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THE SIGNIFICANCE OF REMITTANCE IN FOSTERING ECONOMIC GROWTH: A BIBLIOMETRIC AND SYSTEMATIC LITERATURE REVIEW

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Abstract

Purpose: *The purpose of this study was to examine the bibliographic corpus pertaining to the investigation of the impact of remittances on economic growth. Bibliometric analysis was utilized to evaluate the current state of the art and the dynamics of research papers published on the subject matter. Conversely, the Systematic Literature Review (SLR) method sought to scrutinize selected research papers to ascertain whether remittances play a contributory role in economic growth and whether this impact is contingent upon country-level developments.*

Design: *This study employed a mixed-methods approach, combining bibliometric analysis and SLR to address literature review questions which were formulated using the PICO*

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framework. The study utilized the Web of Science database (WoS). Bibliometric analysis was conducted using VOSViewer and Biblioshiny. The second part of the study involved SLR, following the PRISMA-2020 protocol, to further refine the selection of papers.

Findings: *The findings suggest that a large proportion of published papers do not come from countries with a high share of remittances in GDP, and the number of published research papers is not dependent on the income level of the country. The results indicate that there is a positive relationship between remittances and economic growth, and that this nexus varies depending on a country's income level. More developed countries tend to utilize remittances more efficiently in their economies.*

Originality: *To the best of the authors' knowledge, the present study represents a novel investigation of the literature pertaining to the topic, utilizing the WoS database as a primary source. Moreover, the authors have advanced the methodological approach by employing a synthesis of both bibliometric analysis and SLR.*

Keywords: *economic growth, remittance, country development level, bibliographic corpus*

JEL: *F24, F43, G18*

Introduction

Today, the inflow of remittances is a significant development factor related to migration processes. Since the late 1990s, they have become a factor that promotes development and reduces poverty (Kunz et al., 2022). Remittances strongly impact recipient households' standard of living, as they enable households to achieve a standard of living several quintiles above what they would have achieved in the absence of remittances (Medina & Cardona, 2010). According to the World Economic Forum (2018), the world still faces major challenges in harnessing the real development benefits of remittances. It is well known that remittances are an important link between migration and development. It can be argued that remittances are the hidden driver of global connectivity. It is estimated that the average multiplier for remittances is comparable to or higher than the multiplier for foreign direct investment and official development assistance. The United Nations Sustainable Development Goals recognize remittances as a life-saving tool for many poor families. According to World Bank (n.d.) projections, remittance flows to low- and middle-income countries will increase by 4.2% to $630 billion by 2022. One in seven people in the world is involved in remittances. According to the same source, personal remittances have grown exponentially since 1990. In the last 20 years alone, they have increased by 440.42%. Obviously, remittances are becoming increasingly important in the economy, and their growing value can no longer be ignored.

In addition to being a poorly researched topic, this area also exhibits a multitude of contradictory research outcomes. In the current literature, some authors argue for the positive effects of remittances on economic development (Eggoh et al., 2019; Islam, 2022; Singh &

Mehra, 2014), while some authors (Matuzeviciute & Butkus, 2016; Dujava & Kalovec, 2020; Yadeta & Hunegnaw, 2021; Chirila & Chirila, 2017) claim that remittances have no impact on economic growth. There is also a third opinion, according to which authors claim that remittances have a negative impact on economic growth (Karadag et al., 2019; Didia et al., 2018; Bird & Choi, 2020). Remittances hold significant economic importance for relatively small countries with relatively large diasporas (Desilver, 2018). Some authors (Matuzeviciute & Butkus, 2016) have concluded that the impact of remittances varies depending on the country's level of economic development. According to Vasile et al. (2020), remittances contribute to economic growth and are mainly intended for consumption in less developed countries. Khurshid et al. (2020) found that causality between remittances and economic growth exists for low- and lower-middle-income countries, while the evidence is weak for middle-income countries. The primary aim of this study is to identify and analyze the existing academic literature on the relationship between remittances and economic growth by addressing three review questions using a combined approach of bibliometric and systematic literature review (SLR) analyses. The PICO structure (population, intervention, comparison and outcome) is highly relevant in formulating review questions, as Dekkers et al. (2022) emphasized. Notably, the use of PICO structure is deemed imperative not only in systematic literature analysis, but also in bibliometric analysis, as underscored by Martínez-Heredia et al. (2022) and Azmi et al. (2023).

The main objective of the bibliometric analysis was to comprehensively examine the corpus of literature on the subject of remittances and economic growth, intending to probe the developmental dynamics and the contemporary status of this domain. Furthermore, special attention was directed toward exploring whether the dynamics of academic research interest focused on the topic of remittances and economic growth follow the growth dynamics of the global level of remittances. This involved examining whether most studies that focus on the topic of remittances and economic growth come from countries with higher remittance-to-GDP ratios or whether this depends on income levels, and determining the top authors, sources, keywords, countries, and their relations. A bibliometric analysis was conducted using the Biblioshiny (Aria & Cuccurullo, 2017) and VosViewer (Van Eck & Waltman, 2010) programs. In addition to the bibliometric analysis, an SLR was conducted using the PRISMA-2020 protocol (preferred reporting items for systematic review and meta-analysis) developed by Page et al. (2021) to screen the literature and select all papers closely related to the study of the impact of remittances on economic growth in order to obtain objective and reproducible results. The aim of the SLR was to scrutinize the impact of remittances on economic growth within the corpus of literature pertaining to this subject matter. Review questions arose by following the PICO structure: P – remittance; I – economic growth; C – countries with different income levels; and O – understanding that the relationship between remittance and economic growth can be significantly enhanced through the implementation of an SLR. Therefore, the following review questions arose:

RQ1: "Do remittances affect economic growth?"

RQ2: "Do the effects of remittances on economic growth differ by country income level, as classified by the World Bank?"

RQ3: "Do the effects of remittances on economic growth differ according to the share of migrant remittances in GDP?"

To the authors' knowledge, it should be emphasized that this is the only study besides that of Cazachevici et al. (2020) that deals with a detailed examination of the current scientific evidence on remittances and economic growth. Unlike the aforementioned study, which relied on a search of the Scopus database, in this study the Web of Science (WoS) database was included in the analysis since it is a database characterized by the highest quality of publications and provides multidisciplinary bibliographic data (Raghuram et al., 2019, Bramer et al., 2017; Gusenbauer & Haddaway, 2019). This study went a step further and used a combination of two methods to review existing research and provide a more comprehensive overview of the topic. The results of this research have practical implications as they can serve as a crucial reference point for policymakers in formulating future developmental strategies. In addition, this study aims to assess the current understanding of the impact of remittances on economic development, which will lead to conclusions based on a rigorously scientific, systematic protocol that will further expand the knowledge base. The conclusions derived from the employed methodology will be of utmost significance to the academic community, given that, to the best of the authors' knowledge, no prior joint SLR and bibliometric analysis has been conducted in the domain of remittances and economic development. The remainder of the paper has the following structure: Section 2 describes the data collection and the methodology used; Section 3 contains the results of the bibliometric and SLR; and the final Section contains a discussion and concluding remarks.

1. Data and Methodology

WoS was used to answer the literature review questions. An extensive literature search was conducted using the following indexes: Social Sciences Citation Index (SSCI), Emerging Sources Citation Index (ESCI), and Science Citation Index Expanded (SCI-EXPANDED). The literature search was conducted on October 5, 2022. The search terms were "remittance" and "economic growth," and were combined with the Boolean operators "AND" and "OR." The "AND" operator identified the article title, abstract, and keyword of each document published in the field (Farid et al., 2016), and was used to narrow the search results to include all search terms that needed to be present in the resulting records. In addition to "AND," the "OR" Boolean operator was used to expand the search results to include synonyms in the resulting datasets. The final form of the search terms, along with the Boolean operators, was:

"Remittances" AND ("Economic Growth" OR "GDP" OR "Economic Development") AND ("Causality" OR "Impact" OR "Affect").

The following restrictions were applied to the search: only articles were considered in terms of the document type, and the search was limited to English-language publications. In terms of WoS categories, the following were considered: Economics; Development Studies; Business; Demography; Business Finance; Social Sciences Interdisciplinary; So-

cial Sciences Mathematical Methods; or Social Issues or Multidisciplinary Sciences. A total of 413 papers were found in this search.

The analysis in this study is based on the VOSViewer version 1.6.18 software (Van Eck & Waltman, 2022). For a more in-depth bibliometric analysis, Biblioshiny, an R-based application based on Bibliometrix, was also used (Aria & Cuccurullo, 2017).

This research also utilized an SLR to identify assessments of the current state of knowledge on the relationship between remittances and economic growth. The research was conducted in accordance with the PRISMA-2020 framework and the guidelines for SLRs developed by Page et al. (2021). A review of existing research is the basis for correct conclusions, the identification of gaps, and the outlining of further research that is necessary on a research topic (Davies & Nutley, 1999; Tranfield et al., 2003; Petticrew & Roberts, 2006; Weed, 2006; Grant & Booth 2009; Fink, 2019). To collect literature data in the WoS database, a systematic search was conducted.

2. Research results

2.1. Bibliometric results

A total of 413 works were collected and analyzed to find answers to the main objective of bibliometric analysis. A summary of the data analyzed by bibliometric literature review is provided in Table 1 alongside descriptive statistics.

Table 1. *A summary of the analyzed data*

Description	Results	Description	Results
Timespan	1991–2022	Authors	809
Sources (journals, books, etc.)	191	Authors of single-author docs	103
Documents	413	AUTHOR COLLABORATION	
Annual growth rate %	13.22	Single-author docs	117
Average age of document	5.06	Co-authors per doc	2.34
Average citations per doc	14.27	International co-authorships %	28.81
References	14,015	DOCUMENT TYPES	
DOCUMENT CONTENTS		article	392
Keywords plus (ID)	542	article; book chapter	1
Author's keywords (DE)	798	article; early access	16
		article; proceedings paper	4

Source: *compiled by the authors*

The analysis covers the period from 1991 to 2022 and involves 413 papers, which is a sufficient sample size. Rogers et al. (2020) suggest 200 papers as an analytical minimum. This is a relatively new area of research interest; nonetheless, it is still extensive, considering that the average number of citations of works in this area is more than 14. Moreover,

the average annual growth of interest is more than 13%, which is illustrated in more detail in Figure 1.

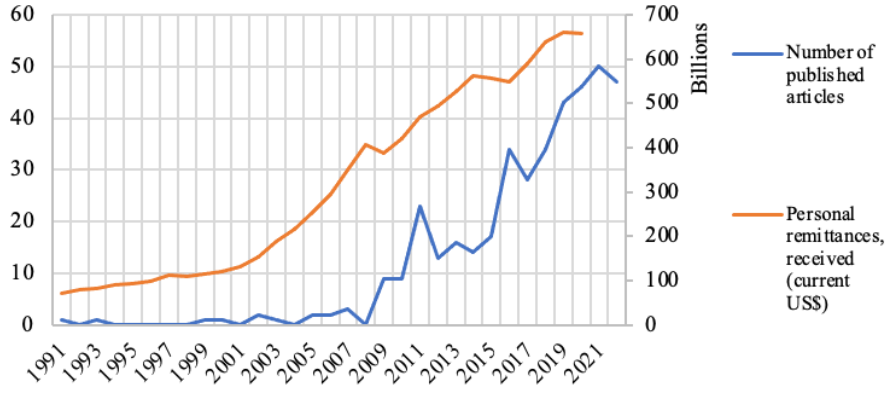

Figure 1. *Comparison between personal remittances and academic research interest focused on the topic of remittances and economic growth*

Source: *compiled by the authors, data retrieved from the World Bank (n.d.)*

Note that the primary axis in Figure 1 indicates the number of published studies, while the secondary axis indicates the personal remittances received in billions of US$. The calculated correlation coefficient between the number of published studies and the total amount of remittances received yielded a value of 0.86, according to which it can be concluded that the dynamics of academic research interest in the topic of remittances and economic growth follows the growth dynamics of global remittances. Furthermore, bibliometric analysis examined whether most studies dealing with remittances and economic growth come from countries with a higher share of remittances in GDP,[2] or whether this depends on income level. The following criteria were analyzed: the scientific production of countries based on the affiliation of all authors, the scientific production of countries based on the country of corresponding authors, and international cooperation.

2 According to the World Bank (2022), the countries with remittances exceeding 20% of GDP are as follows: Tonga, Kyrgyz Republic, Tajikistan, Lebanon, Samoa, Somalia, Nepal, El Salvador, Haiti, Honduras, Bermuda, Gambia, Jamaica, and Lesotho. Countries with more than 10% and less than 20% of remittances to GDP are: Kosovo, Comoros, West Bank and Gaza, Moldova, Nicaragua, Guatemala, Cabo Verde, Dominica, Georgia, Marshall Islands, Montenegro, Guinea-Bissau, Uzbekistan, Jordan, Liberia, Vanuatu, Dominican Republic, Armenia, Senegal, French Polynesia, and Zimbabwe.

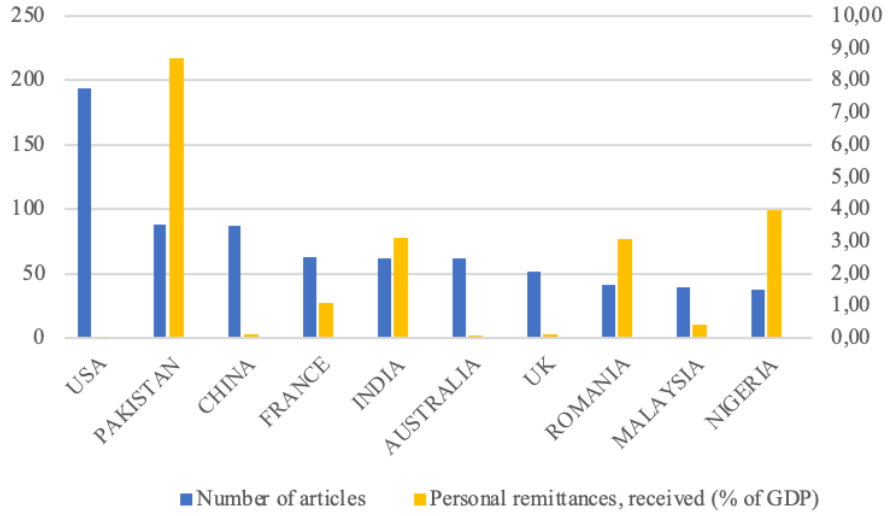

Figure 2. *The 10 countries with the largest number of published articles*
Source: *compiled by the authors, data retrieved from the World Bank (n.d.)*

Figure 2 shows the clustered charts of the top 10 countries (based on the affiliations of all authors) according to the criterion of the total number of articles published on remittances and economic growth. The total number of published articles is shown on the primary axis, while the share of remittances in GDP is shown on the secondary axis. According to the results, the United States is the country with the most articles published (194), followed by Pakistan (88) and China (87). All three countries are strongly associated with remittances. The United States and China are the countries sending the largest amount of remittances. Pakistan ranks third in scientific productivity, with remittances as a share of GDP at 8.69%; Nigeria ranks 10th, at 3.98%; and Romania and India rank 4th and 8th, respectively. Their share of remittances as a share of GDP are both just over 3%.

It must be emphasized that only Pakistan, India and Nigeria belong to the group of lower-middle-income countries, while the others are classified as middle- or high-income countries. Figure 3 shows the scientific production of countries in terms of the number of publications by the corresponding author. On this basis, it is possible to analyze the proportion of published papers related to single-country publications (SCP) and the proportion related to multiple-country publications (MCP).

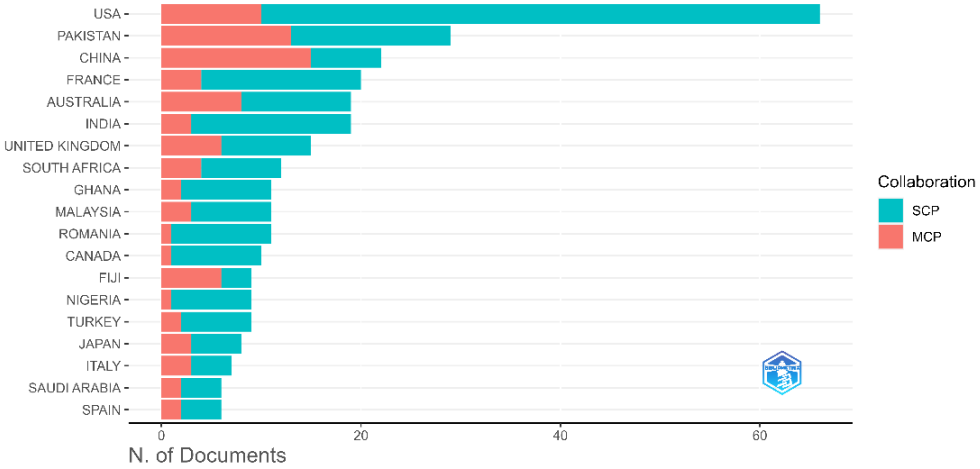

Figure 3. *The top 10 countries of publication based on the corresponding author*

Source: *compiled by the authors. Note: SCP – single-country publications; MCP – multiple-country publications*

According to the corresponding author criteria, the situation in the top 10 countries does not change significantly compared to the previous figure, with only the addition of the South African Republic and Canada. These countries are middle- and high-income countries, where the share of remittances in GDP is 0.24% and 0.05%, respectively. It can also be concluded from Figure 3 that China, Pakistan and the USA are the countries that have achieved higher international cooperation compared to other countries.

From all of these facts and the data analyzed, it cannot be concluded that most studies on remittances and economic growth come from countries with a higher share of remittances in GDP, or that this depends on income levels.

Finally, bibliometric analysis is directed towards recognizing the most relevant authors, sources and keywords and their relations by using network analysis. Figure 4 shows the most relevant authors in this field according to the number of articles published.

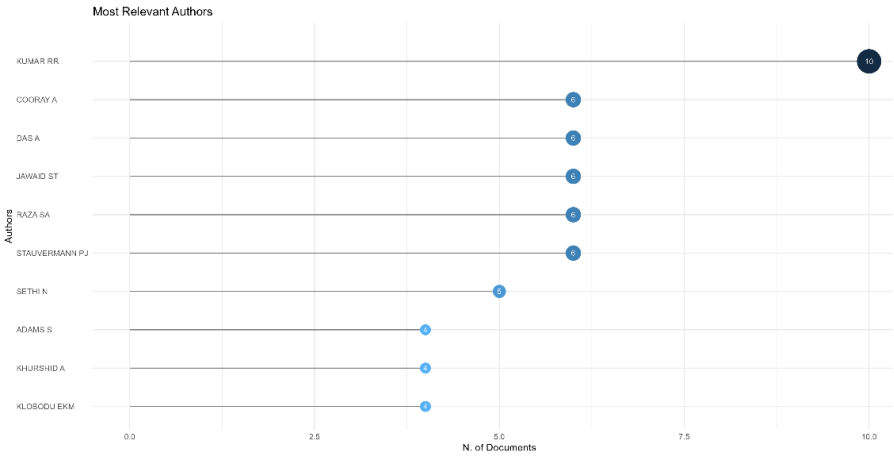

Figure 4. *Most relevant authors according to the number of published papers*
Source: *compiled by the authors, data retrieved from the World Bank (n.d.)*

Ronald Ravinesh Kumar is the most productive author, and also has the most published manuscripts (Jayaraman et al., 2011; Kumar, 2013, 2014; Kumar & Stauvermann, 2014, 2021; Kumar & Vu, 2014; Kumar et al., 2016; Kumar et al., 2018a; Kumar et al., 2018b; Stauvermann et al., 2018). They are followed by Arusha Cooray, Anupam Das, Syed Tehseen Jawaid, Syed Ali Raza, and Peter Josef Stauvermann, with six published manuscripts. Narayan Sethi has published five, while Samuel Adams, Adnan Khurshid and Edem Kwame Mensah Klobodu have published four manuscripts. Another criterion for measuring the top 10 most prolific scholars in the field is presented in Table 2.

Table 2. *Top 10 authors in terms of local impact*

	Prolific Scholars	h_index	g_index	m_index	TC	NP	PY start
1.	KUMAR R.R.	8	10	NA	158	10	NA
2.	JAWAID S.T.	5	6	0.455	97	6	2012
3.	RAZA S.A.	5	6	0.455	99	6	2012
4.	STAUVERMANN P.J.	5	6	NA	75	6	NA
5.	ADAMS S.	4	4	0.571	66	4	2016
6.	COORAY A.	4	6	NA	71	6	NA
7.	DAS A.	4	4	0.364	21	6	2012
8.	KLOBODU E.K.M.	4	4	0.571	66	4	2016
9.	ADAMS R.H.	3	3	0.094	242	3	1991
10.	AKCAY S.	3	3	0.375	23	3	2015

Source: *compiled by the authors*

The primary criteria for ranking authors are the h-index, the g-index, the m-index, total number of citations (TC), net production (NP), and starting year (PY start). From the data presented, it can be concluded that the list of the 10 most influential authors according to the proposed criteria is very similar to that in Figure 4. After analyzing the most influential authors, the most influential journals were analyzed based on several criteria. The first criterion for ranking journals was the total number of publications on the topic of remittances and economic growth (NP), and the other criteria were the h-index, the g-index, the m-index, the total number of citations (TC), and the year in which the first issue of the journal was published (PY start).

Table 3. *Top 10 sources based on local impact*

Element	h_index	g_index	m_index	TC	NP	PY_start
INTERNATIONAL MIGRATION	8	17	NA	664	17	NA
INTERNATIONAL JOURNAL OF SOCIAL ECONOMICS	5	7	0.625	64	13	2015
WORLD DEVELOPMENT	8	11	0.4	575	11	2003
JOURNAL OF INTERNATIONAL TRADE & ECONOMIC DEVELOPMENT	6	11	0.6	123	11	2013
ECONOMIC MODELLING	7	10	0.538	217	10	2010
AFRICAN DEVELOPMENT REVIEW-REVUE AFRICAINE DE DEVELOPPEMENT	8	9	0.444	288	9	2005
JOURNAL OF ECONOMIC STUDIES	4	9	0.222	88	9	2005
JOURNAL OF DEVELOPMENT STUDIES	6	8	0.462	316	8	2010
ECONOMICS BULLETIN	4	4	0.5	24	8	2015
APPLIED ECONOMICS	5	7	0.417	112	7	2011

Source: *compiled by the authors*

According to Table 3, most articles on remittances and economic growth are found in: *International Migration* (17 articles), the *International Journal of Social Economics* (13 articles), the *Journal of International Trade & Economic Development*, and *World Development* (11 articles). *International Migration, World Development* and the *African Development Review* displayed the highest h-index and m-index of the journals. When analyzing the total number of journals cited, *International Migration* ranks first with a total of 664 citations, followed by *World Development* with 575 citations and the *Journal of Development Studies* with a total of 316 citations.

To determine the most frequently used words in the titles and keywords, a visual representation of word frequency in a word cloud was analyzed.

Figure 5. *Word cloud of the top 50 words in titles (left) and keywords (right)*
Source: *compiled by the authors*

Figure 5 shows a visual representation of the word cloud for titles on the left and for keywords on the right. Each word cloud contains the 50 most frequently used words in the respective area, and can potentially be used to establish the relationship between the most important words used by the authors. These words are scattered around the most important keyword: "remittances" in the titles, and "economic growth, impact, and migration" in the keywords. Other important words used in the titles are "economic," "countries," "evidence," "impact," and "development." Given the small size of the words "empirical" and "analysis," it can be concluded that further research on this topic needs to clearly emphasize the empirical analysis of the problem of remittances and economic growth in its titles. Other important words used in the keywords are "remittances," "international migration," "poverty," and "financial development." Considering that the words "causality," "unit root," "foreign direct investment," and "determinants" are extremely small, it is clear that these are areas of research that need further study.

In the last part of the bibliometric results, the relationships between countries were analyzed by bibliographic coupling and a three-field plot in order to visualize the interaction between countries, relevant scientific journals and keywords, and to determine their relationships.

In order to accurately determine the relationships between countries, the bibliographic coupling was analyzed. Kessler (1963) was one of the first authors to elaborate on the concept of bibliographic coupling. Later, this method was further applied by many other authors (Hummon & Doreian, 1989; Jarneving, 2007; Nicolaisen & Frandsen, 2015; Maseda et al., 2022; and others). Term coupling occurs when two articles cite an identical (third) article or other document. The strength of bibliographic coupling is determined by how often two other documents have cited an article or other document.

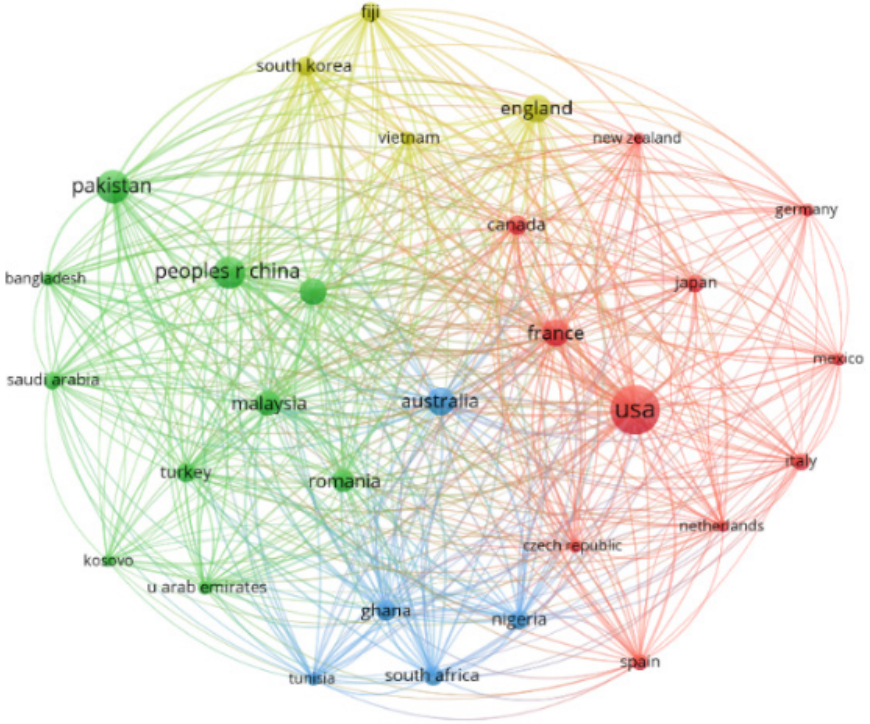

Figure 6. *Bibliographic coupling by countries*
Source: *compiled by the authors*

The minimum number of documents in a country was set at 5. Of all countries, 30 met this threshold. The results of the bibliographic coupling analysis are visually represented in Figure 6 using thematic clusters. The nodes (circles) represent countries whose color is used to group other countries in the same cluster. The size of the node depends on the strength of the bibliographic coupling. The visual representation shows that the USA, China, Pakistan, France, Australia, the UK and Malaysia have the largest nodes.

In the last part, a relation among countries, sources, and keywords will be illustrated by a three-field plot (Figure 7), also known as Sankey's flow chart – named after Captain Matthew Sankey in 1898 (Tsai et al., 2022).

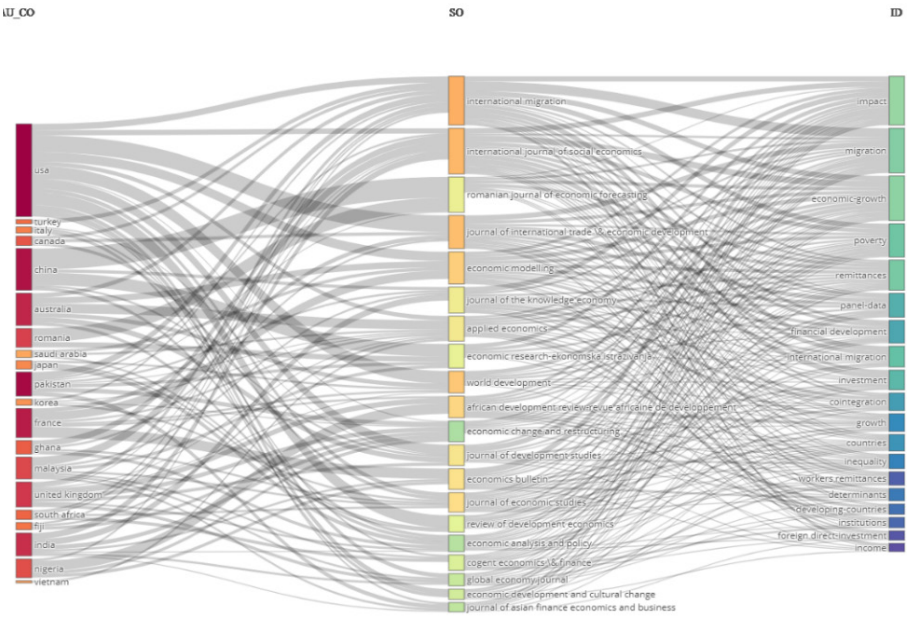

Figure 7. *Three-field plot*
Source: *compiled by the authors*

The three-field diagram in Biblioshiny 2.0 visually evaluates the relationships between countries, sources, and keywords, and is used to highlight relevant elements with different colors. The perimeter of the rectangle shows the relationship between countries, journals and author keywords. The larger the perimeter of the rectangle, the more relationships between the selected components exist. In terms of countries, according to the graph shown, the United States, China, Australia and France dominate, while the leading journals are *International Migration* and the *International Journal of Social Economics*. Stronger relationships can be observed between the United States and the *Journal of International Trade & Economic Development*; China and the *Romanian Journal of Economic Forecasting*; Australia and *Applied Economics*; and France and the *Economic Bulletin*. In addition, a stronger relationship was observed between the *International Migration Magazine* and the keywords "migration" and "impact," and between the *International Journal of Social Economics* and the keywords "economic growth" and "impact."

2.2. Systematic Literature Review Results

The authors followed the PRISMA-2020 diagram shown in Figure 8 when conducting the SLR. A literature review question has to be defined to commence an SLR. Fink (2019) emphasized that the author(s) must be very specific when formulating the litera-

ture review question. The appropriate selection of the keywords that play a selective role in the literature review is also a crucial step in conducting the SLR. All of these mentioned points have already been explained in detail in Section 2.1.

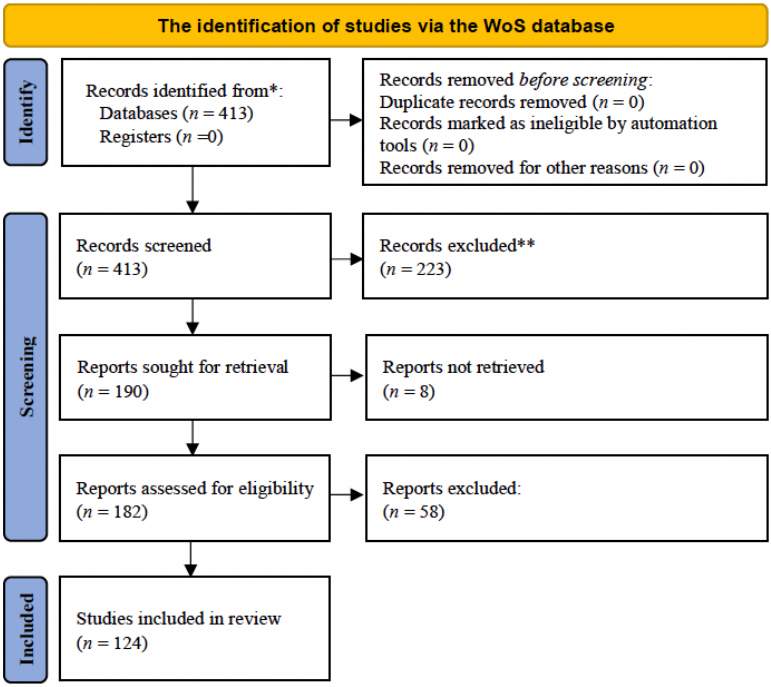

Figure 8. *A PRISMA-2020 diagram for a new systematic review*
Source: *compiled by the authors*

Besides the keywords to be used as search terms, it is imperative to define all of the inclusion and exclusion criteria in order to perform the selection process. During the selection process, the authors independently read each paper to select relevant papers and then discussed any disagreements regarding inclusion and classification until they reached a consensus, as suggested by Law et al. (2014). The authors established the following selection criteria for the relationship between remittances and economic growth. Specifically, the authors included all papers that addressed the causal relationship between the two observed variables and studies that examined the impact of remittances on economic growth, or vice versa. Papers which did not meet the eligibility criteria were excluded from further analysis. The authors first reviewed the titles and abstracts of the 413 identified papers. After the initial screening, 223 papers had to be excluded from the study due to not meeting the agreed-upon criteria. The authors did not use any automation tools to exclude

articles, and screening was conducted manually. Throughout the data collection process, eight papers could not be retrieved. The authors were able to download the full texts of the remaining 182 studies. Following Musinguzi's (2016) instructions, the authors read each paper very carefully and entered all relevant information (authors, year, subject, methods, and results) into a previously prepared Excel spreadsheet. Each author read and reviewed half of the papers independently. Papers that did not meet the criteria were excluded from the analysis. The authors re-evaluated the papers for which they had individual doubts, and then reached a joint consensus. After this detailed review, 124 papers were included in the final analysis. For the final stage of conclusions, the authors selected only papers that observed the impact of remittances on economic growth or papers that examined the causal relationship between the variables in question. A summary of the data analyzed in the SLR is included in the descriptive statistics in Table 4.

Table 4. *A summary of information on the analyzed data*

Description	Results	Description	Results
Timespan	2005–2022	Authors	253
Sources (journals, books, etc.)	78	Authors of single-author docs	31
Documents	124	AUTHOR COLLABORATION	
Annual growth rate %	14.5	Single-author docs	32
Average age of document	4.61	Co-authors per doc	2.27
Average citations per doc	12.1	International co-authorships, %	27.42
References	4137	DOCUMENT TYPES	
DOCUMENT CONTENTS		article	120
Keywords plus (ID)	183	article; early access	3
Author's keywords (DE)	294	article; proceedings paper	1

Source: *compiled by the authors*

The analysis covers the period from 2005 to 2022 and includes 124 papers, where the average number of citations was more than 12 and the average annual growth of interest was more than 14.5%.

The first question that the authors tried to answer through an SLR was **RQ1**: Do remittances influence economic growth? A detailed analysis of the selected papers produced the results shown in Table 5.

Table 5. *The impact of remittances on economic growth*

	IMPACT RESULTS				Total number of papers
	Positive impact	Negative impact	No impact	Mixed results (positive/negative)	
No. of papers	78	14	10	9*	**111**

Source: *compiled by the authors. Note: *different results with regard to the observed countries or measurements in different periods.*

The results of this study on the impact of remittances on economic growth show that 112 papers have addressed this issue. Of these, 78 papers have shown a positive impact, 14 papers have shown a negative impact, 10 papers have shown no impact, and 9 papers have shown a mixed result. The scholarly consensus is that remittances are positively associated with economic growth. However, a synthesis of the literature suggests that the magnitude and direction of this relationship is contingent on several key factors, including the level of financial sector development, the degree of economic openness, the allocation of remittances towards the education sector, and the use of remittances for investment purposes rather than personal consumption. Specifically, the authors contend that lower levels of financial sector development, greater economic openness, and directing remittances towards education and investment rather than personal consumption lead to a stronger positive association between remittances and economic growth (Sobiech, 2019; Cao & Kang, 2020; Ghosh, 2017; Zghidi et al., 2018; Barai, 2012; Incaltarau & Maha, 2011; Didia et al., 2018). Conversely, authors who identify a negative association between remittances and economic growth highlight the potential negative consequences of directing remittances towards meeting basic family needs (Karadag et al., 2019; Eftimoski & Josheski, 2021), particularly if they are not channeled towards investment and exceed a certain threshold of GDP (Jongwanich & Kohpaiboon, 2019; Hassan et al., 2016). Moreover, current research suggests that a significant influx of remittances can trigger the economic phenomenon known as "Dutch disease" (Polat & Andres, 2019; Paudel et al., 2022; Manic, 2019).

By analyzing the impact of remittances on economic growth, the authors confirmed the first question of the literature review – i.e., they proved that remittances positively affect economic growth. At the same time, it is essential to emphasize that the relationship between remittances and economic growth is far from fully explored (Fayissa & Nsiah, 2010; Siddique et al., 2012). The authors anticipate that the research momentum in this area will continue to grow in the coming decades, given its importance to the global economy. The volume of remittances and their resilience to shocks are becoming increasingly evident globally. According to the World Bank, remittance flows to low- and middle-income countries exceeded the sum of direct investment ($259 billion) and foreign aid ($179 billion) in 2020. Moreover, the power of remittances is becoming more dominant in the global economy, and they can no longer be considered small changes (World Bank 2021). In spite of the fact the number of studies examining the causal relationship between remittances and economic growth is extremely modest, the authors strongly suggest that it is important to highlight this fact, and that it is undoubtedly an area for future research.

Table 6. *Causality results*

	CAUSALITY RESULTS					
	Rem. => econ. growth	Econ. growth => rem.	Bidirectional causality	No causality	Mix results	Total
Number of papers	2	3	1	5	2*	**13** (Obs. sample 124)

Source: *compiled by the authors. Note: *different results concerning the observed countries.*

Thirteen papers dealt with the examination of the causal relationship between remittances and economic growth. A total of 2 papers proved that the causal relationship leads from remittances to economic growth, 3 papers proved that economic growth affects remittances, 1 paper proved bidirectional causality, 5 papers proved no causal relationship, and 2 papers showed mixed research results. Based on the findings of the bibliometric analysis and keyword analysis, it was identified that there is a need for more detailed investigation into the causal relationship between remittances and economic growth. This need was further substantiated through the use of an SLR analysis. It was revealed that there is a paucity of research studies that have used causal analysis to explore this relationship. The results obtained from the causality analysis were found to be inconclusive. Therefore, a synthesis of the existing literature suggests that the level of economic development is a key factor that determines the direction of causality, meaning that the nature of influence varies depending on the development level of countries.

The second literature review question – "Do the effects of remittances on economic growth differ according to the country's income level as classified by the World Bank?" – required a very detailed analysis of existing research in such a way that previous research results were classified or differentiated according to country income level, as classified by the World Bank. The next table shows the results of the analysis.

Table 7. *The influence of remittances on economic growth considering the country's level of development*

Sample involved	impact of remittance on economic growth			causality results			
	positive	negative	no impact	remm. on econ. growth	econ. growth on remm.	bidirectional	no causality
Low income	2	2					
Low-middle income	30	9	3	2		5	1
Upper-middle income	13	1		1		5	
High income	12		2	3		21	1

Source: *compiled by the authors*

It is possible to conclude that the impact of remittances on economic growth varies depending on the level of development of the country concerned, which confirms the second literature review question. The majority of research papers, 32 in total, demonstrate a positive relationship between foreign remittances and economic growth in low- and middle-income countries. However, it should be noted that 11 papers indicate a negative impact of remittances on economic growth in these countries. In contrast, for middle- and high-income countries, 25 papers suggest a positive impact of remittances on economic growth, with only 1 paper suggesting a negative impact. This implies that countries with a higher level of development have the capability to efficiently manage and utilize remittances received from foreign countries for their own economic advantage. A synthesis of the research indicates that one of the reasons for the slightly higher

proportion of papers indicating a negative impact of remittances on economic growth in low- and low-middle-income countries is that remittances are often utilized for personal consumption rather than directed towards investments.

The search for answers to the last literature review question – "Do the effects of remittances on economic growth differ according to the share of migrant remittances in GDP?" – required previous research findings to be classified in such a way that each country studied was categorized according to the share of remittances in GDP. The authors, therefore, classified countries into four categories using World Bank data, as shown in Table 8.

Table 8. *The effect of remittances on economic growth considering the share of migrant remittances in GDP*

REMM in GDP (%)	Impact of remittances on economic growth		
	positive	negative	no impact
51.0%	22	9	2
23.6%	7	0	2
22.9%	11	1	0
1.7%	2	1	
TOTAL	42	11	4

Source: *compiled by the authors*

The countries with the largest share of remittances in GDP (51%) showed the highest number of positive (22) but also negative impacts (9) of remittances on economic growth. In other groups of countries where the share of remittances in GDP ranged from 1.7% to 23.6%, there were 20 positive effects of remittances on GDP and only two adverse effects. Thus, the authors proved the last literature review question – i.e., the impact of remittances on economic growth differs depending on the share of remittances in GDP. Although previous research has mostly shown the positive impact of remittances on GDP regardless of the share of remittances in GDP, it is possible to see that the negative impact of remittances on economic growth mainly occurs in countries with the highest share of remittances in GDP. The reason for this may be that complementary policies and sound institutions play an essential role in increasing the impact of remittances on economic growth (World Bank, 2008; Catrinescu et al., 2009), which is not a typical characteristic of countries with a large share of remittances in GDP. Remittances are significant for developing countries in terms of size and in terms of being an important portion of GDP (UNCTAD, 2011). According to IFAD (2022), more than 70 countries in the world are heavily dependent on remittances (at least 4% of their GDP), and these remittances proved to be the driving force of socioeconomic growth for them.

Discussion and concluding remarks

According to UNESCAP (2022), remittances are the most measurable outcome of international migration. Remittances, an important source of foreign exchange earnings, can support a country's savings rate. Existing research suggests that there is no automatic mechanism through which migration and remittances affect the economic development of source countries (Rubenstein, 1992; Clement, 2011; Yang, 2011). Nonetheless, they rival foreign direct investment and official development assistance (ODA) in importance and strength (Depken et al., 2021). Today's migrations go a step further; they take new forms, so much so that the term "elite migration" has emerged, referring to the constant movement of highly skilled, well-educated specialists. It can be concluded that the world is facing a solid evolutionary leap in this field and it is difficult for researchers to obtain a constructive overview, especially when highlighting the diversity of evidence on remittances and economic growth.

The present study represents a pioneering effort, as far as the authors are aware, in utilizing the WoS database to conduct a comprehensive investigation of the existing literature. In addition, the authors have made significant contributions to the methodological framework by combining bibliometric analysis and SLR to provide a more rigorous and comprehensive approach. Both methodologies have gained prominence in recent times, owing to their practicality and utility for both established and emerging researchers.

The principal aim of this investigation was to comprehensively analyze the extant scholarly literature on the relationship between remittances and economic growth.

In order to comprehensively investigate the aforementioned aim of bibliometric analysis and review questions via SLR, a quantitative assessment of the existing literature on the topic of remittances and economic growth was conducted in order to provide a robust foundation for drawing meaningful conclusions and identifying key trends and knowledge gaps in the field. The purpose of the bibliometric analysis was to conduct a thorough investigation of the literature on the topic of remittances and economic growth in order to gain insights into the developmental patterns and current state of this field. Similarly, the goal of the SLR was to examine the influence of remittances on economic growth within the literature related to this topic.

Following bibliometric analysis, a total of 413 scholarly papers published between 1991 and 2022 and indexed in the WoS database were utilized for the purposes of this study. According to the bibliometric analysis, it was concluded that the dynamics of academic research interest in the topic of remittances and economic growth follow the growth dynamics of the global level of remittances based on the high positive correlation coefficient obtained. Parallel growth with the publication of papers on the topic of remittances and economic growth was shown graphically. It was found that most studies on remittances and economic growth are not from countries with a higher share of remittances in GDP, and this does not depend upon the income level. Eminent authors were examined according to the h-index and other criteria, with the first three places being occupied by the following authors: Kumar R.R., Jawaid S.T. and Raza S.A. According to the criterion of the number of published articles, the first three most significant journals are

International Migration, the *International Journal of Social Economics*, and *World Development*. The most frequent keywords are "impact," "economic growth," and "migration." Based on the bibliographic coupling method, four clusters of countries can be identified, with the following countries dominating each cluster: the USA, Australia, China and Pakistan, and the UK. A three-field diagram, also known as Sankey's Flow Chart, was used to identify the relationships between countries, journals, and keywords. According to the chart, stronger relationships can be seen between: the USA and the *Journal of International Trade & Economic Development*; China and the *Romanian Journal of Economic Forecasting*; Australia and *Applied Economics*; and France and the *Economic Bulletin*.

An SLR was conducted in the second part of the research, and 124 papers were included in the analysis. The first literature review question proved that remittances positively affect economic growth. Of the 111 papers analyzed, 78 papers indicated a positive relationship. Of these, 13 dealt with the causal analysis of the selected variables and 8 papers confirmed the corresponding relationship between remittances and economic growth. The study also confirmed the second literature review question, which examined whether the impact of remittances on economic growth varies by the country's level of development. Most papers showed the positive impact of remittances on economic growth using low- and middle-income countries and high- and middle-income countries as examples. It should also be noted that there is a modest amount of work in low- and middle-income countries showing the negative impact of remittances on economic growth, which only confirms that more developed countries use such financial inflows more efficiently in their economies. The same has also been confirmed by studies that have conducted causal analysis. The last literature review question was proven, as the existing studies showed the positive impact of remittances on GDP in countries with lower shares of remittances in GDP, while countries with higher shares of remittances in GDP recorded more mixed results – i.e., they showed both positive and negative impact of remittances on economic growth. The following conclusions can be drawn. Based on the above, according to the World Bank, there is no example of a country where remittances appear to have promoted economic development. The question of whether remittances promote economic growth then follows, to which neither theoretical nor empirical studies have provided a conclusive answer. While remittances raise income levels in the recipient country and plausibly contribute to poverty reduction (Adams & Page, 2005; Gupta et al., 2009), it is not evident that remittances increase output and promote long-term economic growth. However, what can be confirmed with certainty, taking into account the results of this study, is that remittances ultimately positively impact economic growth in most countries. These results also indicate that future research needs to focus on specific empirical analyses, particularly those that examine the causal relationship between remittances and economic growth, which has been largely neglected. There is also a need to further investigate their relationship with foreign direct investment. The extant literature on the impact of remittances on economic growth appears to be relatively limited. According to the authors' knowledge, only one study has conducted a literature review on this topic, which was undertaken by Cazashevici et al. (2020). In their investigation, the authors employed a meta-analytic approach and formulated cer-

tain conclusions based on geographic divisions. Their findings indicated that while the impact of remittances on economic growth is mixed, the predominant effect is positive, which aligns with the results of our study. However, this research focused specifically on the relationship between remittances and economic growth with respect to income level and the share of remittances in GDP.

Bearing in mind the research results that unequivocally indicate that the positive effects of remittances on economic growth are more prevalent in countries at a higher level of development, clear political implications emerge from the above. It is up to the holders of political power, especially in countries at a lower level of development, to design policies that will obtain greater benefits from the inflow of remittances, primarily to direct their use for investment purposes.

The limitations of this study must be addressed. Although the WoS has a greater depth of scientific citations and is the oldest scientific database, data from the Scopus database were not included in the analysis. It would certainly be advisable to include both databases simultaneously in future studies. This study was limited to the keywords "remittances" and "economic growth." From the bibliometric analysis, it can be concluded that it would be advisable to include the terms "impact" and "migration" in order to achieve greater relevance of the analyzed data. It must be mentioned, of course, that this analysis was conducted at a specific point in time, so search queries and citations will undoubtedly change in future.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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