also set to benefit from initiatives such as the Solidarity Lanes and will gain access to the Connecting Europe Facility to advance transport infrastructure projects. Additionally, the EU is working toward a long-term roaming agreement, building on the recently adopted voluntary measures to reduce roaming charges.
- Supporting Moldova's reform agenda focuses on strengthening administrative capacity and expanding engagement in European Union programs such as Horizon Europe, Fiscals, Customs, LIFE, and EU4Health.
- Efforts to enhance Moldova's energy security include increasing domestic electricity production, developing renewable energy sources, and participating in the EU's joint gas purchasing mechanism.
- Strengthening Moldova's security entails implementing targeted measures, including broadening cooperation through the EU Partnership Mission to Moldova.
- Efforts to counter foreign information manipulation and interference are complemented by initiatives to enhance strategic communication capacities (European Commission, 2023).

Despite the aforementioned factors, the Russian influence remains a significant threat to Moldova's economic integration process with the EU, continuing to create substantial obstacles to this endeavor.

OVERVIEW OF THE ECONOMY OF MOLDOVA AND EUROPEAN UNION

Moldova, as a former Soviet republic, has demonstrated a distinct evolution in its internal and external policies. Geographically positioned in the center of Europe, it nonetheless exists on the periphery of the continent in a

political context. Together with Belarus and Ukraine, Moldova is situated in the "grey zone," which remains under the sphere of influence of Russia, thereby posing significant political and economic risks. Russia exerts economic influence over Moldova and provides support to the criminal authority in Transdnistria. Moldova will be unable to fully benefit from its integration into the European Union unless it withdraws Russian troops from its territory and resolves the Transdnistrian issue. Despite the Istanbul OSCE Summit setting 2002 as the deadline for the withdrawal of Russian troops, this has not been realized. Consequently, the progress of Moldova's European integration will largely depend on the success of its diplomatic negotiations and the responsiveness of international organizations (Benchechi, 2004, p. 104).

Launched in 2009, the Eastern Partnership program for the Eastern neighborhood region (Ukraine, Azerbaijan, Armenia, Georgia, Belarus, Moldova) includes a strong political call for reforms, dialogue, and the promotion of democratic principles. This program introduced new Association Agreements aimed at fostering political partnership and deeper economic integration with the European Union, with the goal of establishing deep and comprehensive free trade areas (Morari, 2023, p. 33). Moldova trade volume with the EU over the years, including both exports and imports, is presented in Figure 1 below.

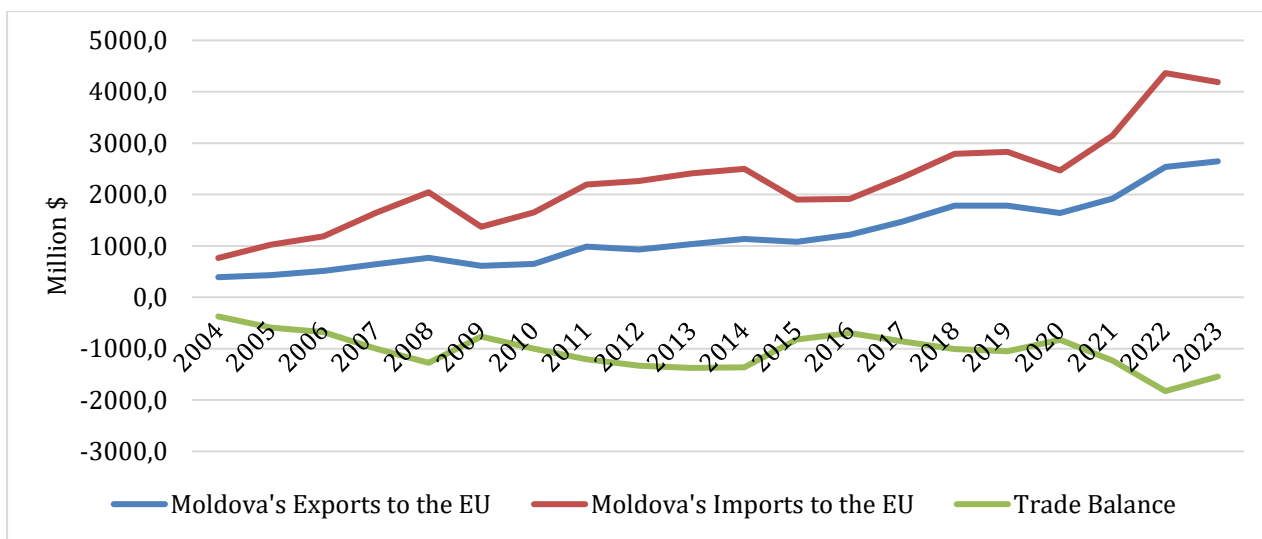


Figure 1: Moldova's trade volume with the European Union (EU 27)

Source: www.trademap.org (Access to date: 22.10.2024)

According to the Figure 1, despite fluctuations in Moldova's imports due to instabilities observed in certain years, bilateral commercial and economic engagement between Moldova and the European Union (EU) show an upward trend over the analyzed years. Since Moldova's imports from the EU exceed its exports to the EU, a trade deficit has been present throughout all years. This situation clearly indicates the significant role the EU plays in Moldova's imports.

During the analyzed years, The European Union has constituted roughly 40–50% of Moldova's total imports

and approximately 60–65% of its total exports, with significant portions of these shares being directed to countries such as Romania, Germany, Italy, Poland, France, and Hungary for imports, and Romania, Italy, Germany, the Czech Republic, Poland, and Bulgaria for exports. When examining Moldova's foreign trade with countries outside the European Union, the top three countries for exports are Ukraine, the Russian Federation, and Türkiye, while the top three countries for imports are Ukraine, China, and Türkiye.

Moldova's exports are predominantly comprised of electrical machinery and equipment, mineral fuels, cereals, oil seeds, edible fruits and nuts, fats and oils, beverages, and other products. Notably, key exports such as electrical machinery, cereals, oil seeds, fats and oils, and non-knitted apparel are primarily directed towards the European Union. A significant portion of Moldova's exports to the EU consists of food sector products, establishing the EU as an important market for Moldova's food production goods. Moldova primarily imports mineral fuels, electrical machinery, vehicles, machinery and mechanical appliances, plastics, and pharmaceutical products, all sourced from European Union countries. While the country exports a significant amount of food products to the EU, it also sends electrical machinery and equipment. Conversely, Moldova relies on the EU for essential imports, including mineral fuels, electrical machinery, vehicles, and food items. There is significant potential for further development of the bilateral commercial and economic relations between Moldova and the European Union, driven by both geographical advantages and the strategic partnership that exists between the two entities.

LITERATURE REVIEW

The Trade Intensity Index (TII) is a widely used tool for examining international trade dynamics, as it evaluates the relative intensity of bilateral trade between countries or regional blocs. The main objective of this study is to determine whether the trade relations and intensity between Moldova and the European Union surpass or lag behind the global average throughout Moldova's economic integration process with the EU. Additionally, it seeks to determine how factors such as economic downturns, armed conflicts, the COVID-19 pandemic, and bilateral agreements influence this process. Consequently, this study will include relevant examinations in the literature review, providing a comprehensive analysis of the existing literature on the subject.

Table 1: Literature Review List

Author(s) & Date	Countries & Period	Purpose	Results
Çeştepe, 2012	Iran, Iraq, Israel, UAE, Saudi Arabia with Türkiye; (1999-2009)	To evaluate Türkiye's trade relations with Middle Eastern countries and assess intra-industry trade levels.	Türkiye's trade with these countries increased over the period, though intra-industry trade remained low, with higher levels for processed goods. The study recommended that Türkiye focus more on exporting capital-intensive goods

Can & Mercan, 2014	Türkiye & Israel (2000-2012)	to examine the impact of adverse political developments on trade, particularly intra-industry trade, in Türkiye-Israel commercial relations	Despite political tensions, strong relations between the two countries have led to a significant increase in bilateral trade. It has also been observed that intra-industry trade was unaffected by political instabilities; however, a decline was recorded for the 2008 financial crisis
Yazıcı, 2016	Türkiye & Israel (1995-2015)	To assess the resilience of trade between Türkiye and Israel during political crises	Despite political tensions, the strong relations between the two countries led to a significant increase in bilateral trade, while a decline was observed during the 2008 financial crisis period
Gümüş & Kramskova, 2024	Türkiye & Israel (2001-2021)	To analyze Türkiye-Russia trade relations and the effects of financial and political crises.	Russia's trade intensity with Türkiye increased, while Türkiye's trade intensity with Russia declined. The negative impact of the 2008 financial crisis, the Jet Crisis, and the COVID-19 pandemic was apparent in the evolution of their trade relations.
Ibrahimov, Baghirov, & Ashimova, 2019	Poland & Azerbaijan (2003-2016)	Examining bilateral TI between Poland and Azerbaijan and the effect of the 2008 financial crisis	Poland's TI with Azerbaijan was higher than Azerbaijan's with Poland, but overall TI was below the global average. The 2008 financial crisis negatively impacted Poland's TI, while Azerbaijan's TI with Poland grew positively
Baghirov & Ahadov, 2019	Azerbaijan and China (2007-2016)	Assessing TI between Azerbaijan and China and the impact of the 2008 financial crisis	Trade intensity was below the global average, and the 2008 financial crisis had a notable negative effect
Demir, 2020	The Middle East countries with Türkiye (2007-2018)	To analyze trade relations between Türkiye and Middle Eastern countries.	Trade intensity between Türkiye and these countries increased over the period. Due to the 2008 financial crisis, Kuwait, UAE, Qatar, and Oman were negatively affected, while Other Middle Eastern countries were not affected.
Muradov, Tuzcuoğlu, Ahmadov, & Baghirov, 2023	Azerbaijan & Kyrgyzstan (2015-2022)	To assess trade relations between Azerbaijan and Kyrgyzstan, focusing on the COVID-19 pandemic's influence	Trade intensity remained above the global average except in 2016 and 2017. COVID-19 negatively impacted Azerbaijan's trade intensity with Kyrgyzstan, while Kyrgyzstan's trade intensity remained stable
Drieniková, Zubaľová, & Horváth, 2024	United States & EU (2015-2021)	To analyze U.S.-EU trade relations and COVID-19's effect	The U.S. trade intensity score for goods with the EU dropped below the global average due to COVID-19, while trade in services remained above average and unaffected
Şimşek, Şimşek, & Zhanaltay, 2017	Türkiye and Russia (1992-2015)	Analyzing Türkiye's trade relationship with Russia and measure trade intensity	Despite bilateral trade relations between Türkiye and Russia exceeding the global average, the 1998 Ruble crisis and the 2008 financial crisis adversely affected these relations.
Selamzade, 2022	Turkish Republics	Analyzing an economic cooperation between the Turkish Republics	As a result of the study, it was revealed that policies aimed at increasing bilateral cooperation that would increase the trade

			volume between the Turkish Republics should be implemented. As a result of increasing the intensity of bilateral relations, it was suggested that steps should be taken towards the establishment of an Economic Union.
Tuzcuoğlu, Selamzade, Baghirov, & Gasimova 2023	Azerbaijan & Kyrgyzstan (2010-2019)	Evaluation of Azerbaijan and Kyrgyzstan trade relations in the context of export and import concentration index.	Trade intensity remained above the global average except in 2010 and 2019. The distance between countries and the difference in economic levels negatively impacted Azerbaijan's trade intensity with Kyrgyzstan, while Kyrgyzstan's trade intensity remained stable.
Imren et al. 2025	Azerbaijan & European Union (2004-2023)	Evaluation the bilateral trade and economic relations between Azerbaijan and the European Union utilizing the trade intensity index.	Following their peak in 2007, trade relations between Azerbaijan and the European Union deteriorated due to a series of external shocks, including the 2008 global financial crisis, the COVID-19 pandemic, and the 2020 Karabakh War.

Source: Created by authors

PURPOSE, DATA AND METHODOLOGY

The main purpose of this study is to evaluate Moldova's bilateral trade and economic relations with the European Union (EU) and to examine their evolution over time. In particular, the study aims to assess the impact of positive agreements, such as the EU Eastern Partnership Program launched in 2009, on Moldova's economic integration with the EU, as well as the negative effects of external factors, including economic crises, political challenges, wars, hotspots, and pandemics. The study applies the Trade Intensity Index (TII) to determine whether Moldova's trade with the EU exceeds or falls below the global average, thereby indicating the relative strength of bilateral trade relations. By comparing Moldova's level of economic integration before and after the implementation of the Eastern Partnership Program, the study evaluates the program's effectiveness and seeks to identify measurable changes in Moldova–EU economic relations. The research hypothesizes that the Eastern Partnership Program has contributed to the expansion and deepening of Moldova's economic integration with the EU, while acknowledging that adverse factors may cause temporary slowdowns. Based on the analysis outcomes, the study ultimately aims to provide policy recommendations to further strengthen Moldova–EU economic and trade relations.

This study utilizes the TII analysis, covering the period from 2003 to 2023, to evaluate the positive agreements that bolster bilateral economic and trade relations between Moldova and the EU. It also examines the adverse effects of economic crises, political obstacles, and pandemics on Moldova's integration into the EU. The primary objective is to determine whether the TII between Moldova and the EU is above or below the global average. The analysis draws on data from the UNCOMTRADE statistical database and international trade statistics, focusing on each party's exports to one another, their global exports, and total global exports. The TII

serves as a tool to assess whether the trade volume between Moldova and the EU surpasses the global average, allowing for a comparison of Moldova's trade performance with its overall trade.

The study aims to analyze Moldova's economic integration into the EU and the existing economic and trade relations between the two entities, employing the Trade Concentration Index method for this assessment. The straightforward approach, referred to as the TII, was initially introduced by Brown (Brown, 1949, p. 76) and subsequently refined by Kojima (Kojima, 1964, p. 20). To assess the trade intensity between two countries, the TII for country *i* in relation to country *j* during period *t* is calculated using the following formula (Peter & Ross, 1982, p. 67):

$$TII_{ijt} = \frac{(X_{ij} / X_{it})}{(X_{wj} / X_{wt})} \quad (1)$$

Here, TII_{ijt} – TII between Moldova and the EU, X_{ij} = exports of union *i* to union *j*, X_{it} = total exports of union *i*, X_{wj} = total exports of union *j* to the world, X_{wt} = total world exports, t = years.

There $TII_{ijt} \geq 0$ can take a value greater than zero. If it takes the value zero $TII_{ijt} = 0$, there is no trade relationship between the two countries or unions and if it takes the value $TII_{ijt} = 1$, there is a fully balanced bilateral trade relationship. If TII_{ijt} is between $0 < TII_{ijt} < 1$, country *i*'s trade with the other country is below the world average and if $TII_{ijt} > 1$ country *i*'s trade with the other country is above the world average (Paswan, 2021, p. 5). This methodology allows for the identification of trends in bilateral trade, the evaluation of the effects of positive agreements like the Eastern Partnership Program, and the assessment of negative shocks such as the 2008 Global Financial Crisis and the COVID-19 pandemic. By comparing TII scores across years, the study provides a robust and theoretically grounded analysis of Moldova's economic integration with the EU.

RESEARCH FINDINGS

The TII method is utilized to evaluate the bilateral economic and commercial relations between Moldova and the EU based on data from 2003 to 2023. This method examines not only the positive agreements aimed at strengthening these relations but also the impact of negative factors such as economic crises, political challenges, and pandemics on Moldova's integration into the EU. Additionally, the analysis aims to determine whether the trade intensity between Moldova and the EU is above or below the world average. The scores reflecting how positive and negative factors have influenced Moldova's economic integration into the EU are presented in Figure 2 through the TII analysis.

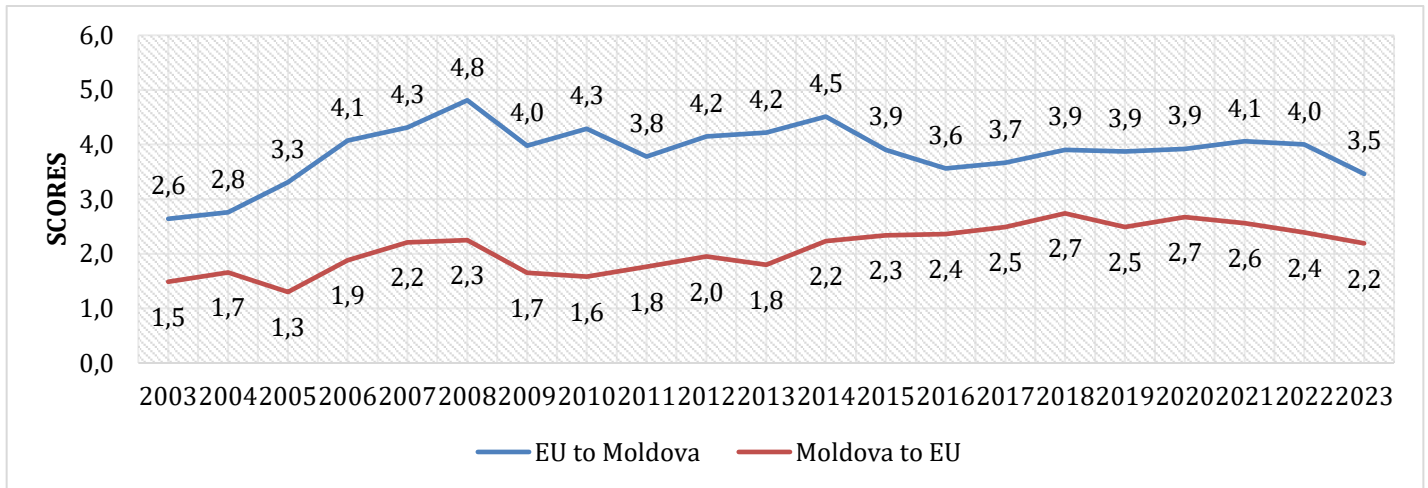


Figure 2: TII analysis results scores for Moldova and the EU

Source: www.trademap.org (Access to date: 25.10.2024)

According to the evaluation of bilateral trade relations and trade intensity between EU countries and Moldova, the analysis suggests that both the EU's trade intensity score with Moldova and Moldova's trade intensity score with the EU are above the global average, in other words, $TII_{ijt} > 1$. Additionally, the EU's bilateral trade intensity with Moldova is found to be approximately twice as high as Moldova's trade intensity with the EU, exhibiting a parallel trend over these years. This indicates that bilateral commercial ties between the two countries are dependent on external factors, which appear to influence their trade and economic relations. Between 2003 and 2008, a stable upward trend in trade relations and trade intensity between the European Union (EU) and Moldova was observed. However, due to the impact of the 2008 Global Financial Crisis, a marked decline in these bilateral trade relations and trade intensity was recorded between 2008 and 2010. From Moldova's perspective, a renewed trend of increasing trade volume was observed from 2010 up to the COVID-19 pandemic, an increase that can be associated with the EU's Eastern Partnership Program agreement launched in 2009. From the EU's perspective, a generally stable yet fluctuating trade trend was observed between 2010 and the COVID-19 period. In the context of the COVID-19 pandemic, it is clear that the pandemic had a negative impact on bilateral commercial and economic ties for both the EU and Moldova.

CONCLUSION

This study, conducted using the Trade Intensity Index (TII) analysis method, investigates the bilateral trade and economic relations between Moldova and the European Union (EU), focusing on both positive policy initiatives and external adverse events. The findings indicate that Moldova's trade and economic links with the EU are above the world average, while the trade concentration score of the EU with Moldova is approximately twice as high as Moldova's trade concentration score with the EU. These results confirm the expectation that the EU Eastern Partnership Program, launched in 2009, has positively contributed to Moldova's economic integration

with the EU. A significant upward trend in trade and integration has been observed following the implementation of the program, demonstrating its effectiveness in enhancing bilateral economic relations.

At the same time, the analysis highlights the vulnerability of Moldova's integration process to external shocks. The 2008 Global Financial Crisis and the COVID-19 pandemic both exerted substantial negative impacts on Moldova–EU trade and economic relations. These outcomes are consistent with previous studies reviewed in the literature, which also report the negative influence of global financial crises and pandemics on bilateral trade and integration. Thus, while positive policy interventions such as the Eastern Partnership Program have promoted economic integration, external crises can temporarily slow or reverse progress, underscoring the need for resilient economic and trade policies.

A general assessment of the study indicates that the Eastern Partnership Agreement has facilitated the development and deepening of Moldova's integration into the EU. However, the integration process remains sensitive to regional and international crises, which create significant negative effects on bilateral trade and economic cooperation. This situation emphasizes the necessity of developing policies and strategies aimed at enhancing the resilience of Moldova's economic and trade relations, mitigating the impacts of external shocks, and revitalizing trade flows through a reassessment of regional policies, market conditions, and competitive dynamics. The study also anticipates that the ongoing economic recovery and future integration will depend on collaborative projects and sustained engagement between Moldova and the EU. Furthermore, due to the limited number of studies on this topic, the research constitutes a valuable resource for future scholars and policymakers.

The conclusions, evaluation, and recommendations of the study are closely aligned with the introduction, literature review, and methodology. The findings directly reflect the study's purpose and hypotheses, demonstrating that the Eastern Partnership Program has positively influenced Moldova's economic integration, while external shocks, including the 2008 Global Financial Crisis and the COVID-19 pandemic, produced measurable negative effects. These results are consistent with the theoretical framework and empirical evidence provided by the TII methodology. The evaluation section contextualizes the findings within broader regional and geopolitical dynamics, considering factors such as Russia's influence and Moldova's strategic position.

The study provides practical recommendations that address the structural vulnerabilities identified, emphasizing the need for resilient trade policies, strategies to counter external shocks, and strengthened economic cooperation. These recommendations are coherent with the study's objectives and tested hypotheses, offering actionable guidance for policymakers to support Moldova's deeper integration with the EU. Overall, the study effectively synthesizes its insights, offering evidence-based, policy-relevant conclusions while maintaining consistency with the methodology, literature, and research objectives.

REFERENCES

- Baghirov, A., & Ahadov, R. (2019). Bilateral trade intensity between Azerbaijan and China (2010-2016 period). *Proceedings of the 1st International Conference on Economics and Management, Azerbaijan, 3*, 183-192. https://www.academia.edu/45029045/Bilateral_trade_intensity_between_Azerbaijan_and_China
- Benchechi, D. (2004). European neighbourhood policy: political, economic and social issues. In F. Attinà, & R. Ross (Eds), *Problems Toward Integration of the Republic of Moldova in the European Union* (pp. 102-110). A publication of the Project The European Union Neighbourhood Policy of the Faculty of Political Sciences of the University of Catania.
- Brown, A. (1949). *Applied Economics: Aspects of the World Economy in War and Peace*. George Allen and Unwin.
- Can, M., & Mercan, M. (2014). The effect of political instability on highs-Tech Intra-Industry Trade: The Case of Turkey-Israel (2000-2012). *International Journal of Alanya Faculty of Business, 6*(2), 29-44.
- Çeştepe, H. (2012). Analysis of Turkey's trade with selected Middle East Countries. *The International Journal of Economic and Social Research, 8*(2), 23-43.
- Demir, M.A. (2020). Analysis of trade intensity between Turkey and selected Middle East countries. *Journal of Nazilli Faculty of Economics and Administrative Sciences, 1*(1), 1-14.
- Drieniková, K., Zubařová, L., & Horváth, M. (2024). The EU-US trade relations changes during the COVID-19. *24th International Joint Conference Central and Eastern Europe in the Changing Business Environment: Proceedings* (s. 25-34). Bratislava & Prague : Prague University of Economics and Business Oeconomica Publishing House. <https://doi.org/10.18267/pr.202>
- Erkisi, K., & Ceyhan, T. (2019). Trade liberalization and economic growth: A panel data analysis for transition economies in Europe. *Journal of Economics, Finance And Accounting, 6*(2), 82-94. <https://doi.org/10.17261/Pressacademia.2019.1047>
- European Commission. (2023, 06). The European Union and Moldova. *European Commission*. https://ec.europa.eu/commission/presscorner/api/files/attachment/875502/EU_Solidarity_with_Moldova.pdf
- European Union. (2023, 02 14). Delegation of the European Union to the Republic of Moldova. *European Union*. https://www.eeas.europa.eu/moldova/european-union-and-republic-moldova_en?s=223
- Gümüř, G., & Kramskova, M. (2024). An Analysis of bilateral trade relation between Turkey and Russia: The challenges and opportunities of Russia-Ukraine war. *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi, 23*(50), 1876-1902. <https://doi.org/10.46928/iticusbe.1343400>
- Ibrahimov, A., Baghirov, A., & Ashimova, Z. (2019). Bilateral trade intensity between Azerbaijan and Poland (2003-2016 period). *Reforma* (3), 39-52.
- Imren Karaosmanođlu, E. A., Selamzade, F., & Rahimli, M. (2025). The impact of crises on Azerbaijan European Union economic relations: A Trade Intensity Index Approach. *Alanya Academic Review, 9*(3), 706-714. [10.29023/alanyaakademik.1571652](https://doi.org/10.29023/alanyaakademik.1571652)
- Kojima, K. (1964). The pattern of international trade among advanced countries. *Hitotsubashi Journal of Economics, 5*(1), 16-36. <https://doi.org/10.15057/8091>
- Morari, C. (2023). EU'S Role in its Eastern Neighborhood Transformation. In M. Natea, & S. Costea (Eds.), *The EU Foreign Policy and Security Dilemmas in a Challenging World* (pp. 31-36). L'Europe unie/United Europe.

- Muradov, A., Tuzcuoğlu, F., Ahmadov, F., & Baghirov, A. (2023). Covid-19 salgınının ikili dış ticaret üzerindeki etkisinin ticaret yoğunluğu analizi ile araştırılması: Azerbaycan ve Kırgızistan örneği. In Ö. Karaman (Ed.), *Türk Dünyası Jeopolitiği*. Nobel Akademik Yayıncılık.
- Paswan A, S. (2021). India's bilateral trade with China- empirical study based on trade intensity index & trade reciprocity index. *Studies in Economics and Business Relations*, 2(1), 1-16. <https://doi.org/10.48185/sebr.v2i1.81>
- Peter, D., & Ross, G. (1982). Trade intensities and the analysis of bilateral trade flows in a many-country world: A survey. *Hitotsubashi Journal of Economics*, 22(2), 62-84. <https://doi.org/10.15057/7939>
- Selamzade, F. (2022). *Türk Cumhuriyetleri Arasında Bir İktisadi İşbirliği*, Akademisyen Kitabevi
- Selamzade, F. (2023). Eski SSCB Ülkelerinin Makroekonomik Göstergelerinin Karşılaştırılması 1991-2021. *Presented at the Karadeniz 12th International Conference On Social Sciences*, Rize. pp. 450-459
- Şimşek, N., Şimşek, H., & Zhanaltay, Z. (2017). Analysis of bilateral trade relations between Turkey and the Russian Federation. *Bilig*, 83, 1-26.
- Spilker, G., Bernauer, T., Kim, I. S., Milner, H., Osgood, I., & Tingley, D. (2018). Trade at the margin: Estimating the economic implications of preferential trade agreements. *The Review of International Organizations*, 13, 189–242. <https://doi.org/10.1007/s11558-018-9306-7>
- Tabur, C. (2013). The evolution of EU's neighbourhood policy towards Eastern Europe. *Marmara Journal of European Studie*, 21(2), 55-72. <https://doi.org/10.29228/mjes.101>
- Tuzcuoğlu, F., Selamzade, F., Baghirov, A., & Gasimova, Y. (2023). Azerbaycan ve Kırgızistan Ticaret İlişkilerinin İhracat ve İthalat Yoğunlaşma İndeksi Bağlamında Değerlendirilmesi (2010-2019). In Ö. Karaman (Ed.), *Türk Dünyası Jeopolitiği* (pp. 211-226). Nobel Akademik Yayıncılık.
- Yazıcı, M. (2016). 1995-2014 döneminde Türkiye - İsrail dış ticareti. *Proceedings of the Kırıkkale University, II International Middle East Symposium: State, Non-State Actors and Democracy in the Middle East*, 32. https://www.researchgate.net/profile/Mirac-Yazici/publication/294891850_1995-2014_Doneminde_Turkiye_Israil_Dis_Ticareti/links/5850783c08ae8f3738194379/1995-2014-Doeneminde-Tuerkiye-Israil-Dis-Ticareti.pdf

InTraders Academic Platform

InTraders Journal Topics; international trade, tourism and economy-based topics.

InTraders Conference Topics

Social Sciences Titles: Sociology, Psychology, Communication Studies, Journalism, Public Relations, Advertising, Social Work, Philosophy, History, Economics, Business Administration, Labor Economics, Human Resources, International, Finance, Econometrics, Political Science and Public Administration, Law, Islamic Economics and Finance, Management Informatics Systems, Health Management, International Trade, Logistics, Sports Science Studies, Sports, Nutrition

Education Titles: Distance Education, Higher Education, Teaching and Learning, E-learning, Lifelong Learning, Literary Studies, Comparative Literature, Linguistics and Environment Studies

Health Science Titles: Nursing, Midwifery, Health Management topics.

Engineering Titles: artificial intelligence, software, computer sciences, and industrial engineering topics.

"We caress the souls of researchers."

InTraders Academic Platform

<https://www.intraders.org>

Autumn Conferences

<https://www.intraders.org/october/>

Winter Conferences

<https://www.intraders.org/icse/>

Spring Conferences

<https://www.intraders.org/may/>

Academic Journal

<https://dergipark.org.tr/en/pub/intraders>

Conference Alerts

<https://www.conferencealertsintraders.com>



InTraders International Trade Academic Journal, Volume 8, Issue 2

December 2025, e-ISSN-2667-4408

www.intraders.org