

Remittances and Sustainable Development Goals

An Overview of Opportunities and Challenges in MENA Countries

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Abstract

Migrations and remittances play a significant role in the development of different economies and have the potential to contribute to the achievement of the Sustainable Development Goals (SDGs). This article profoundly reviews the relationship between migrations, particularly remittances and countries' progress toward the SDGs. Based on 122 articles extracted from the Web of Science database during the period 2003-2024, a bibliometric analysis, systematic review, and clustering exploration, the study aims to verify whether the scientific literature brings together sufficiently solid evidence to precisely answer the question of how significantly remittances contribute to the accomplishment of SDGs. Using VOSviewer, a rigorous, structured and reproducible software for information synthesis, the investigation examines the connections between migrations and remittances, including economic, social, and environmental aspects. It highlights the challenges and opportunities associated with harnessing migrations and remittances for sustainable development in MENA countries. Findings encourage future scientific research to focus more on topics-related to Remittances and SGDs 14, 17, 16, 7, 5 and 6. Through this comprehensive analysis, policymakers and stakeholders can gain valuable insights into the role of migrations and remittances in promoting SDGs. In addition, it helps researchers to point out any gaps or areas in the literature that require more investigation.

Keywords: *Migrations, Remittances, Sustainable Development Goals, MENA countries, Bibliometric analysis.*

Introduction

With the rapidly evolving dynamics of the modern-day setting, every country strives to achieve sustainable development goals (SDGs) as they have the potential to transform the global landscape (WHO, 2023). MENA, one of the world's largest and most populous continents (UN, 2022), has also set some sustainable development goals that the region thrives on achieving, and efforts are now underway to revamp the overall developmental strategies and policies in all its countries. In this significant paradigm, the vital role of remittances cannot be overlooked, as they have indecisive impacts on the continent's economic growth (Miller et al., 2020; Khan et al., 2022).

MENA has been a major recipient of remittances, with millions of residents working in various countries worldwide. These financial inflows are pivotal in improving the livelihoods of individuals, families, and communities across the continent (Chuc et al., 2022). Moreover, they have the potential to contribute significantly to achieving the United Nations' SDGs (Akanle et al., 2022). The present article presents a comprehensive framework designed to address social, economic, and environmental challenges globally.

Firstly, remittances contribute to poverty alleviation and economic empowerment (Acheampong et al., 2021), which are key components of the SDGs. Many families heavily rely on remittances as a vital source of income, enabling them to meet basic needs such as food, education, healthcare, and shelter (Aga & Martinez Peria, 2014). In rural areas, where poverty rates are often higher, remittances can be a lifeline, providing capital for entrepreneurial activities and agricultural investments (Maphosa, 2005). By bolstering household incomes, remittances directly impact SDG 1, aiming to end poverty in all its forms.

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Secondly, remittances enhance access to quality education and healthcare (Amega, 2018). With the financial support received from migrant family members, children households are more likely to attend school regularly, reducing the prevalence of child labor and increasing literacy rates. Improved education, as emphasized in SDG 4, contributes to human capital development, fostering sustainable economic growth and reducing inequalities (Asongu & Odhiambo, 2021; Awdeh & Jomaa, 2022). Furthermore, remittances can help cover medical expenses, ensuring access to healthcare facilities and supporting SDG 3's objective of promoting well-being for all (Cuadros-Meñaca, 2020; Mirzaei et al., 2020; Rahman et al., 2022).

Thirdly, remittances play a significant role in fostering entrepreneurship and job creation (Mohammed & Karagöl, 2023), thereby advancing SDG 8, which promotes inclusive and sustainable economic growth. Many remittance-receiving households in MENA use the funds to start small businesses or invest in existing ones, creating employment opportunities within their communities. These businesses contribute to local economies, generating income and fostering economic resilience. Additionally, remittances can catalyze productive investments in sectors such as agriculture, infrastructure, and technology, aligning with SDG 9's objective of building resilient infrastructure and promoting sustainable industrialization (Nurse, 2018).

Furthermore, remittances can strengthen social cohesion and gender equality (Sambo, 2016). The flow of funds from migrants abroad can empower women who often play a central role in managing household finances. Women receiving remittances may gain greater decision-making power, enabling them to invest in their families' well-being and participate actively in community development. Moreover, remittances reduce gender disparities by supporting women's education, healthcare, and entrepreneurial activities, aligning with SDG 5's goal of achieving gender equality and empowering all women and girls (Akanle et al., 2022; Nurse, 2018).

Notably, the impact of remittances extends beyond household-level improvements, as they also contribute to national economies. In some MENA countries, remittances constitute a significant portion of foreign exchange earnings and contribute to stabilizing the balance of payments. Governments can leverage remittance inflows to promote investment in infrastructure, healthcare, and education, aligning with SDG 17's emphasis on strengthening global partnerships for sustainable development (Akanle et al., 2022).

However, despite the positive impacts, challenges remain in maximizing the potential of remittances for sustainable development. High transaction costs, limited financial inclusion, and regulatory barriers can hinder the flow of remittances and reduce their overall effectiveness (Ahmed et al., 2021; Sghaier, 2021). Addressing these challenges requires collaboration between governments, financial institutions, and international organizations to create an enabling environment that promotes affordable, accessible, and secure remittance services.

In summary, it has been asserted that remittances have the potential to contribute to the MENA SDGs. Thus, the current study intends to conduct a thorough review to underscore the remittance landscape's economic, social, and environmental aspects and their vital character in achieving the SDGs in the MENA context.

To our knowledge, there are rare studies that have explored this relationship through systematic review analysis for the MENA countries. This research on migration, remittances and the SDGs aimed at addressing migration-related challenges by raising awareness about the positive contributions of migration to sustainable development and countering negative stereotypes and misinformation. This can foster greater public support for inclusive and rights-based migration governance policies. The study tries to provide an overview of existing literature on migration, remittances and their impacts on sustainable development by discussing key findings used in previous studies and identifying gaps or areas needing further investigation in the literature.

Furthermore, exploring the relationship between migration, remittances, and the SDGs can inform the development of evidence-based policies and strategies that harness the potential of migration to achieve specific sustainable development targets. The rest of the paper is structured as follows: section 1, literature review; section 2, methodology results and analysis and section 3, conclusion and policy recommendations.

Literature Review

Economic Implications

Remittances, defined as the transfer of money by individuals working abroad to their home countries, have emerged as a crucial component of many MENA economies. They have an economic impact, focusing on their role in poverty reduction, financial inclusion, and economic growth.

Starting with poverty reduction, remittances have played a significant role in reducing poverty levels in many MENA countries (Emara & Mohieldin, 2020; Khan et al., 2022; MacIsaac, 2021; Mouna & Jarboui, 2022). They provide a vital lifeline for millions of households by supplementing income and improving their standard of living. The MENA area has lower rates of poverty and income disparity than other regions. (Adams & Page, 2003). The earnings of the impoverished in the Middle East have increased since the early 1980s as a result of worldwide migration to the Persian Gulf and Europe. In addition, many MENA nations have employed government jobs to keep their citizens employed and out of poverty. Migration and remittances have a statistically significant effect on lowering the degree and depth of poverty in the MENA region, according to (Adams & Page, 2003). Remittances raised per capita incomes and the percentage of income accruing to the poor in labor-exporting nations (Page, 2007). They help alleviate poverty by directly supporting essential needs such as food, healthcare, education, and housing. The funds received enable families to afford better nutrition, access quality healthcare services, and provide educational opportunities for their children (Bare et al., 2022; Ben Mim & Mabrouk, 2014).

Regarding financial inclusion, remittances have also contributed to enhancing financial inclusion in MENA region. Many recipients of remittances lack access to formal financial services, such as banking facilities (Haouas et al., 2022; Jemiluyi & Jeke, 2023). However, the growth of digital payment platforms and mobile money has revolutionized the remittance MENA landscape (David & Williams, 2022; Gevaudan & Lederman, 2020). These innovative technologies have enabled recipients to receive and manage remittances more efficiently, fostering financial inclusion. Access to formal financial services empowers individuals to save, invest, and engage in entrepreneurial activities, thereby stimulating economic development (Emara & Mohieldin, 2020; Sakyi-Nyarko et al., 2022). Furthermore, financial inclusion improves the ability to finance and save for migration costs and may enhance their capacity to use social networks for migration-related objectives (Usman et al., 2022). The impacts are varied across rural and urban settings (Smith & Wesselbaum, 2023).

Furthermore, remittances have positively impacted economic growth, entrepreneurship and investment in MENA countries. They inject additional capital into the local economies, driving consumption and investment. The inflow of remittances has the potential to stimulate domestic demand, boost small businesses, and create job opportunities. Studies have shown that remittances positively correlate with higher GDP growth rates in different MENA countries (Ben Mim & Ben Ali, 2012; Bird & Choi, 2020; Kratou & Gazdar, 2016; Sghaier, 2021). Additionally, remittances act as a counter-cyclical shock absorber during economic downturns or financial crises, providing stability to local economies (Constantinescu & Schiff, 2014; Edelbloude et al., 2017).

Remittances have facilitated entrepreneurship and investment activities in MENA countries. Some remittance recipients utilize the funds to start small businesses or expand existing ones (Alhassan et al., 2022; Aloui & Maktouf, 2023). These entrepreneurial ventures create employment, generate income, and foster economic resilience. Also, remittances can serve as a source of investment capital, supporting projects in different sectors such as agriculture, real estate, and manufacturing. By conducting remittances towards

productive investments, MENA economies can benefit from increased productivity, innovation, and economic diversification (Ben Mim & Mabrouk, 2014; Mabrouk, 2018).

Finally, Remittances also contribute to savings and capital accumulation (Sabra, 2016). Many recipients allocate a portion of the remittances towards savings and asset-building. These savings can serve as a safety net during financial instability periods and enable households to make long-term investments, such as homeownership or education. Furthermore, the accumulation of savings can provide a foundation for future entrepreneurial ventures and stimulate local investment (Ben Mim & Ben Ali, 2012; Ben Mim & Mabrouk, 2014).

Social Implications

Remittances also have significant social implications for MENA communities by focusing on aspects such as access to education, healthcare, housing, social stability, gender equality, and social cohesion. They have played a crucial role in improving access to education in many countries (Maïga et al., 2016; Sezgin et al., 2023). The funds received from family members working abroad enable households to afford school fees, textbooks, uniforms, and other educational expenses. This financial support allows children to attend school and pursue higher education, empowering them with knowledge and skills for future opportunities (Rahman et al., 2022). Remittances have contributed to reducing educational disparities and promoting human capital development (Asongu & Odhiambo, 2021; Chaaban & Mansour, 2012; Mansour et al., 2011).

Remittances have also had a significant impact on improving healthcare access (Siegel, 2021). The funds sent by migrant workers support medical expenses, including hospital visits, treatments, and the purchase of medications (Egami & Matsumoto, 2020). They help families afford quality healthcare services, particularly in areas with limited healthcare infrastructure and resources (Egami & Matsumoto, 2020; Mirzaei et al., 2020; Rahman et al., 2022). Additionally, remittances contribute to health-related initiatives such as vaccination programs, disease prevention campaigns, and awareness campaigns, thus improving overall public health outcomes (Cuadros-Meñaca, 2020).

Remittances have played a role in improving housing and infrastructure conditions in MENA countries. The funds received enable families to invest in the construction, renovation, or purchase of homes (Jureidini et al., 2010). They also support the development of basic infrastructure such as water supply, sanitation facilities, and electricity, thereby enhancing living standards (De Haas, 2006; Monitor, 2017). Improved housing conditions contribute to the overall well-being and social stability of communities.

Remittances contribute to social stability by providing a steady stream of income, remittances help alleviate economic pressures and reduce the risk of social unrest (Arshad et al., 2022; Haller et al., 2018). They act as a buffer during economic downturns, helping families cope with financial shocks and maintain a certain level of stability (Khan et al., 2022). Moreover, they can foster a sense of social cohesion by strengthening family ties, supporting community projects, and encouraging collective responsibility (Adams & Page, 2003; Page, 2007). Furthermore, remittances have implications for gender equality in many societies (Nahar et al., 2022). Female migrants who send remittances contribute to empowering women and challenging traditional gender roles (Rahman, 2015). The financial independence gained through remittances allows women to have greater decision-making power within their households and communities (Kunz, 2008). Additionally, remittances sent by female migrants often prioritize investments in education and healthcare for their families, promoting gender equality in access to these vital resources (Chaaban & Mansour, 2012; Green et al., 2019). Remittances contribute to social cohesion by strengthening familial and community bonds. The financial support from migrants working abroad helps maintain social connections, fosters a sense of belonging, and encourages intergenerational solidarity (Adger et al., 2002; Taran, 2009). Remittances often fund social events, celebrations, and community development initiatives, bringing people together and reinforcing social networks. This social cohesion contributes to a sense of identity, community resilience, and collective well-being (Levitt & Lamba-Nieves, 2011; Zewdu, 2014).

Environmental Implications

Environmental impacts of remittances focus on their potential to support green investments, renewable energy projects, and climate change adaptation, as well as the challenges associated with promoting environmentally sustainable practices among remittance recipients (Mills, 2023). Remittances can contribute to environmental sustainability by supporting green investments. Funds received through remittances can be directed towards environmentally friendly projects, such as sustainable agriculture, reforestation initiatives, and conservation efforts (Hajer Habib, 2022; Zhao & Qamruzzaman, 2022). By directing remittance funds into green investments, MENA countries can promote sustainable land use, protect biodiversity, and mitigate the negative impacts of climate change.

Remittances can play a role in promoting renewable energy projects (Subramaniam et al., 2023). The funds received can be utilized to invest in solar panels, wind turbines, and other forms of clean energy infrastructure. This enables households and communities to transition from fossil fuels to renewable energy sources, reducing carbon emissions and promoting a cleaner environment (Menichetti et al., 2019). Remittances can also support the dissemination of clean energy technologies, such as improved cookstoves, which improve indoor air quality and reduce deforestation (Anil Shrestha & Makoto Kakinaka, 2022). They can support climate change adaptation efforts. Many regions in MENA are particularly vulnerable to the impacts of climate change, including increased droughts, floods, and extreme weather events. Remittance funds can be utilized to implement adaptation strategies, such as the construction of flood-resistant infrastructure, water management systems, and early warning systems (Wodon et al., 2014). These measures help communities become more resilient to climate-related challenges and protect their livelihoods (Ferreira Fernandes & Alves, 2022).

A potential concern is the influence of remittances on consumption patterns that may have adverse environmental impacts. Increased remittance inflows can lead to changes in consumer behavior, including greater consumption of resource-intensive products and lifestyles. For instance, remittances may increase demand for energy, water, and land, potentially exerting pressure on natural resources. It is crucial to promote sustainable consumption practices and guide remittance recipients toward environmentally conscious choices (Ari, 2022).

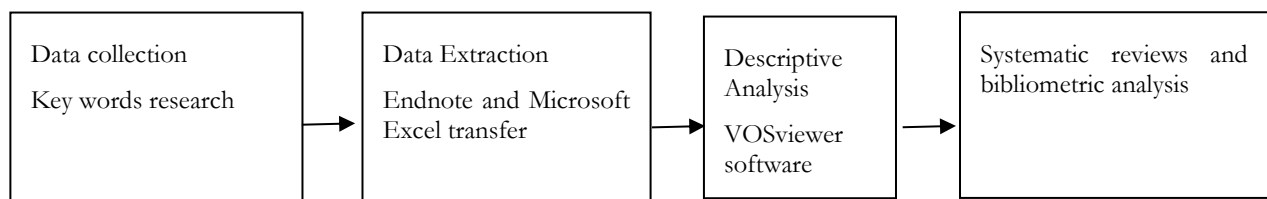
Methodology and Data Collection

In today's rapidly changing world, the significance of accurate weather forecasts cannot be overstated. Therefore, research methods such as systematic reviews and bibliometric analysis are crucial in advancing our understanding of weather prediction models and identifying gaps in current research. Systematic reviews and bibliometric analysis play significant roles in understanding the existing literature, identifying research gaps, and synthesizing evidence (Maryanti et al., 2022). A systematic review analyzes all available evidence on a particular topic and comprehensively summarises the findings. Meanwhile, bibliometric analysis involves examining the citation patterns and publication trends within a specific field or set of articles (Mishra et al., 2023; Yamaguchi et al., 2023). Both methods are complementary and can be used to identify key research areas and emerging trends in a particular field.

Findings help researchers make informed decisions about actual research directions and contribute to advancing knowledge in respective fields. In addition, bibliometric analysis can provide insights into the impact and visibility of research outputs, such as the number of citations received by a particular article, the h-index, or the impact factor of a journal. These measures can be used to evaluate the quality and impact of research, and they are often considered when making decisions about new research. Furthermore, systematic reviews and bibliometric analysis can also be used to inform policy and decision-making in various sectors. For example, a systematic review of relationships between migration and SDGs can provide policymakers with evidence-based recommendations on the SDGs that should be more explored. Moreover, bibliometric analysis can help identify the most influential studies in a particular field, allowing policymakers to prioritize resources and funding accordingly. In summary, systematic reviews and

bibliometric analysis are valuable tools in the realm of research for understanding existing literature, identifying gaps, synthesizing evidence, making informed decisions, evaluating research impact, and informing policy-making.

Using VOSviewer software, based on 122 relevant selected publications exported from the Web of Science database, and searching for 3 topics “Sustainable development and remittances” or Remittances and MENA” or MENA and Sustainable development goals”, the study aimed to explore the published articles during 2003- 2024. With 122 articles published and 1,348 citations, the sample demonstrates a solid impact in the field. On average, each article has garnered approximately 11 citations, reflecting consistent recognition and relevance of each work. The H-index equals 19, further highlighting the substantial impact of the selected articles. These metrics underscore the significant influence and quality of the sample chosen for remittances and SDGs topic.

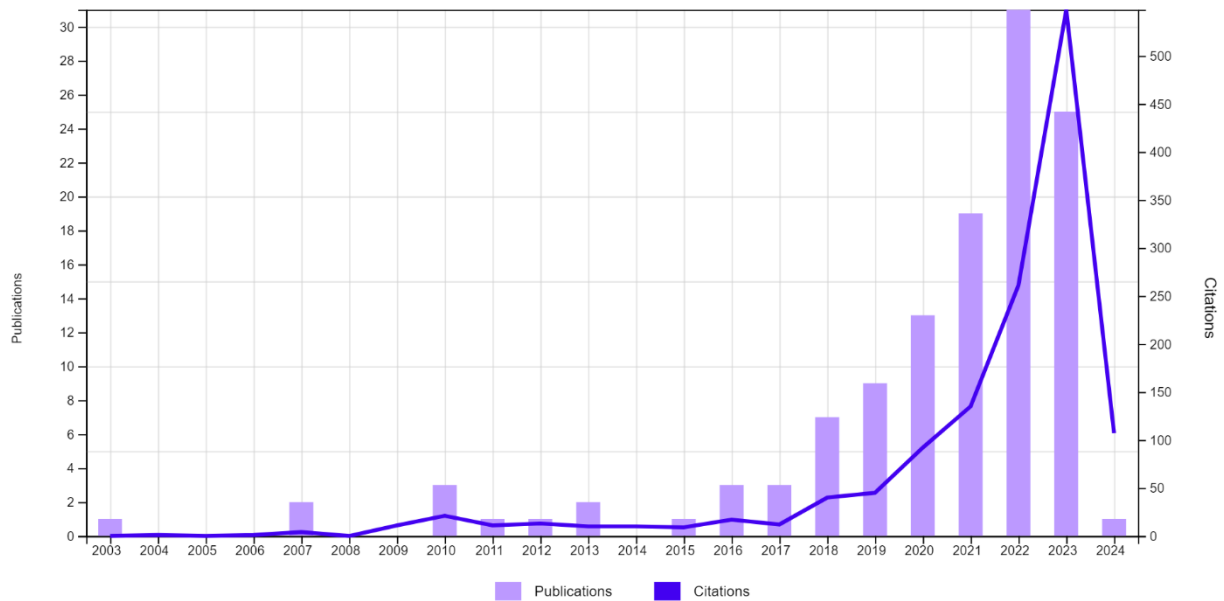


An analysis of selected publications provides the top 5 most productive countries exploring migration—SDGs MENA region research in terms of the number of WoS articles: United States (17), United Arab Emirates (12), Pakistan (11), Tunisia (10), England, and Saudi Arabia (9). The top finding agencies are from the United Kingdom, Germany, and Australia.

Results and Analysis Discussion

From 2003 to 2024, Figure 1 depicts the evolution of research on the interaction between remittances and SDGs in MENA countries. Research on the topic started to take shape in 2018. The advancement of this theme's study has accelerated annually. The year 2022 marked the pinnacle of research. The number of studies done on this topic decreased in 2023. Over the last ten years, the evolution of research on this topic was cited in more than 500 journal papers in 2022. The result reveals the increasing significance of exploring the relationship between remittances and SDGs in MENA countries. It highlights the growing interest and attention in understanding and addressing the impact of remittances on achieving the SDGs in this region.

Figure 1: Publications and citations per year



Source: Author presentation

Treemap chart 1: WOS Categories



Source: Author presentation

Treemap chart 1 shows that Economics, Environmental Sciences, Environmental Studies, Green Sustainable Technology and Development Studies are the WOS categories that have received more academic attention during the last ten years indicating a growing interest in topics related to sustainability and the environment. The analysis also highlights the interdisciplinary nature of migration-sustainability research, with diverse areas such as economics, business, management, and international relations appearing in the WoS categories. Interestingly, the analysis shows that these top research areas comprise 32% of total

publications, suggesting a concentrated clustering in economics and environmental issues. This concentration may indicate the growing recognition of the role of economies in addressing sustainability challenges.

Treemap chart 2: Citation topics Micro top 10

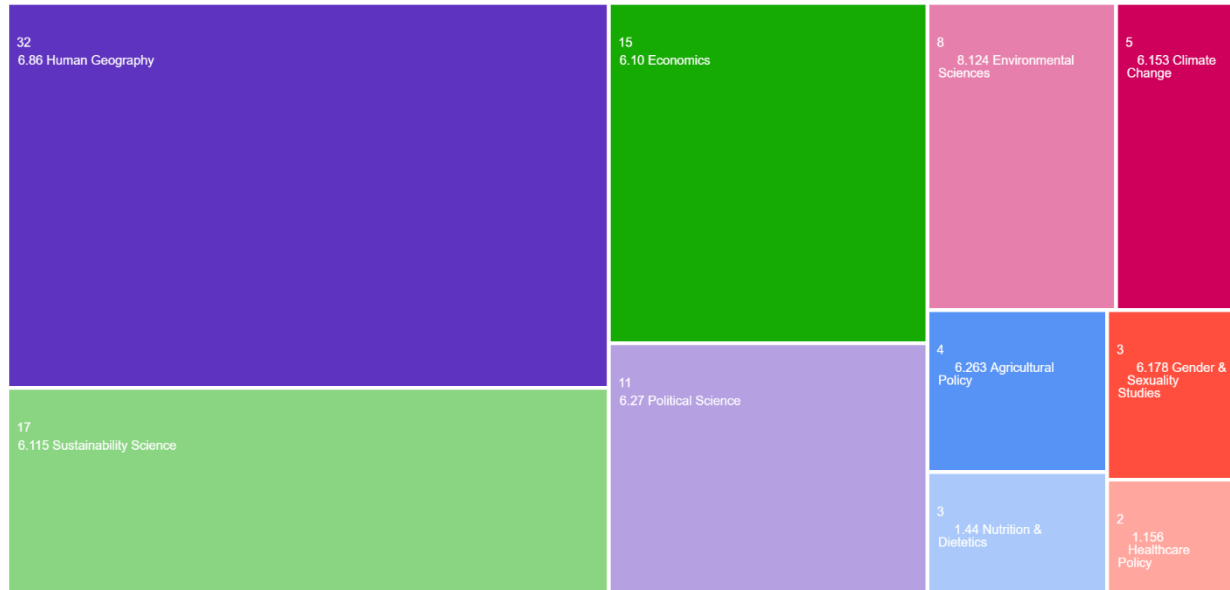


Source: Author presentation

Regarding citation topics in the Micro top 10, results presented in Treemap chart 2 include “immigration”, “environmental Kuznets Curve”, “economic growth”, “foreign aid”, “food insecurity”, “microfinance”, “household air pollution”, “urban agriculture”, “maternal mortality” and “deforestation”. Immigration has been found to have both positive and negative effects on host and origin economies. For instance, it can lead to labor market changes, economic growth, and cultural and environmental diversity, but may also pose challenges in terms of health and food inequality and inclusive finance.

The bibliometric analysis revealed from Treemap chart 3 that Citation topics in Meso's top 10 include “Human geography”, “Sustainability sciences”, “Economics”, “Political sciences”, “Environmental Sciences”, “Agricultural policy”, “Nutrition and dietetics”, “Climate change”, “Gender and sexuality studies”, and “Health care policy”. These topics reflect the multidisciplinary nature of meso-level studies, which encompass various aspects of social, economic, and environmental issues. These topics are all interconnected and play a crucial role in understanding and addressing challenges related to the relationship between migration and sustainable development.

Treemap chart 3: Citation topic Meso top 10



Source: Author presentation

Table 1 shows the order of the most explored Sustainable Development Goals in the region, Reduced Inequality (SDG 10) 38% is ranked first, then No Poverty (SDG 01) 25%, Climate Action (SDG 13) 20%, Decent Work and Economic Growth (SDG 08) 12% and Zero Hunger (SDG 02) 7%. These are the Top 5 SDGs explored in the MENA countries. Good Health and well-being (SDG 03), Industry Innovation and Infrastructure (SDG 09), Sustainable Cities and Communities (SDG 11), Responsible Consumption and Production (SDG 12), Life on Land (SDG 03), Quality Education (SDG 04), Clean Water and Sanitation (SDG 06), Gender Equality (SDG 05), Affordable and Clean Energy (SDG 07) and Peace and Justice Strong Institutions (SDG 16) present less than 5% for the selected publications in the study. Only two SDGs did not appear in the results, Life below Water (SDG 14) and Partnership for the Goals (SDG 17). Actual research focuses on socioeconomic issues such as poverty reduction, inequality, and hunger in the MENA region, with comparatively less attention on environmental sustainability and social issues such as health, education, and gender equality.

Table1: Sustainable Development Goals

Field:	Record Count	% of 122
Sustainable Development Goals		
10 Reduced Inequality	46	37.71%
01 No Poverty	31	25.41%
13 Climate Action	24	19.67%
08 Decent Work and Economic Growth	15	12.30%
02 Zero Hunger	9	7.38%
03 Good Health and Well Being	6	4.92%
09 Industry Innovation and Infrastructure	4	3.28%
11 Sustainable Cities and Communities	3	2.46%
12 Responsible Consumption and Production	3	2.46%
15 Life on Land	3	2.46%
04 Quality Education	2	1.64%
06 Clean Water and Sanitation	2	1.64%
05 Gender Equality	1	0.82%
07 Affordable and Clean Energy	1	0.82%
16 Peace and Justice Strong Institutions	1	0.82%

Source: Author presentation

To deepen the analysis, we use VOSviewer software to read data from the bibliographic database, particularly from the title and abstract with a minimum number of occurrences of terms (10). The results report 58 items and 985 links. The high total link strength (9721) suggests that the connections between items are significant and potentially influential within the database. Four clusters emerge from the analysis.

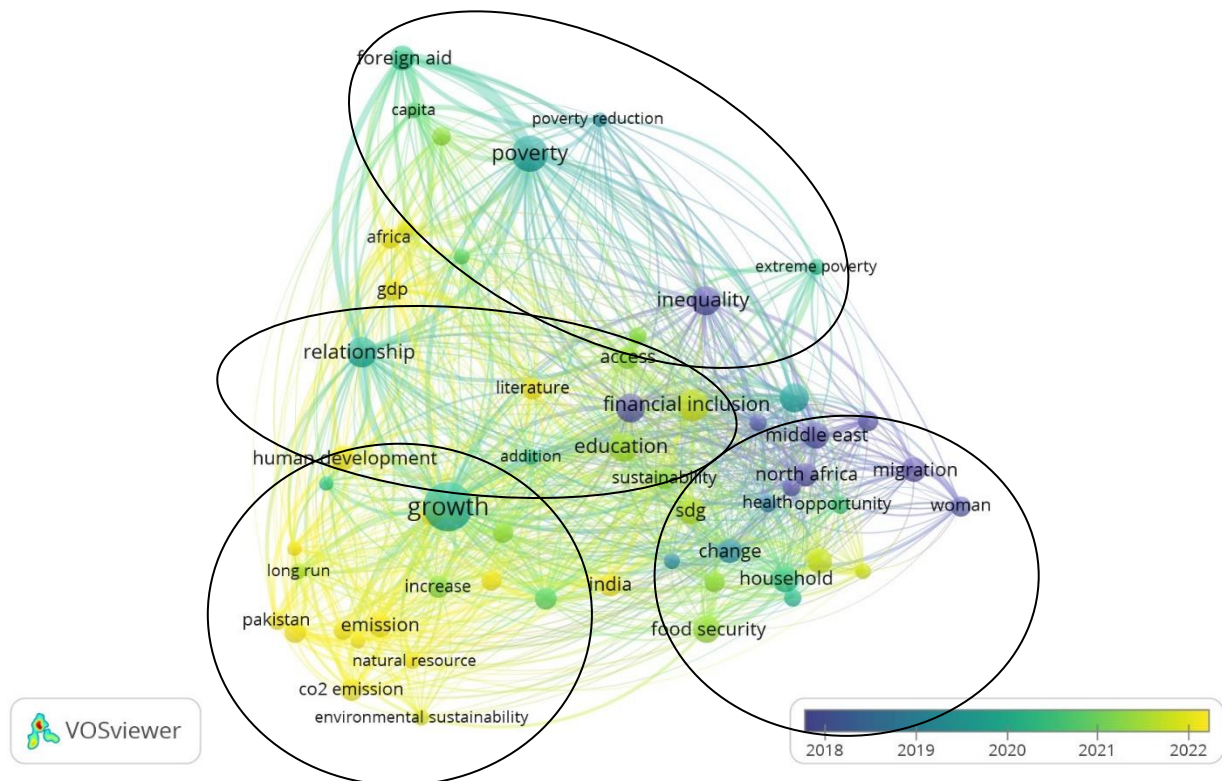
Cluster 1: Migration and health (migration, food security, health, pandemic, covid, women, sustainability). This cluster (23 items) seems to focus on issues related to migration, health, and sustainability, emphasising how these intersect with issues like food security and the impacts of pandemics such as COVID-19, especially on women. The MENA region is among the items that define Cluster 1. The proposed relevant SDGs that can be mapped with Cluster 1 are SDG 2: Zero Hunger (food security), SDG 3: Good Health and Well-being (health, pandemic), SDG 5: Gender Equality (women), SDG 11: Sustainable Cities and Communities (migration) and SDG 13: Climate Action (sustainability)

Cluster 2: Environmental Sustainability and Development (energy consumption, natural resources, environmental sustainability, human development, growth). This cluster (20 items) appears to centre around ecological sustainability and human development, including energy consumption, natural resource management, and strategies for achieving sustainable development. Appropriate SDGs that match with Cluster 2 are SDG 7: Affordable and Clean Energy (energy consumption), SDG 12: Responsible Consumption and Production (natural resources), SDG 13: Climate Action (environmental sustainability) and SDG 15: Life on Land (natural resources)

Cluster 3: Inequality and Poverty (inequality and poverty, poverty reduction and extreme poverty). This cluster (12 items) addresses socioeconomic inequality and poverty issues, including discussions on poverty reduction strategies and efforts to alleviate extreme poverty. Here Africa and Sub-Saharan Africa Regions emerge from the items defining Cluster 3. Possible associated SDGs are SDG 1: No Poverty (poverty, extreme poverty), SDG 5: Gender Equality (inequality) and SDG 10: Reduced Inequalities (inequality)

Cluster 4: Financial Inclusion and Education (remittances, financial inclusion, access, education). This cluster (4 items) revolves around remittances, financial inclusion, and access to education, highlighting the importance of financial services and education in promoting economic development and social inclusion. Applicable SDGs are SDG 4: Quality Education (education), SDG 8: Decent Work and Economic Growth (financial inclusion, access) and SDG 10: Reduced Inequalities (access).

Figure 3: Overlay Visualization- map based on text data



Source: Author presentation

These mappings illustrate how the clusters align with specific Sustainable Development Goals, demonstrating the interconnectedness of various global development challenges and the SDGs framework's comprehensive nature in addressing migration and remittances.

Based on the above analysis, future scientific research should investigate how migration patterns are influenced by access to clean water and sanitation in origin and destination areas, analyze the impact of migration on water resources management and sanitation infrastructure in urban and rural areas and explore the challenges faced by migrants in accessing clean water and sanitation services, especially in informal settlements and refugee camps (SDG 6). Moreover, important need to examine how migration contributes to or hinders the development of infrastructure in both sending and receiving countries and analyze how innovation and technology can improve infrastructure and support migrants' integration in contributing to sustainable development goals (SDG 9). Another potential avenue for future research is the link between migration and marine ecosystems, particularly in coastal regions where migrants settle or pass through. Explore how migration affects marine resource management, including fisheries, pollution, and marine biodiversity. Investigate the environmental impacts of migration-related activities such as maritime transportation and coastal development (SDG 14).

Furthermore, new research could also evaluate the effectiveness of migration policies and governance mechanisms in promoting sustainable development outcomes. This could involve comparative studies of migration policies across different countries and regions by examining the relationship between migration and peacebuilding efforts, including conflict resolution, reconciliation, and post-conflict reconstruction. Also, it could analyze the role of legal frameworks, human rights institutions, and governance mechanisms in protecting the rights of migrants and fostering social cohesion in diverse societies and explore the nexus between migration, justice systems, and access to legal remedies for migrants, including refugees and asylum seekers (SDG 16)

Finally, researchers and academics have to investigate how partnerships and collaborations between governments, civil society organizations, and international actors can support migrants' rights and promote inclusive development. (1) Analyze the role of diaspora communities and transnational networks in fostering sustainable development initiatives in both origin and destination countries. (2) Explore innovative approaches to financing migration-related projects and programs, including remittances, diaspora bonds, and migrant investment schemes (SDG17)

By integrating remittances into the research agenda for these SDGs, scholars can contribute to a more comprehensive understanding of the complex interactions between migration dynamics and sustainable development goals, ultimately informing policy and practice to better address the needs and rights of migrants worldwide.

Conclusion and Policy Recommendation

All in all, migration and remittances have the potential to support environmental sustainability in MENA region by promoting green investments, renewable energy projects, and climate change adaptation. However, challenges exist in promoting sustainable practices and ensuring that remittance-driven consumption patterns align with environmental goals. Policymakers, organizations, and stakeholders need to integrate ecological considerations into remittance-related initiatives, raise awareness about sustainable practices, and provide support for green investments. By leveraging remittances for environmental sustainability, MENA countries can strive toward a more sustainable and resilient future.

Enhance Financial Inclusion

Policies should focus on expanding financial inclusion to maximize the positive impact of remittances (Alhassan et al., 2022; Bare et al., 2022). This can be achieved by promoting mobile banking, digital payment platforms, and financial literacy programs. Governments can collaborate with financial institutions to develop accessible and affordable financial services tailored to the needs of remittance recipients (Nandru et al., 2023).

Foster Sustainable Entrepreneurship and Investment

Policies should encourage the productive use of remittances by providing training, mentorship, and access to credit for entrepreneurial ventures. Governments can establish incubation centers, offer tax incentives for green investments, and facilitate access to investment opportunities in sectors aligned with sustainable development. This will promote job creation, economic diversification, and environmental sustainability (Hipsher & Hipsher, 2020; Muñoz et al., 2018).

Strengthen Education and Health Systems

Policies should prioritize investments in education and healthcare infrastructure to ensure access to quality education and healthcare services (Arshad et al., 2022; Awdeh & Jomaa, 2022; Bare et al., 2022; Green et

al., 2019; Usman et al., 2022). Governments should allocate resources to build schools, improve educational facilities, and strengthen healthcare systems, particularly in underserved areas. Emphasis should also be placed on teacher training, curriculum development, and improving the availability of healthcare professionals (Green et al., 2019; Siegel, 2021).

Promote Sustainable Consumption and Production Patterns

Policies should promote sustainable consumption practices among remittance recipients. This can be achieved through awareness campaigns, education on sustainable lifestyles, and incentives for adopting environmentally friendly behaviors (Hipsher & Hipsher, 2020; Ncube & Gómez, 2015). Governments can encourage the production and consumption of sustainable products, support eco-certifications, and develop regulations that promote sustainable resource management (H. Habib, 2022).

Support Renewable Energy Transition

Policies should facilitate the integration of remittances into renewable energy projects (Nwani et al., 2022). Governments can provide incentives, subsidies, and regulatory frameworks that promote the adoption of clean energy technologies. They should also foster partnerships between remittance recipients and renewable energy providers to accelerate the transition towards affordable and clean energy sources (Baniya & Giurco, 2021; A. Shrestha & M. Kakinaka, 2022; Anil Shrestha & Makoto Kakinaka, 2022).

Strengthen Partnerships

Governments should foster partnerships between diaspora communities, international organizations, and local stakeholders to maximize the impact of remittances on sustainable development (Gallina, 2008; Maimbo & Ratha, 2005). Collaboration can include knowledge sharing, technical assistance, and joint initiatives that align with the SDGs. Governments can establish platforms for dialogue and coordination, encouraging stakeholders to work together towards common goals (Gallina, 2008).

Develop Monitoring and Evaluation Mechanisms

Governments should establish monitoring and evaluation mechanisms to track the impact of remittances on sustainable development. This includes collecting data on remittance flows, analyzing their allocation and impact, and assessing progress toward SDG targets regularly. The findings can inform evidence-based policymaking and enable adjustments to strategies and interventions (Maimbo & Ratha, 2005).

Strengthen Regulatory Frameworks

Governments should establish clear regulatory frameworks that govern remittance flows and promote transparency (Guetat & Sridi, 2017; Bousnina & Gabsi, 2022). This includes measures to reduce transaction costs, combat illicit financial flows, and ensure that remittance services are secure and efficient. Regulatory frameworks should also consider the specific needs and challenges faced by remittance recipients, such as protecting their rights and addressing potential vulnerabilities (Khan & Akhtar, 2022; Maimbo & Ratha, 2005).

By implementing these policy implications, governments in MENA region can harness the potential of remittances to contribute significantly to sustainable development. Policies that enhance financial inclusion and technology promote sustainable entrepreneurship and investment, strengthen education and health systems, encourage sustainable consumption and production patterns, support the renewable energy transition, strengthen partnerships, develop monitoring and evaluation mechanisms, establish robust regulatory frameworks that can maximize the positive impact of remittances on the SDGs and accelerate progress toward sustainable development and improve the well-being of their populations.

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