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A holistic approach to Sustainable Development Goal 8: Integrating economic growth, employment, and sustainability

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Abstract

Research background: The realization of United Nations Sustainable Development Goals (SDGs) 8 hinges on the sustained growth of both the economy and the global employment outlook. In order to ensure progress in fostering inclusive and equitable growth and employment opportunities, it is essential to undertake a comprehensive analysis of the SDG findings across all relevant subtargets.
Purpose of the article: This study provides an in-depth analysis of the research surrounding SDG 8 (Decent Work and Economic Growth), emphasizing its pivotal role in sustainable development.
Methods: Utilizing the PRISMA framework and BERTopic method, it explores the intricate interconnections between SDG 8 and other goals, such as reducing inequalities (SDG 10), clean energy (SDG 7), climate action (SDG 13), poverty alleviation (SDG 1), and innovation and infrastructure (SDG 9).
Findings & value added: The findings emphasize the importance of subtarget 8.1 (sustained per capita growth) and subtarget 8.5 (full employment and decent work for all). Additionally, the study underscores the need for policies supporting resource efficiency and sustainable consumption (subtarget 8.4), while green innovation and the digital economy are strongly linked to subtarget 8.2 (enhanced productivity through technological upgrading). Ensuring that economic growth is inclusive and equitable, as outlined in subtarget 8.3, is crucial for reducing inequalities. Policymakers must balance economic growth with environmental sustainability, promoting decent work conditions (subtarget 8.8) and adopting green technologies. These findings offer valuable insights for advancing SDG 8, ensuring that economic progress benefits all segments of society while safeguarding natural resources and fostering long-term prosperity.

Introduction

Launched in 2015, the 17 United Nations Sustainable Development Goals (SDGs) established a global blueprint to achieve a more sustainable future by the year 2030. As we approach the midpoint of this timeline, it is clear that the pace of progress is slower than anticipated, with many targets still far from being realized (Sachs *et al*., 2022). Among these goals, SDG 8 — "Decent work and Economic Growth" — is particularly significant as it seeks to promote sustained, inclusive, and sustainable economic growth,

full and productive employment, and decent work for all (Kakar *et al*., 2021). This goal encompasses various sub-targets, including increasing economic productivity, promoting policies that support entrepreneurship and job creation, eradicating forced labor, and ensuring labor rights for all workers (Moore *et al*., 2025). However, progress toward these goals has been inadequate (Moore *et al*., 2025; Strunk, 2025). The International Labour Organization (ILO) reports that only 8 out of 23 indicators for SDG 8 have showed "good" or "moderate" progress from 2010 to 2022. Challenges such as ensuring a 7% GDP growth rate in the least developed countries, enhancing global resource efficiency, and supporting micro-, small-, and medium-sized enterprises continue to hinder progress. These challenges underscore the urgent need for innovative policy measures to enhance economic productivity and promote decent work globally, reinforcing the transformative vision of SDG 8. (International Labour Organization, 2023).

Despite these challenges, research suggests that strategic, evidence-based policy interventions can accelerate progress toward SDG 8 (Bryan *et al*., 2019). Targeted investments in education, skills development, and labor market reforms can enhance productivity and ensure more inclusive economic growth. One of the key challenges in measuring progress on SDG 8 is the over-reliance on Gross Domestic Product (GDP) as the primary economic indicator. While GDP is a useful measure of economic output, it fails to capture broader dimensions of sustainable development, such as social well-being, environmental sustainability, and equitable labor conditions (Coscieme *et al*., 2020). A more comprehensive approach that incorporates indicators such as income distribution, job quality, and ecological impact is essential for assessing the true effectiveness of SDG 8. Shifting the focus beyond GDP would allow policymakers to evaluate whether economic growth translates into real improvements in living standards. For instance, a country with high GDP growth but widespread income inequality and poor labor rights protection may not truly be making progress toward SDG 8. Therefore, integrating multidimensional indicators into economic assessments would provide a more accurate picture of sustainable and inclusive development.

The significance of SDG 8 has been widely recognized in global development discourse. The World Bank emphasized its importance in eradicating poverty and ensuring equality. However, challenges persist in achieving these aims, with significant disparities in growth across regions and a high global unemployment rate exacerbated by the COVID-19 pandemic,

resulting in the loss of 255 million full-time jobs in 2021 (Byttebier, 2022; Lenzen *et al*., 2022). The transition from the Millennium Development Goals (MDGs) to the SDGs marked a shift toward a more holistic approach to development, emphasizing the interconnectedness of economic, social, and environmental factors (Halisçelik & Soytas, 2019). Achieving SDG 8 requires policies that integrate sustainability, social protection, and economic inclusion. A balanced approach that aligns economic growth with human rights and social equity is essential for long-term sustainability (Frey, 2018). Beyond employment, economic progress has often come at the cost of environmental degradation and resource depletion, reinforcing the need for a balanced development model that integrates economic, social, and environmental considerations (Hariram *et al*., 2023). With global emissions reaching record levels in 2020, addressing the intersection of economic growth, environmental sustainability, and employment quality has become more urgent than ever.

SDG 8 is deeply intertwined with multiple Sustainable Development Goals, reinforcing the need for a holistic and integrated approach to economic development. Achieving sustained and inclusive economic growth requires coordinated efforts across SDG 4 (Quality Education), SDG 5 (Gender Equality), and SDG 9 (Industry, Innovation, and Infrastructure), among others. Chigbu and Nekhwevha (2023) highlight that the 3% annual economic growth target often conflicts with sustainability objectives, particularly in reducing resource consumption and CO2 emissions. The material footprint indicator — a key measure of SDG 8.4 (resource efficiency in economic growth) and SDG 12.2 (sustainable resource management) — is critical, given that the global material footprint has quadrupled since 1970, largely driven by emerging economies in the Asia-Pacific region (Lenzen *et al*., 2022).

International trade plays a dual role in advancing SDG 8. While it fosters economic growth and poverty reduction, it can also exacerbate environmental degradation and labor exploitation through outsourcing (Malik *et al*., 2024). This highlights the need for consumption-based indicators and policies that address carbon leakage, labor rights violations, and environmental externalities**.** Green finance mechanisms, such as sustainability-linked bonds and carbon credits**,** can mitigate these negative impacts while promoting responsible trade practices (Koundouri *et al*., 2024). The role of digital financial services (DFS) in advancing SDG 8 is also well-documented. Zehri *et al*. (2024) show that DFS enhances employment quali-

ty, productivity, and economic participation, aligning with SDG 9 by fostering industry innovation and strengthening labor markets. Furthermore, the expansion of digital finance supports the transition to a net-zero economy by funding eco-friendly initiatives and sustainable entrepreneurship**.** Similarly, Niță *et al*. (2024) propose the Green Economy Index (GEI) to measure sustainable development progress by integrating economic, social, and environmental dimensions**,** thereby promoting green jobs, sustainable industries, and climate-resilient policies**.**

Ralph and Arora (2024) expose persistent gender disparities that impede economic development, linking SDG 8 with SDG 5. Structural inequalities in labor markets perpetuate wage gaps and limit women's access to leadership roles, necessitating reforms to ensure equitable employment. Furthermore, balancing economic growth with environmental sustainability remains a challenge, underscoring the relevance of SDG 13 (Climate Action). Arilla-Llorente *et al*. (2024) study highlights the necessity of integrating sustainability into economic planning, aligning SDG 8 with SDG 12 (Responsible Consumption and Production) to promote ethical labor practices and reduce resource depletion.

Moving toward an integrated approach, achieving SDG 8 — decent work and sustainable economic growth — requires cross-sectoral policies that align with SDGs 4, 5, 9, 12, and 13. Education and skills development (SDG 4) are critical for preparing the workforce for evolving industries, while gender equality (SDG 5) ensures inclusive economic participation. Financial inclusion (SDGs 8 & 9) fosters entrepreneurship and economic resilience, and industrial innovation (SDG 9) drives productivity and sustainable business models. Responsible production (SDG 12) and environmental protection (SDG 13) safeguard resources for future generations. Integrating carbon credits, net-zero strategies, and green finance mechanisms into global and national policies is essential for balancing economic progress with environmental and social sustainability. Without such a holistic framework, inclusive and resilient economic growth will remain out of reach.

Against this backdrop, we address two key research questions that are critical for deepening the understanding of SDG 8, its subtargets, and its interconnections with other SDGs. First, we analyze how sustainable economic growth impacts other SDGs by constructing a network of relationships based on existing literature (RQ1). Second, we apply topic modeling

to synthesize key themes and trends in SDG 8 research, offering a comprehensive view of the ongoing scholarly discourse (RQ2).

Understanding these interconnections is crucial for policymakers and administrators involved in designing sustainability policies (Koundouri *et al*., 2024). Insights from this study can help policymakers allocate resources more effectively and prioritize actions that foster sustainable economic growth while ensuring social inclusion and environmental responsibility (Sachs *et al*., 2022; Chigbu & Nekhwevha, 2023; Malik *et al*., 2024). Moreover, integrating financial inclusion, green finance, and industrial innovation into policy frameworks can strengthen economic resilience and long-term sustainability (Niță *et al*., 2024; Zehri *et al*., 2024).

Our study provides a groundbreaking and comprehensive evaluation of SDG 8 by addressing its role in a wide range of critical economic and social challenges. Unlike previous research, which often examines these areas in isolation, our study uniquely integrates diverse themes — monetary policy stability, sustainable banking, inflation, interest rates, unemployment, technology and innovation, international trade, productivity, and economic crises — to assess their collective impact on sustainable and inclusive economic growth. By doing so, we bridge gaps in the literature that have traditionally treated these aspects separately, failing to capture their interconnected nature (Sachs *et al*., 2022; Koundouri *et al*., 2024).

Furthermore, our study extends beyond macroeconomic considerations to examine the economic ramifications of the COVID-19 pandemic, focusing on its long-term effects on tourism, labor market dynamics, and employment trends. While existing research has explored these issues individually, our study provides a holistic perspective on post-pandemic economic resilience, filling an important research gap (Chigbu & Nekhwevha, 2023; Malik *et al*., 2024). Additionally, by incorporating key dimensions of social equity — such as the gender wage gap, migration, wage growth, and poverty — we offer a more nuanced understanding of labor market inequalities, an area that remains underexplored in the context of SDG 8 (Niță *et al*., 2024).

A key innovation of our study is its emphasis on sustainable agriculture, green technology, and the digital economy as drivers of the green transformation. These factors are essential for long-term productivity and environmental sustainability, yet their integration into SDG 8 research has been limited (Zehri *et al*., 2024). By explicitly linking SDG 8 with SDG 12 (responsible consumption and production) and SDG 13 (climate action), we

provide a more comprehensive framework that highlights the interconnectedness of economic resilience, social inclusion, and environmental sustainability. This multidimensional approach enhances the novelty of our study, offering policymakers actionable insights for designing strategies that foster sustainable economic growth while addressing environmental challenges (Sachs *et al*., 2022; Koundouri *et al*., 2024).

To systematically analyze these interconnections, we employ a rigorous scientometric approach, combining a PRISMA-based systematic review with Bidirectional Encoder Representations from Transformers (BERT) topic modeling. Scientometric analysis enables a quantitative assessment of extensive research bodies, revealing patterns, networks, and emerging trends that traditional qualitative reviews might overlook (Donthu *et al*., 2021). The application of BERTopic further strengthens this analysis by identifying the thematic evolution of SDG 8 research, providing deeper insights into shifting academic and policy discourses (Grootendorst, 2022; Raman *et al*., 2024a).

Rest of the paper is divided into four sections. First, a comprehensive literature review provides essential background and sets the context. Next, the methodology section details the systematic review approach undertaken in this research. Subsequently, the results and discussion section highlights the key findings derived from the review. Finally, the conclusion summarizes these findings and discusses their implications for policy formulation and future research directions.

Literature review

While the literature has delved into specific aspects of "economic growth, full and productive employment, and decent work for all," the literature thus far has been fragmented. One of the reasons for this gap is that since the time of the Agenda 2030, several researchers have criticized SDG 8 for targeting narrow economic indicators of growth and neglecting other important goals related to environmental considerations (Eisenmenger *et al*., 2020; Hickel, 2019b), health care for all (Koutsoumpa *et al*., 2020) or consideration for inclusivity or equity (Kamran *et al*., 2023).

An economy that targets high economic growth is focused on policies that promote high energy demand (Topcu *et al*., 2020), increase international trade (Jalil & Rauf, 2021), and increase the use of skilled labor to the det-

riment of marginal workers and wage inequality (Aiyar & Ebeke, 2020), leading to increased carbon emissions (Wang *et al*., 2022) and decreased environmental quality and unsustainable economic growth (Khan *et al*., 2020). Highlighting these inconsistencies, new frameworks have been proposed to help integrate these discrepancies (Kreinin & Aigner, 2022). While some argue that decarbonization and degrowth are the right direction (Hickel, 2019a), others argue for the decoupling of GDP from energy resources and its effects (Haberl *et al*., 2020). Nevertheless, GDP is an important indicator of a country's economic wellbeing. A higher GDP is related to increased investments, the creation of more jobs, and better conditions of work (Phan *et al*., 2024; Chigbu & Nekhwevha, 2023). As pointed out by the IMF, businesses in a country with a growing GDP tend to do better than those where it does not (assuming inflation remains under control). The global experience of contracting GDP during the COVID-19 pandemic and increased demand for fiscal stimulus by economies have highlighted the importance of achieving greater economic growth (McKibbin & Fernando, 2023). The ongoing debate indicates the complexity of the goal and its targets.

Recent studies have introduced new perspectives on SDG 8 by incorporating themes like carbon credits, green finance, and net-zero transitions. Lenzen *et al*. (2022) emphasize the material footprint indicator as a crucial tool for tracking progress toward SDG 8.4 (resource efficiency in economic growth) and SDG 12.2 (sustainable resource management). Similarly, Malik *et al*. (2024) explore the impact of international trade on SDG 8, demonstrating that while trade fosters economic growth and poverty reduction, it also contributes to outsourcing environmental degradation and labor exploitation from developed to developing nations.

Building on these concerns, recent research highlights how disruptive technologies can both support and challenge sustainable economic growth. Dadkhah *et al*. (2024) argue that AI, IoT, blockchain, and edge computing enhance productivity, optimize industrial operations, and promote digital entrepreneurship under SDG 8. However, they also warn that these technologies could exacerbate job displacement and the digital divide, necessitating inclusive policymaking. Niță *et al*. (2024) contribute to this discussion by developing a Green Economy Index (GEI) that integrates economic, social, and environmental dimensions, offering a comprehensive framework to measure progress on SDG 8 alongside SDG 9 (Industry, Innova-

tion, and Infrastructure) and SDG 12 (Responsible Consumption and Production).

Beyond broad economic measures, sector-specific research has examined SDG 8's application in key industries. Dávid and Dadkhah (2023) investigate AI's role in the tourism sector, finding that innovations like the Metaverse, augmented reality, and chatbots enhance efficiency while generating new economic opportunities. Similarly, Boudt *et al.* (2024) assess the trajectory of SDG 8 in EU-funded research projects, revealing a growing emphasis on productivity, entrepreneurship, and full employment y*et al*so highlighting disparities in policy alignment. Koundouri *et al*. (2024) use machine-learning text mining to evaluate how EGD policies align with various SDGs. While the EGD strongly supports SDGs 7 (Clean Energy), 12 (Sustainable Consumption & Production), and 13 (Climate Action), it underrepresents SDG 8, particularly regarding employment and economic inclusivity. This gap underscores the need for a more balanced policy approach that integrates economic growth with labor market resilience, ensuring that sustainability transitions do not come at the cost of equitable employment opportunities.

Several scientometric studies have focused on sustainable development topics such as sustainability in higher education (Leal *et al*., 2023), SDG 12 (Raman *et al*., 2024d), health and well-being (Sweileh, 2020; Raman *et al*., 2024c), and environmental economics (Lin & Zheng, 2016). Table 1 presents a collection of recent studies that cover various topics related to decent work, sustainable development, technological advancements, global open data policies, renewable energy, and the economic impact of COVID-19. These studies use diverse methodologies, such as systematic literature reviews, meta-analyses, bibliometric analyses, and panel data estimation. However, these studies have not explored the subtargets within SDG 8, which requires grouping them into themes and synthesizing insights from them to identify gaps in the literature further. Our study also aims to guide future research directions and policy interventions related to SDG 8 and its subtargets.

Methods

Understanding the role of SDG 8 in fostering economic growth and decent work requires a systematic and multi-method approach that captures the

breadth of academic discourse, emerging trends, and interconnections with other SDGs. The primary hypothesis guiding this research is that SDG 8 contributes to sustainable economic development by promoting inclusive employment, resource efficiency, and technological upgrading, aligning with multiple SDG targets beyond economic growth. To test this hypothesis, the study employs a three-step methodology:

1. Systematic Literature Review using the PRISMA Framework – Ensuring a rigorous and replicable process for identifying and selecting relevant research related to SDG 8 and its subtargets.
2. SDG Mapping Analysis – Utilizing co-citation mapping and SDG tagging to assess how research on SDG 8 interconnects with other SDGs, including reducing inequalities (SDG 10), clean energy (SDG 7), climate action (SDG 13), poverty alleviation (SDG 1), and innovation and infrastructure (SDG 9).
3. BERTopic-Based Topic Modeling – Extracting thematic insights from large-scale textual data to uncover evolving research areas, policy discussions, and sectoral applications related to SDG 8.

This approach enables a comprehensive examination of SDG 8, validating the hypothesis by identifying key themes shaping its implementation and assessing its broader contributions to sustainable development.

PRISMA framework

This investigation employed the PRISMA framework as a guide for analysis (Page *et al*., 2021). The robustness and reliability of the PRISMA protocol are well established, and it has been utilized in systematic literature reviews across various domains, including economics (Wang *et al*., 2020; Cramarenco *et al*., 2023), e-learning (Behl *et al*., 2022), digital transformation (Eger & Žižka, 2024; Lăzăroiu *et al*., 2023; Kovac *et al*., 2024; Kliestik *et al*., 2024) and sustainable development goals (Parvathy *et al*., 2025; Raman *et al*., 2023a; Arthur *et al*., 2024; Rózsa *et al*., 2023; Ogutu *et al*. 2023).

Identification phase

An extensive search was conducted in the Dimensions database on January 2, 2024, for the period from 2016 to 2023, coinciding with research developments following the adoption of the SDGs by the United Nations in

late 2015. The Dimensions database, chosen for its broad journal coverage, surpasses Web of Science by 82.2% and Scopus by 48.1% (Singh *et al*., 2021) and is an ideal resource for exploring SDG-related research publications. Publications focused specifically on economics were identified via ANZSRC code 38, with the Dimensions database employing the ANZSCO framework for research field classification (ANZSCO, 2013). The Economics Field of Research (38) is composed of three distinct subfields: Applied Economics (3801), Econometrics (3802), and Economic Theory (3803). A total of 6,86,138 publications were identified during this phase.

Screening phase

During the screening phase, publications with missing author details or DOIs, non-SDG mapped publications were excluded, resulting in the exclusion of 6,32,454 publications. Publications directly non-mapped to SDGs were identified via proprietary algorithms within the Dimensions database. This selection was informed by several SDG mapping initiatives, including the Aurora-Network-Global's SDG-Queries, University of Auckland's (Auckland SDG mapping, n.d.), and Elsevier's SDG Mapping Initiatives (Elsevier's, n.d.). The Digital Science SDG Mapping Initiative was chosen for its integration with Dimensions, offering preset search queries for each SDG and leveraging a machine-learning model refined through expert review. We utilized the predefined filters available in the Dimensions database, which are specifically designed for mapping publications to the SDGs. These filters are based on comprehensive keyword search strings and criteria that incorporate key phrases and terminology from the UN's definitions and narratives of the SDGs. Numerous studies have employed precise SDG mapping techniques to analyze research trends in emerging topics. For example, Raman *et al*. (2022) investigated green hydrogen for sustainable development, whereas Raman *et al*. (2024a) and Raman *et al*. (2023b) explored sustainable aviation fuel and green supply chain management, respectively. These studies highlight the application of SDG mapping to understand the alignment and impact of scholarly work on SDGs within these novel areas. A total of 53,684 publications remained eligible for further assessment.

Eligibility Phase

In the eligibility phase we retained 53,684 publications as relevant to SDGs.

Inclusion phase

The final criteria for inclusion were stringent, considering only SDG 8 mapped publications, English-language research articles, chapter, and proceedings while explicitly excluding all preprints to ensure the quality and reliability of the collected data. This process resulted in 37,990 publications being included in the study for topic modeling.

Topic modeling

Numerous approaches to topic modeling, such as Non-negative Matrix Factorization (NMF), Latent Dirichl*et al*location (LDA), Probabilistic Latent Semantic Analysis (PLSA), and To2Vec, have been employed in various studies. However, they often fail to account for the semantic relationships among terms fully and may struggle with short-text formats (Egger & Yu, 2022). Bidirectional Encoder Representations from Transformers (BERT) is a deep learning model developed by Google (Devlin *et al*., 2019), representing a significant shift from earlier Bag-of-Words (BoW) methods. Unlike conventional models that rely primarily on term frequency, BERTopic utilizes embeddings (Grootendorst, 2022) to represent documents in a lower-dimensional space while capturing contextual information (Alamsyah & Girawan, 2023; Nedungadi *et al*., 2025).

In this investigation, BERTopic serves as the primary method for topic extraction, employing advanced transformer-based processes and the Class-Tf-idf-Transformer to form concise and coherent topic clusters (Grootendorst, 2022). These clusters offer nuanced perspectives on the subject under review, allowing for greater depth of analysis. After data collection, essential preprocessing steps — such as text cleaning, tokenization, and other natural language processing (NLP) techniques — are performed to ensure data consistency. To further refine the dataset for visualizations and topic differentiation, sentence embeddings are generated using the "all-mpnet-base-v2" model from Sentence Transformer, followed by dimensionality reduction through uniform manifold approximation and projec-

tion (UMAP) (McInnes *et al*., 2018). This approach aligns with existing efforts to map this domain using BERTopic modeling (Raman *et al*., 2024b; Nedungadi *et al*., 2025).

The modeling sequence begins with embedding vectorization, translating text into numerical embeddings. Subsequently, Unified Manifold Approximation and Projection (UMAP) is utilized to group related data points, enhancing topic cluster clarity (Yi *et al*., 2025). Hierarchical Density-Based Spatial Clustering of Applications with Noise (HDBSCAN) then identifies dense regions in the dataset, filtering out points that do not fit. Afterward, class-based Term Frequency-Inverse Document Frequency (c-TF-IDF) pinpoints pivotal terms by examining their occurrence patterns across documents (Oh *et al*., 2023). For clustering and semantic search tasks, this study relies on the "all-MiniLM-L6-v2" text model, which assigns topics to documents based on representative terms, indicating the degree of relevance (Kim *et al*., 2024; Khodeir & Elghannam, 2025).

To optimize the topic modeling procedure, three principal hyperparameters—n-gram range, number of topics, and minimum topic size — are fine-tuned. The n-gram range is set to (1, 2) for enhanced contextual detail while testing between 4 and 20 topics strikes a balance between focus and breadth. A minimum topic size of 20 preserves topic coherence, and a limit of 20 keywords per topic highlights the most critical terminology. Following stopword elimination, commonplace words such as 'use,' 'add,' and 'related' are removed, reducing noise (Grootendorst, 2022). Default UMAP settings enable the calculation of document-topic probabilities, with the language fixed at English. Topic separation is guided by intertopic distance and coherence metrics, using a minimum distance of 0.05 and the cosine metric for angular similarity (McInnes *et al*., 2018). The process uses a random state of 100 and sets n_neighbors to 15 to balance local and global data structures. Ultimately, 14 topics are identified based on intertopic distance and coherence scores, culminating in a finer interpretation of the dataset. To further refine our analysis, we reviewed the three most-cited publications within each topic for deeper insights.

SDG framework

SDG 8 itself is a multifaceted goal, encompassing subtargets aimed at fostering economic growth, providing full and productive employment,

and ensuring decent work conditions. The specifics of these subtargets are illustrated in Fig. 2 (Bieszk-Stolorz & Dmytrów, 2023).

In analyzing the intricate web of SDGs, it becomes evident that the success of one goal is often intertwined with advancements in others (Raman *et al*., 2024c). Network analyses by Le Blanc (2015) and Nilsson *et al*. (2016) reveal a varied landscape of interconnections among the SDGs, with some demonstrating strong links across numerous targets and others showing less pronounced connections. Emphasizing the need for an integrated approach, Griggs *et al*. (2013) recommended embedding individual sustainability goals within a comprehensive framework that reflects the synergies between the environmental, social, and economic domains.

Our examination employs a cocitation mapping technique (Hou *et al*., 2018) to visualize the interconnectedness of SDGs, with a particular emphasis on SDG 8. This method identifies how frequently pairs of SDGs are cited together in the same body of literature, providing insights into their thematic and conceptual relationships. We utilized VOSviewer (v1.6.20) (van Eck & Waltman, 2010) to generate the cocitation network, applying a threshold to include only SDGs that met a minimum citation count of five, ensuring the robustness of connections. The process was not manually curated, but rather relied on bibliometric algorithms to identify relationships based on the joint citation frequency of SDGs within the same collection of research publications. The VOSviewer software identified cocitations, meaning that if two SDGs frequently appeared in the same reference lists of academic papers, they were considered strongly linked. This method did not depend on specific keywords but instead on actual citation patterns within peer-reviewed literature. To ensure robustness, we set a minimum citation threshold of five, meaning that SDGs had to be cocited at least five times in the dataset to be included in the final cocitation network. The resulting cocitation map portrays each SDG as a node, where the node size reflects the prevalence of that SDG in research. Thicker connecting lines between nodes indicate a higher frequency of cocitation, revealing strong conceptual linkages between SDGs.

Through this structured bibliometric approach, the mapping reveals clusters of research where SDG 8 (economic growth) intersects with social inclusion (SDG 1, 10), sustainable agriculture (SDG 2), clean energy transitions (SDG 7), and urban resilience (SDG 11). This visualization provides actionable insights for policymakers and researchers, allowing them to identify synergies and research gaps in sustainable development. This ap-

proach allows for an in-depth understanding of how SDG 8 interacts with other goals, highlighting clusters of research where economic growth intersects with social inclusion, environmental sustainability, and governance structures. By capturing these linkages in a structured, data-driven visualization, the cocitation mapping provides a cohesive representation of SDG research, aiding policymakers and scholars in identifying key areas of synergy and potential research gaps.

Results and discussion

SDG network map (RQ1)

The SDGs are indivisible, with no prioritization of one over another, reflecting the integrated nature of the 2030 Agenda for Sustainable Development (Coscieme *et al*., 2020). SDG 8, which aims to "promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all," is intricately linked to several other SDGs. The cocitation map (Fig. 3) based on the current dataset confirms this, positioning SDG 8 as central within the broader SDG framework.

The connection with SDG 1 (No Poverty) is intuitive, as job creation and sustainable economic growth are foundational for poverty alleviation. SDG 8, particularly subtarget 8.5, which seeks full employment and decent work for all, plays a crucial role in lifting individuals out of poverty by reducing unemployment and fostering quality job opportunities. Similarly, SDG 2 (Zero Hunger) benefits from economic growth, as increased employment and higher incomes contribute to enhanced food security and improved nutrition. SDG 3 (good health and well-being) is closely tied to SDG 8, with decent work conditions and economic stability contributing to better health outcomes. Economic growth enables investments in healthcare infrastructure, whereas subtarget 8.8, which focuses on safe working environments, reduces occupational health hazards. Additionally, SDG 4 (quality education) is critical to achieving SDG 8.6, which promotes youth employment, education, and training. A skilled workforce is fundamental to sustainable economic growth and ensuring long-term productivity.

Industrial innovation and infrastructure development, as emphasized in SDG 9 (Industry, Innovation, and Infrastructure), are further strengthened by economic growth, which creates more employment opportunities and

supports sustainable industrialization, aligning with subtarget 8.2 (enhancing productivity through innovation). The interplay between SDG 7 (affordable and clean energy) and SDG 8 highlights the role of energy access in industrial and economic development, emphasizing the need for sustainable, energy-efficient growth practices. The strong linkage between SDG 10 (reduced inequality) and SDG 8 reflects the shared focus on fostering inclusive economic growth that diminishes disparities, as targeted in subtarget 8.3. If growth is not inclusive or sustainable, it risks widening inequalities related to gender parity, poverty, and well-being. Moreover, SDG 11 (Sustainable Cities and Communities) ties into urban economic growth and employment creation, which is the key to ensuring long-term urban resilience and inclusive ecosystems. Finally, the connection between SDG 13 (climate action) and SDG 8 underscores the importance of environmentally conscious economic growth. The risk of unsustainable growth, which could exacerbate greenhouse gas emissions and pollution, as targeted in subtarget 8.4 (improving resource efficiency), highlights the need to balance economic objectives with environmental responsibility to safeguard future generations.

These interlinkages reflect the far-reaching impact of sustainable economic growth on social, environmental, and infrastructural development. As Pham-Truffert *et al*. (2020) argue, SDGs exhibit both co-benefits and trade-offs — economic growth, while critical, must be aligned with environmental goals to avoid exacerbating inequalities and ecological degradation (Coscieme *et al*., 2020; Wilke *et al*., 2025; Baiardi, 2022).

Major research topics (RQ2)

After BERTopic modeling was conducted, a total of 14 relevant topics were extracted. Table 2 shows the major topics, key terms in topics, and authors. For further discussion, three papers on each topic were selected on the basis of their best probability of fit to the respective topics and are discussed next.

Monetary policy stability

Macroeconomic stability is essential for sustainable per capita economic growth, which aligns with SDG 8. Specifically, this topic addresses subtarget 8.1, which calls for sustained per capita economic growth, and subtar-

get 8.2, which emphasizes achieving higher levels of economic productivity through diversification, technological upgrading, and innovation. The effective use of macroeconomic tools, including fiscal and monetary policy, not only stabilizes an economy but also accelerates its growth (Cho & Ree, 2023).

Our first topic underscores the importance of monetary policy for fostering economic growth. The studies here build scenarios that enhance monetary policy transmission during global economic crises, including the 2008 financial crisis and COVID-19, supporting subtarget 8.1. Clarida (2019) used a dynamic stochastic general equilibrium model to show how shocks to central bank policy rates can affect both monetary policy and exchange rates. The study highlights that a global shock may result in substantial policy coordination, even without explicit cooperative intentions, contributing to macroeconomic stability, which is essential for achieving subtarget 8.2. Similarly, Dery and Serletis (2021) compared the impacts of uncertainty shocks, such as those caused by COVID-19, with those of traditional monetary and leverage shocks on fluctuations in economic output and inflation. Their findings indicate that while uncertainty shocks better explain output fluctuations, inflation is more influenced by traditional macroeconomic instabilities. This insight is relevant to subtarget 8.1, which stresses the need for economic stability even in the face of crises. Proaño and Lojak (2020), through simulation, explored the monetary policy transmission mechanism in a scenario with near-zero nominal interest rates, as observed after the 2008 financial crisis. The study contributes to subtarget 8.2 by shedding light on how monetary policy innovations can support economic resilience, fostering higher levels of productivity through effective monetary interventions.

The Sustainable Development Goals Report emphasized that the global economy had been slowing even before the pandemic, and the pandemic further exacerbated this downturn. The use of effective monetary policy tools is crucial to stabilizing economies and achieving the 7 percent GDP growth target set under subtarget 8.1. This topic provides valuable insights into how monetary policy channels can function effectively to support economies in crisis, directly contributing to the achievement of SDG 8.

Sustainable banking

The banking sector plays a crucial role in the economic growth of nations, directly supporting SDG 8. This topic addresses subtarget 8.10, which focuses on strengthening the capacity of domestic financial institutions to encourage and expand access to banking, insurance, and financial services for all. The second topic explores the impact of various risks on the profitability and sustainability of the banking sector globally, highlighting the relevance of sustainable banking practices to support economic resilience and growth.

The first study by Kola *et al.* (2019) investigates how banking sector profitability is exposed to credit risk. By employing a panel data analysis, they find that an increase in nonperforming loans, which heightens financial instability, has a significant negative effect on bank performance. This highlights the importance of effective credit risk management for financial institutions, contributing to subtarget 8.10 by ensuring that banks remain stable and are capable of expanding access to financial services despite credit-related challenges. The second study by Lalon *et al.* (2023) examines the effects of liquidity risk on bank performance. Covering a sample of state-owned commercial banks over ten years (2012–2021), the study reveals that these banks were not significantly impacted by liquidity risk during the pandemic, offering country-specific insights during the COVID-19 pandemic. This resilience in the face of liquidity challenges supports the achievement of subtarget 8.1, which seeks sustained per capita economic growth, and subtarget 8.10, which ensures that financial institutions continue to function effectively even during crises. The third study by Liyanagamage (2021) provides a comprehensive examination of the sustainability and stability of commercial banks in Sri Lanka over two decades. The study finds that while bank efficiency positively impacts bank stability, credit growth negatively affects it, emphasizing the need for stronger bank supervision and an improved regulatory environment. This finding directly relates to subtarget 8.2, which emphasizes enhanced economic productivity, including within the financial sector, through innovation and improved practices. Strengthening the regulatory framework, as suggested, would bolster the banking sector's ability to provide sustainable financial services, contributing further to subtarget 8.10.

While these studies offer valuable insights into the various risks faced by banks, including credit and liquidity risks, and how they impact bank

performance, the mixed evidence highlights the complexities of achieving sustainability in banking. However, a more focused approach toward expanding access to financial services for all, particularly in underserved regions, would greatly aid in achieving the targets set under SDG 8, specifically subtarget 8.10. Sustainable banking practices that mitigate risks while expanding inclusivity are the key to fostering long-term economic growth and stability.

Inflation, interest rates, and unemployment

Research on the interplay between inflation, interest rates, unemployment, and economic growth provides valuable insights into achieving SDG8, specifically subtarget 8.1 (sustained per capita economic growth) and subtarget 8.5 (full and productive employment and decent work for all). By examining these macroeconomic variables together, studies build upon each other, offering a comprehensive view of the mechanisms that influence sustainable economic growth.

Mahrizal and Maidiansyah (2022) laid the foundation for understanding the factors that drive unemployment in Indonesia. Their analysis, which was based on time series data over ten years, revealed a complex relationship where increases in the minimum wage elevated unemployment, whereas economic growth and inflation contributed to a reduction in unemployment. This finding sets the stage for the exploration of how economic growth and inflation can act as stabilizing forces within the broader macroeconomic context, directly addressing the goals of subtarget 8.5 by providing insights into labor market dynamics. In addition, Pasaribu *et al.* (2023) expanded the analysis to explore how monetary policy affects the real sector of the economy, linking inflation and economic growth through the lens of both short-term and long-term impacts. While Mahrizal and Maidiansyah provided a foundational understanding of inflation's effect on unemployment, this study demonstrates how money supply and inflation are key drivers of economic growth in both the short and long run. In addition, it highlights that exchange rates and interest rates play crucial roles in long-term growth, offering a more detailed perspective on how economic policies can align with subtarget 8.2 by fostering productivity through monetary interventions. This connection shows that inflation not only influences unemployment but also contributes to sustained growth over time when combined with appropriate monetary policies. In addition, Handri-

yani *et al.* (2018) examined how household consumption, investment, and employment directly influence economic growth, adding a practical layer to the understanding of the consumption–growth relationship. Their findings, which show that household consumption expenditure, investment, and labor participation positively impact growth, build on earlier insights by illustrating how internal demand and labor dynamics interact with inflation and monetary policy to sustain growth. The negative effect of interest rates on growth, as found in this study, echoes the findings of Pasaribu *et al*. (2023), emphasizing the importance of maintaining stable interest rates to promote long-term productivity and economic resilience.

Together, these studies illustrate a cohesive picture of how inflation, wages, consumption, and monetary policy mechanisms interact to achieve sustainable economic growth. They collectively contribute to the achievement of SDG 8 by offering a multifaceted approach to managing inflation, supporting inclusive employment, and fostering long-term growth through both policy interventions and household-level economic activity.

Technology and innovation

The studies grouped under this topic explore the critical relationships between technology, innovation, and economic growth, contributing directly to SDG 8, particularly subtarget 8.2, which focuses on achieving higher levels of economic productivity through technological upgrading and innovation. Together, these studies provide a comprehensive understanding of how technological advancements drive economic growth and the role of institutional and policy frameworks in facilitating this progress.

Sukharev and Voronchikhina (2018) offer a theoretical foundation for understanding how technological growth is integral to economic growth. His framework posits that while multiple technologies are available for enhancing production, the speed of technological adoption is largely determined by the rate of institutional change within an economy. This insight lays the groundwork for understanding how innovation is not only about the availability of technology, but also about the enabling environment that facilitates its integration into the economy. This aligns with subtarget 8.2, which calls for technological upgrading as a key driver of productivity and economic expansion. A study by Mohamed *et al*. (2022) empirically demonstrated the positive impact of technological innovation on economic growth across 20 developing countries. Their study extends

the discussion by utilizing proxies such as education expenditures, patent filings, research and development (R&D) expenditures, and the number of researchers engaged in R&D activities. By including high-tech exports and scientific outputs, their research highlights that the presence of robust technological and educational infrastructures significantly fosters economic growth in developing economies. This study provides empirical evidence supporting the importance of investing in innovation ecosystems to achieve subtarget 8.2, which emphasizes the importance of diversification and technological upgrading in developing economies. In further expanding on the theme of innovation's impact on growth, Sugiarto and Iskandar (2023) examine the role of technology, capital investment, and human resource development in fostering economic growth. Their analysis, which uses partial least square structural equation modeling, presents mixed results on the direct impact of innovation technology on economic growth, suggesting that while technology plays a critical role, other factors, such as capital investment and human resources, also significantly contribute to growth outcomes. This finding indicates that achieving SDG 8.2 may require a more nuanced approach that not only focuses on technology but also ensures that human capital development and inclusive investment strategies are in place to capitalize on technological advancements fully.

Collectively, these studies underscore a positive association between innovation, technological upgrading, and economic growth, reinforcing the key principles of SDG 8.2. They also highlight the importance of institutional support and education systems in driving this innovation, particularly in developing countries. To further enhance the impact of technological innovations, a focus on high value-added and labor-intensive industries, particularly SMEs, could accelerate progress toward sustained and inclusive economic growth. The inclusion of these industries in technological upgrading strategies can ensure that the benefits of innovation reach broader sections of the economy, contributing to more equitable and sustained growth, as envisioned under SDG 8.

International trade and productivity

Firms engaged in exporting are often at the forefront of adopting upgraded technologies and driving innovation to remain competitive in global markets. Export-oriented firms typically demonstrate greater productivity, contributing directly to SDG 8, specifically subtarget 8.2, which empha-

sizes economic productivity through technological upgrades and innovation. The research grouped under this topic provides insights into the dynamics of international trade, firm productivity, and the broader economic implications of trade openness.

Building on this understanding, Giordano and Lopez-Garcia (2021) examine how firm heterogeneity influences the performance of exporting firms in the EU. Their study has revealed that new exporting firms tend to have higher productivity levels and pay higher wages than their non-exporting counterparts do, indicating that exposure to international markets incentivizes technological upgrades and innovation. Furthermore, they show that openness to international trade not only boosts firm-level productivity but also elevates aggregate productivity at the national level. This aligns closely with subtarget 8.2, as it highlights the role of trade openness in facilitating technological upgrading and promoting economic growth through innovation. Expanding on these themes, Sudan (2022) compares the performance of India and China, revealing divergent strategies in trade-led economic growth. While one country pursued an export-led growth model, the other focused on both domestic trade and foreign trade as twin engines of growth. This comparison underscores the importance of trade openness for driving economic productivity, yet it also reveals that simply opening an economy to trade is insufficient. The study emphasized that sustained trade reforms and the removal of trade barriers are essential for leveraging the full potential of international trade to increase productivity and growth. These insights directly contribute to the pursuit of subtarget 8.2, as they stress the need for a well-balanced approach to fostering both domestic innovation and global competitiveness through open and dynamic trade policies. Bruhn *et al*. (2019) further enrich this discussion by analyzing the productivity spillover effects of foreign direct investment (FDI). Their research shows that FDI can create a catch-up effect among domestic firms that utilize similar technology, leading to greater technological innovations and frontier shifts in production processes. However, the study also reveals that FDI does not consistently contribute to significant spillover effects when implemented in isolation, indicating that the policy framework surrounding FDI is crucial for maximizing its productivity benefits. This finding reinforces the idea that government policies should be oriented toward fostering an integrated approach to FDI and trade openness, ensuring that technological innovations benefit a wider range of firms and sectors.

The combined insights from these studies demonstrate a strong link between international trade, technological upgrades, and innovation, all of which are central to achieving SDG 8.2. While the positive relationships among trade openness, productivity, and innovation are well established, the research also highlights the importance of sustained policy reforms and the reduction of trade barriers to ensure that the benefits of global trade are fully realized. Governments must focus on crafting policies that promote sustainable development and productivity growth, ensuring that the gains from technological upgrades and trade-driven innovation are distributed equitably across industries and regions. By doing so, countries can achieve sustained, inclusive economic growth in line with the objectives of SDG 8.

Economic crisis and policy recommendations

The studies grouped under this topic examine the role of economic policies in mitigating the effects of crises and ensuring sustainable economic growth, aligning with SDG 8. Specifically, these studies contribute to understanding how economic policies can help countries navigate crises, sustain investments, and maintain employment, which are crucial for achieving subtarget 8.1 (sustaining per capita economic growth) and subtarget 8.5 (full and productive employment).

Kostiana *et al*. (2020) analyze how political instability impacts economic fluctuations, with the focus on Ukraine. The study emphasizes the importance of creating free trade zones with EU countries and reducing tariff and nontariff barriers to enhance economic stability during times of political uncertainty. By fostering international trade and opening markets, the study suggests that Ukraine can stabilize its economy and maintain growth despite political disruptions. This approach directly supports subtarget 8.1, as trade liberalization can act as a buffer, helping economies sustain growth even during periods of instability. Building on the theme of crisis response, Serohina and Petryshchenko (2021) examine the impact of the COVID-19 pandemic on the labor force composition. The pandemic forced many firms to close, resulting in widespread job losses and wage reductions. Others adapted by shifting to remote work or implementing quarantine measures with lower wages. The study highlights the emergence of a new normal, where some industries have permanently changed their modes of operation, whereas others are struggling to adapt. This shift underscores the challenges of sustaining economic activity during a global crisis, where

both employment and economic growth are severely impacted, posing significant setbacks to achieving SDG 8. The study stresses that not all sectors can adjust to such disruptions, leading to economic slowdowns that jeopardize progress toward sustainable development. Trenev (2018) shifted the focus to the organizational level, emphasizing the need for firms to create useful knowledge that can be integrated to improve performance, particularly in times of crisis. The study suggests that organizations must invest in training human capital enhancing employees' skill sets to integrate new knowledge and technologies, particularly in the digital economy. This strategy can help firms remain competitive and adapt to rapid changes, whether caused by technological advancements or external shocks such as war or pandemics. Trenev's insights support subtarget 8.5, as equipping the workforce with relevant skills ensures productive employment and helps sustain economic growth by maintaining firm-level performance.

These studies collectively highlight the critical role of adaptation and resilience in response to crises. Whether through trade liberalization, labor force reconfiguration, or organizational knowledge creation, the focus is on finding ways to sustain growth during times of disruption. However, as the research suggests, more work needs to be done to understand the full range of solutions to the challenges posed by crises such as war or pandemics. Further studies could provide a deeper understanding of the long-term impacts of these crises and offer new strategies for overcoming such disruptions. By doing so, countries can develop more effective policies to sustain growth and employment, thereby advancing the achievement of SDG 8 and moving toward a path toward sustainable economic growth.

COVID-19 impacts

This topic examines the economic impact of COVID-19 and its repercussions on macroeconomic performance, focusing on sustained economic growth and job creation in line with SDG 8. These studies highlight the severe disruptions caused by the pandemic and propose policy measures that can mitigate its effects, ultimately contributing to subtarget 8.1 (sustained per capita economic growth) and subtarget 8.5 (productive employment and decent work for all).

Tudorache and Nicolescu (2022) provide an analysis of the pandemic's impact on macroeconomic performance across EU countries. The study revealed that the health crisis led to a sharp decline in gross domestic

product (GDP) and rising unemployment rates. With respect to inflation, the study has revealed that the response varied across countries: some reduced prices due to a drop in demand for goods and services in the initial phase, whereas others saw price increases. In the second year of the pandemic, all EU countries faced high rates of inflation, which made it even more difficult to sustain economic growth. These findings underscore the importance of managing both inflation and unemployment during a crisis to prevent long-term economic stagnation. Such insights directly contribute to subtarget 8.1, as addressing inflationary pressures is key to ensuring steady economic growth during crises. Gagnon *et al.* (2023) expand the analysis by examining the pandemic's impact on real GDP across 90 countries for 2020 and 2021 via panel data analysis. Their study highlights the disproportionate economic impact of the pandemic on emerging economies and developing countries, where the negative effects of lockdowns were more severe. The study also highlights the vulnerability of countries that are deeply integrated into global trade networks, as the pandemic disrupted international trade flows, exacerbating the negative spillover effects on economic output. The findings point to the need for stronger global coordination and support mechanisms for developing countries, especially during global crises, aligning with subtarget 8.2, which focuses on enhancing economic productivity through greater diversification and technological upgrading.

Onyechege *et al.* (2022) explored the indirect impact of COVID-19 on economic activity through the lens of the industrial production index. These findings align with other studies showing a significant negative impact on economic activity, with increased unemployment, reduced wages, and a substantial decline in production levels. Importantly, this study highlights the adverse effects on small and medium-sized enterprises (SMEs), which are among the worst hit by the pandemic. The authors recommend that governments prioritize financial support for SMEs and implement training programs to equip the workforce with the skills needed to adapt to the digitized ways of working in the post-pandemic world. This approach not only supports job creation but also ensures that economic recovery is inclusive, aligning with subtarget 8.5.

Collectively, these findings enhance our understanding of the pandemic's impact on global economic activities and suggest key policy recommendations to help mitigate these effects. Governments are encouraged to focus on effective inflation management, stimulating demand, increasing

financial support to affected sectors — especially SMEs — and upskilling the labor force to adapt to new work environments. By implementing these measures, countries can pave the way for sustained economic growth and productive employment, both of which are central to achieving SDG 8. These policy recommendations, if followed, could help governments restore economic activity and employment to prepandemic levels, ensuring a pathway to sustained and inclusive growth in the postpandemic recovery period.

Tourism for economic growth

The tourism sector plays a critical role in economic growth, contributing to job creation, foreign exchange earnings, and investments across various sectors, including infrastructure development. As such, the promotion of beneficial and sustainable tourism, a key focus of SDG 8 under subtarget 8.9, is essential for fostering inclusive and sustainable economic growth. Sustainable tourism practices, in particular, have become increasingly important as they attract environmentally conscious tourists, which leads to higher revenues and improves the destination's global reputation.

In their study, Nguyen *et al*. (2023) explored the relationship between tourism and the shadow economy in 129 economies between 1996 and 2015. Their findings suggest that inbound tourism plays a positive role in reducing the size of the shadow economy by bringing formal economic activities into the spotlight. However, the expansion of outbound tourism is associated with an increase in underground economic activities. This effect has grown over time, with the influence of tourism on the shadow economy becoming more significant, especially in high- and low-income countries. This study highlights how tourism can act as a tool not only for economic growth but also for formalizing informal sectors, thereby contributing to subtarget 8.9 by ensuring that tourism development leads to broader socioeconomic benefits. Obi and Ogbeide (2022) provide additional insights by investigating the relationship between currency rates and tourism growth in the U.S. They reported that tourism increases during periods of economic weakness, when the U.S. dollar is weaker relative to other currencies, making the U.S. an attractive destination for foreign tourists. These dynamic underscores the importance of exchange rate policies in influencing tourism flows and promoting inbound travel during times of economic downturns. By aligning tourism promotion strategies with peri-

ods of favorable exchange rates, governments can capitalize on the opportunity to boost foreign exchange earnings and investment in the tourism sector, contributing to sustained economic growth, a key element of SDG 8.9. By building on these themes, Shizhao and Mingying (2023) analyze the impact of the tourism sector on economic growth via the example of China. Their study emphasized that the growth of tourism businesses is vital for countries where the sector significantly contributes to national economic performance. A decline in the growth of the tourism industry could have wide-reaching implications, particularly for nations heavily reliant on tourism revenues. This study provides a theoretical basis for the urgent need to continuously improve the tourism business environment by enhancing infrastructure, marketing strategies, and sustainable tourism practices to maintain steady growth in the sector. These efforts ensure that the economic benefits of tourism are sustained over time, aligning with the broader objectives of SDG 8.9.

The results of these studies underscore the multifaceted role of tourism in driving economic growth, formalizing the economy, and promoting sustainable development. This research highlights the importance of targeted policies that not only promote tourism, but also ensure that it contributes to sustainable economic growth and social welfare. By focusing on sustainable tourism practices and enhancing the business environment for tourism-related industries, countries can better leverage the sector's potential to meet the SDG 8.9 goals of beneficial and sustainable tourism development.

Labor market and employment

The labor market and economic growth are fundamentally interconnected, with a strong and expanding economy typically leading to higher levels of employment, better wages, and improved job opportunities. This relationship is crucial for achieving several subtargets of SDG 8, particularly subtarget 8.3 (promote policies to support job creation and growing enterprises), subtarget 8.5 (full employment and decent work with equal pay), subtarget 8.6 (protect youth employment, education, and training), subtarget 8.7 (end modern slavery, trafficking, and child labor), and subtarget 8.8 (protect labor rights and promote safe working environments). The studies discussed under this topic provide insights into how firms, governments,

and economic conditions shape the labor market and its contribution to sustained economic growth.

Vallanti and Gianfreda (2021) offer an in-depth analysis of how firms in the formal sector respond to stricter labor market regulations. Their study has revealed that compliance with labor laws often drives firms to resort to undeclared employment to avoid the tax and regulatory burdens that accompany formal employment. This behavior is especially prevalent in small firms, which exploit geographical labor heterogeneity to make more flexible hiring and firing decisions. While these practices may allow firms to navigate strict regulations, they undermine the objectives of subtarget 8.5, which calls for decent work and equal pay for all workers. Furthermore, this study highlights the need for balanced policies that ensure that firms comply with labor regulations without incentivizing informal employment — a critical step in protecting labor rights and promoting a safe and formal working environment, as outlined in subtarget 8.8. In a related study, Durand-Lasserve (2022) examines the impact of foreign worker quotas and labor subsidies on domestic employment in countries with a significant expatriate workforce and substantial public-sector wage expenditures. The study focuses on Saudi Arabia and reveals that when limits are placed on the number of foreign workers, the effectiveness of labor subsidies on local employment is diminished because of the presence of the public sector. The study further demonstrates that subsidies for local labor have a greater impact on employment in the public sector than in the private sector. These findings are important for subtarget 8.3, which emphasizes policies supporting job creation and enterprise growth, particularly in the private sector. By understanding the dynamics between foreign labor and domestic employment, governments can develop more effective labor policies that prioritize job opportunities for nationals without sacrificing economic growth. Finally, Dossche *et al*. (2023) explore the relationship between labor productivity and employment volatility in OECD countries. Their study suggests that in countries with lower employment volatility, procyclical labor productivity is linked to greater labor market frictions. This implies that the deregulation of labor markets can reduce employment volatility and enhance labor productivity, but it also introduces complexities related to the balance between job security and flexibility. These insights are crucial for subtarget 8.5, which focuses on achieving full and productive employment while maintaining decent work conditions. The study also aligns with subtarget 8.8, as it underscores the need to strike

a balance between promoting labor market flexibility and protecting workers' rights to ensure that productivity gains do not come at the expense of worker welfare.

Together, these studies underscore the importance of comprehensive labor market policies that promote job creation, ensure decent work, and protect labor rights. They highlight the need for a balanced approach that fosters employment growth while addressing the challenges of labor market regulations, foreign worker quotas, and productivity fluctuations. By implementing these policies, governments can contribute to sustained economic growth and the achievement of the SDG 8 subgoals related to employment, decent work, and labor market protection.

Gender wage gap

The gender wage gap remains a significant issue in almost every economy and is characterized by disparities in pay between men and women, despite equal qualifications or work contributions. This issue aligns closely with SDG 8 (Decent Work and Economic Growth), particularly subtarget 8.5, which aims for full employment and decent work with equal pay for all. The studies grouped under this topic provide insights into the barriers women face in achieving equal pay, such as sticky floors and glass ceilings, which prevent advancement even when women attain certain levels in their careers.

Dumauli (2019) explores the gender wage gap in Japan, where working mothers experience a 'child wage penalty.' The study has revealed that women who have children see a decrease in wages, regardless of the timing of childbirth, which is a significant barrier to achieving equal pay. In contrast to expectations, delaying childbirth does not seem to result in higher lifetime earnings for women in Japan, suggesting that focusing solely on career timing may not be an effective solution for overcoming the wage gap. This finding emphasizes the need for policies that support working mothers, such as childcare support and family-friendly workplace policies, to promote equal pay and career advancement, in line with subtarget 8.5. Harman and Bartůsková (2023) extend the analysis of the gender pay gap to Visegrád Group countries, where their findings indicate that observable factors account for approximately 20% of the gender wage gap. Despite women being equally qualified and capable of performing the same jobs as men, they are often relegated to low-paying jobs and lower positions,

which limits their earning potential. Managerial positions, in particular, seem elusive for women, contributing to the glass ceiling effect. The persistence of these patterns highlights the need for targeted interventions that encourage the advancement of women into higher-paying and leadership roles, ensuring that they receive equal pay for equal work, in alignment with subtarget 8.5. Finally, Bremmer and Kesselring (2018) examine how changes in social security policies can impact labor market participation for older women, regardless of their marital status, ethnicity, or race. The study shows that the elimination of the employment tax for individuals reaching their normal retirement age led to an increase in labor force participation for women in that age range. This finding underscores the importance of policy measures that address the specific needs of women at different stages of their careers, particularly older women, who may face additional barriers to equal pay. By encouraging longer participation in the labor market and reducing tax-related disincentives, these policies help narrow the gender wage gap and promote economic equality, supporting the broader goals of SDG 8.5.

The findings from these studies highlight the structural barriers that contribute to the gender wage gap and the policy interventions needed to overcome them. By addressing issues such as the child wage penalty, the glass ceiling, and the challenges faced by older women in the workforce, governments can take meaningful steps toward achieving equal pay and gender equality in the labor market. These measures are essential for fulfilling the goals of SDG 8.5, ensuring that all individuals, regardless of gender, can access decent work and receive equal compensation for their contributions to the economy.

Migration, wage growth, and poverty

Human migration, driven by economic, social, and geographical factors, has long been a topic of interest because of its profound impact on economic growth and labor market dynamics. Migration influences job creation, resource efficiency, and labor productivity, which aligns with SDG 8 (Decent Work and Economic Growth), particularly subtarget 8.3 (promoting policies to support job creation and growing enterprises) and subtarget 8.4 (improving resource efficiency in consumption and production). The studies discussed under this theme provide nuanced insights into the complex relationships among migration, labor markets, and economic growth.

Ma (2022) challenges the common perception of highly skilled labor migration to the U.S., observing that while there has been a significant influx of skilled immigrants over the past few decades, these workers do not always act as substitutes for native workers. In some cases, skilled immigrants complement native workers, particularly in sectors such as computer science and electronics engineering, where the presence of skilled immigrants has a limited impact on native professionals with similar skills. This highlights the heterogeneous effects of migration across different occupations. The findings suggest that while skilled migration can enhance innovation and labor productivity, its effects vary depending on the specific labor market dynamics. This directly supports subtarget 8.3, which aims to foster job creation and enterprise growth by leveraging the talents of both native and immigrant workers in different sectors of the economy. Similarly, Ege *et al*. (2022) examined the effects of the Syrian migrant influx on the Turkish labor market, specifically focusing on the impact in both the formal and informal sectors. The study reveals that in formal sectors, such as manufacturing, the impact of Syrian migrants on native workers is relatively modest. However, in informal sectors, particularly among marginalized groups, such as temporary and part-time workers, the adverse effects are stronger, mirroring trends in industries such as agriculture and construction. This finding underscores the challenges faced by vulnerable native workers in adjusting to the increased competition from migrant labor, potentially leading to increased poverty among these groups. These dynamics highlight the importance of inclusive labor policies that protect the most vulnerable workers while maximizing the economic benefits of migration, contributing to SDG 8 by supporting job creation and ensuring that migration leads to inclusive economic growth. Bijwaard and Wahba (2019) take a different approach by examining the complexities of immigrant wage growth in the host country. The study suggests that accurately estimating wage growth among immigrants requires considering both selective outmigration and labor market selectivity. Without accounting for these factors, wage growth estimates can either underestimate or overestimate the true economic contribution of immigrants. This finding is crucial for understanding how migration can contribute to economic growth by addressing labor demand and enhancing labor productivity. When effectively managed, migration can be a key driver of economic growth by introducing new skills, knowledge, and innovation into the host economy, which is

central to SDG 8.4 — improving resource efficiency in consumption and production.

Overall, these studies illustrate the complex relationship between migration and economic growth, with both positive and negative effects depending on the sector and labor market conditions. While migration can bring valuable skills and innovation to the economy, it also raises challenges in managing the distribution of labor market benefits and protecting vulnerable native workers. To align with the goals of SDG 8, governments should focus on creating policies that promote job creation, improve labor market efficiency, and ensure that migration contributes to sustainable and inclusive economic growth.

Sustainable agriculture and productivity

The agricultural sector is a cornerstone of economic growth, particularly in developing countries, where it serves as a source of raw materials for various industries and drives economic development. As such, the push for green and sustainable agriculture has gained significant momentum among policymakers and researchers. This shift is directly related to SDG 8, especially its focus on sustainable economic growth, which seeks to ensure that economic progress is both inclusive and environmentally sustainable.

Myeki *et al*. (2023) focused on the green total factor productivity (GATFP) growth of 49 African nations between 2000 and 2019, underscoring the importance of incorporating sustainability metrics into agricultural productivity measures. This study highlights how conventional measures of total factor productivity (TFP) often overestimate agricultural growth by disregarding emissions. By factoring in environmental impacts, the authors present a more accurate picture of agricultural productivity and emphasize the need for policy measures that address environmental concerns. This aligns with SDG 8 by ensuring that growth in agriculture does not come at the expense of long-term sustainability, promoting sustainable economic growth through environmentally responsible practices. Building on this, Gjokutaj (2021) offers insights from the Albanian economy, focusing on the well-being of farmers and agricultural laborers. The study indicates that while taxing income or land can drive structural changes in agriculture, taxing specific activities or resources may have direct implications for sustainability. Effective interventions from both central and local governments, particularly through regulatory and tax policies, are essential for

achieving the right balance between fostering economic growth and promoting sustainable agricultural practices. This perspective is essential for SDG 8, as it ties economic policies to the socioeconomic welfare of those working in agriculture, ensuring that growth benefits all stakeholders equitably. Finally, Hoa (2021) emphasized the role of human capital development in agricultural productivity, particularly in Vietnam. This study highlights that improving human capital, including through education, training, and the adoption of modern techniques, is key to increasing productivity in agriculture. For developing countries, investing in human capital can drive significant advancements in agricultural efficiency, fostering sustainable growth in line with SDG 8. As agriculture modernizes, empowering laborers with the skills to work more efficiently and sustainably is critical for achieving long-term resilience in the sector.

Together, these studies illustrate the multifaceted role that green and sustainable agriculture can play in driving economic growth while safeguarding environmental resources. They collectively emphasize the importance of adopting sustainable agricultural practices, developing effective policies, and investing in human capital to ensure that agricultural productivity contributes to both economic development and environmental sustainability. In this way, the agricultural sector can align with SDG 8 by fostering sustainable economic growth that benefits both current and future generations.

Green technology and productivity

Green economic growth seeks to harmonize economic growth with environmental sustainability, create jobs, drive innovation in sectors such as renewable energy, waste management, and green transportation, and reduce the ecological footprint. By transitioning to a green economy, countries can enhance the well-being of their citizens and ensure the planet's long-term health for future generations. This concept directly supports SDG 8, particularly its focus on sustainable economic growth that promotes environmental sustainability and inclusive prosperity.

Wang *et al*. (2023) delve into the interlinkage between green total factor productivity (GTFP) and economic growth, highlighting how a nation's economic goals impact the growth of green technologies and efficiency. The study reveals that focusing primarily on economic objectives can have a negative effect on green patent innovation. This suggests that policies

aimed at accelerating economic growth may inadvertently stifle innovation in environmentally friendly technologies, leading to stagnation or even regression in green technology development. Such trends inhibit the growth of green technology and slow the transition toward a more sustainable economy, emphasizing the need for policies that balance economic and environmental goals. The findings align with SDG 8, as sustainable economic growth depends on fostering innovation that supports both economic development and environmental protection. Similarly, Islam (2021) highlights the dual impact of economic growth on society and the environment, noting that while economic growth improves living conditions, it also adds to the burden on the ecosystem, primarily through environmental pollution. The author suggested that policymakers should prioritize renewable energy as a central component of the energy mix and promote pollution-neutral techniques to mitigate environmental degradation. By integrating renewable energy sources, countries can reduce their carbon footprint and create a more sustainable energy framework, contributing to long-term environmental well-being. This aligns with SDG 8 by ensuring that economic growth is sustainable and supports the health of the environment over the long term. Safi *et al*. (2023) examine the interplay between eco-friendly innovations and international trade, focusing on energy productivity and consumption-based carbon emissions. Their study suggested that promoting eco-innovative initiatives and sustainable exports can significantly reduce carbon emissions while simultaneously fostering economic growth. By increasing energy productivity and promoting sustainable trade practices, policymakers can help reduce the environmental impact of economic activities and advance green economic growth. The study emphasized that integrating sustainability into international trade and energy policies is essential for achieving SDG 8 by fostering innovation and ensuring that economic growth is environmentally sustainable.

The combined insights from these studies underscore the importance of aligning economic policies with green growth strategies to ensure that the pursuit of economic prosperity does not come at the expense of the environment. Promoting green technologies, renewable energy, and eco-innovations is essential for balancing economic development with environmental sustainability. By integrating these approaches, countries can transition toward a green economy that fosters sustainable economic growth, supports job creation, and preserves natural resources for future generations, in line with the broader objectives of SDG 8.

Digital economy and green transformation

The rise of the digital economy has been a major driver of economic growth in recent years, enhancing productivity, fostering innovation, and improving efficiency across multiple sectors. By generating novel employment opportunities and transforming conventional industries, the digital economy has contributed to unprecedented levels of economic development. This transformation is closely aligned with SDG 8, particularly in promoting sustainable economic growth through the integration of digital technologies and fostering a more inclusive economy.

Smirnov *et al*. (2019) explore the challenges and opportunities presented by the third wave of capitalism, characterized by digital transformation and the discontinuity it brings to global business. The study highlights how emerging markets are being reshaped by consumer influence, the shift toward hyperdrive business models, and the move away from traditional hierarchical decision-making toward a more interconnected and market-oriented network structure. These shifts in the business landscape demand reliable knowledge and innovation to remain competitive. The paper underscores how the digital economy's transformative potential can propel growth while simultaneously requiring businesses and policymakers to adapt to new economic realities. This is in line with SDG 8, as digital transformation promotes productivity, job creation, and economic growth. Kong and Li (2022) further discuss the role of the digital economy in green economic transformation within China. The study has revealed that the development of the digital economy plays a critical role in promoting green economic efficiency, highlighting how digital technologies can be leveraged to reduce environmental impact while enhancing economic growth. This finding supports the green economy objectives of SDG 8 by showing that economic growth can be achieved in an environmentally sustainable way. The study illustrates that digital innovation can drive efficiency in industries, reducing resource consumption and emissions while maintaining productivity, an essential element of sustainable economic growth. Similarly, Rehman and Nunziante (2023) provide evidence of the positive relationship between the digital economy and green economic efficiency, emphasizing the spatial spillover effects of digital transformation. As regions develop their digital economies, green economic practices and technologies are spread to neighboring areas, leading to widespread improvements in economic and environmental performance. This spatial effect highlights the

potential for digital infrastructure investment to not only increase productivity but also contribute to a greener economy. The study argues that public policies should prioritize digital infrastructure investment and digital literacy programs, particularly in regions lagging, to reduce digital disparities and enhance overall factor productivity. This approach fosters social and economic unity, aligning with SDG 8 by promoting inclusive growth and ensuring that the benefits of the digital economy are widely distributed.

Recommendations for policymakers and researchers

Collectively, the findings from these studies highlight the transformative power of the digital economy in driving economic growth and green transformation. By fostering innovation, improving efficiency, and promoting sustainability, the digital economy plays a vital role in advancing the goals of SDG 8. Governments and policymakers should focus on investing in digital infrastructure, promoting digital literacy, and ensuring that sustainable practices are integrated into the development of the digital economy to achieve inclusive and environmentally sustainable economic growth.

To advance SDG 8, policymakers must implement strategies that drive sustainable and inclusive economic growth while balancing environmental and social objectives. Employment policies should focus on job creation in high-growth sectors such as renewable energy, digital technology, and sustainable tourism (SDG 8.2), alongside wage transparency and labor rights enforcement to reduce income disparities (SDG 8.5) (Hariram *et al*., 2023). As net-zero commitments shape economic priorities, integrating carbon credits, climate finance mechanisms, and nature-based solutions into job creation strategies can support green employment while ensuring economic resilience (SDG 8.4). Governments must incentivize green growth by incorporating sustainability metrics such as green GDP and circular economy principles (SDG 12.2), while assisting businesses in adopting eco-friendly innovations (Islam, 2021; Wang *et al*., 2023). Expanding financial inclusion, particularly for MSMEs in underserved regions, remains a priority (SDG 8.3), with sustainable banking and climate finance instruments such as green bonds and transition finance playing a role in mobilizing capital for enterprises focused on low-carbon development (Zehri *et al*., 2024). Trade policies should also be revisited to facilitate carbon pricing adjustments, green supply chain integration, and greater participation in

global value chains that align with sustainable trade practices (SDG 17.11) (Bruhn *et al*., 2019). Additionally, adaptive labor market policies, including unemployment insurance and job retention programs, can protect workers from economic downturns (SDG 8.6), ensuring social safety nets and resilience (Serohina & Petryshchenko, 2021).

Collaboration between academia, government, and industry is critical in addressing real-world challenges associated with achieving SDG 8. Researchers and scholars should focus on multidisciplinary research exploring the intersections of social justice, sustainability, and economic development, particularly in the context of climate finance and net-zero transitions (SDG 13.2). The long-term impacts of economic policies on labor markets, gender pay disparities, and job security — especially in emerging economies — require further empirical study (SDG 5.4) (Dumauli, 2019; Harman & Bartůsková, 2023). Research should also assess the effects of automation and digital transformation on employment patterns (SDG 8.2), along with the reskilling needs for workers in decarbonizing industries (SDG 4.4) (Sukharev, 2016; Mohamed *et al*., 2022). Additionally, understanding the role of sustainable finance, including carbon trading mechanisms and blended finance models, in supporting employment and enterprise growth (SDG 8.10) will be crucial in designing inclusive economic policies (Kola *et al*., 2019).

Our study is not without limitations. In the context of the PRISMA framework, potential biases may arise in the selection of literature from a specific database. To address this issue, we used the Dimensions database, which is widely used for scientometric studies (Singh *et al*., 2021). With respect to BERT topic modeling, we recognize its ability to handle large datasets and uncover key themes. By extracting coherent topic representations grounded in the semantic similarity of words and phrases within textual data, topic modeling reduces the introduction of human biases in topic classification, thereby improving the objectivity and reliability of the findings (Kimura, 2024). However, topic modeling algorithms can be influenced by the quality of the input data and the assumptions embedded in their design. After the automated search, the authors conducted a manual review of a subset of the final set of identified papers to assess their relevance and authenticity. The subset was based on 50 highly cited papers from each year. We believe that papers that are frequently cited within the community are more likely to be accurately classified. The authors reviewed the introduction, methodology, and results sections to confirm the

relevance and authenticity of the papers to SDG 8. Furthermore, the interconnections between different SDGs can be complex, and our analysis acknowledges the limitations in capturing them through a specific SDG mapping approach (Raman *et al*., 2023b).

Conclusions

In conclusion, this study provides a comprehensive map of SDG 8 and its subtargets, exploring its intricate relationships with other SDGs (RQ1). By analyzing the impact of sustainable economic growth on goals such as poverty alleviation (SDG 1), quality education (SDG 4), industrial innovation (SDG 9), and climate action (SDG 13), this study highlights the central role of SDG 8 in fostering inclusive growth, decent work, and environmental sustainability. The findings underscore the need for balanced policies that promote economic progress while addressing inequalities and supporting the transition to a green economy, thus advancing the broader objectives of the 2030 Agenda. Second, using the BERTopic method, this study synthesizes themes and emerging trends related to SDG 8 and its subtargets (RQ2). The analysis of 16 distinct topics highlights the multifaceted nature of sustainable economic growth and its extensive connections to other SDGs. Topics such as employment creation, green economic transformation, gender wage gaps, and the impact of public debt on growth reveal the broad scope of SDG 8, which encompasses a wide range of social, economic, and environmental dimensions. The study emphasized the critical role of decent work for all (SDG 8.5), youth employment and training (SDG 8.6), and the need to protect labor rights and promote safe work environments (SDG 8.8). Furthermore, trends in green innovation and the digital economy illustrate the growing importance of sustainable industrialization (SDG 8.2) and resource efficiency (SDG 8.4) in advancing long-term economic stability. The findings reveal that economic growth must be inclusive, promoting social equity and poverty reduction while aligning with environmental goals such as climate action.

A key insight from this study is the identification of sustainability metrics, such as green GDP and circular economy principles, as critical components of SDG 8's success. While previous research has emphasized economic growth, this study underscores the importance of incorporating environmental accountability into economic models (Wang *et al*., 2023). Addi-

tionally, the study provides fresh insights into the role of digital transformation and financial inclusion in enhancing economic participation, particularly in developing economies (Kong & Li, 2022). The study also differentiates itself by examining the resilience of economies to crises such as the COVID-19 pandemic, offering policy recommendations for mitigating employment shocks and fostering long-term sustainability (Serohina & Petryshchenko, 2021). By bridging gaps in the existing literature, this study not only presents a more integrative framework for understanding SDG 8 but also offers forward-looking strategies for policymakers and researchers. The findings highlight the need for adaptive labor market policies, sustainable banking practices, and digital infrastructure investments to ensure that economic growth is inclusive, resilient, and environmentally sustainable. Future research should build upon these insights by further exploring the intersection of economic policies, technological advancements, and sustainability to refine strategies for achieving SDG 8 in a rapidly evolving global economy.

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This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement

All data generated or analyzed are included in the published article. The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation. The raw anonymized data can be provided by emailing the primary author.

Author contributions

All listed authors have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the source analysis.

Conflict of interest statement

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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Annex

Table 1. Review of studies on economic growth and sustainable development

Authors	Focus of the research	Methodology
Pereira *et al.* (2019)	Investigating empirical aspects of decent work	Systematic review from 2013 to 2017
Makarenko *et al.* (2021)	Evaluating the intersection of SDG 8 and SDG 4 in a knowledge economy	Meta-analysis approach from 2015 to 2021
Richards *et al.* (2022)	Understanding the economic impact of COVID-19	Literature review of data from January 2020 to February 2021
Tomeczek (2022)	Examining the functioning and influence of keiretsu networks in Japan	Bibliometric approach covering the years 1990 to 2020.
Desalegn *et al.* (2022)	Investigating economic responses to COVID-19 and geopolitical crises	Combined bibliometric approach and panel data estimation for the years 2019 to 2022
Wang & Cheung (2023)	Examining decent work in the tourism and hospitality sectors	Systematic review and meta-analysis of literature covering the years 1999 to 2023.
Nourafkan & Tanova, (2023)	Understanding employee perspectives on decent work	Systematic review methodology to examine studies from 2017 to 2021.
Beltozar-Clemente *et al.* (2023)	Assessing the role of 5G networks in advancing SDG 8	Systematic literature review drawing from Scopus, IEEExplore, and ScienceDirect for the years 2016 to 2021.
Hötte *et al.* (2023)	Investigating the impact of technological change on job creation	Systematic literature review from 1988 to 2021
Moghadasi (2023)	Analyzing the effects of global open data policies on SMEs	PRISMA methodology to synthesize findings from six case studies
Chou *et al.* (2023)	Assessing the relationship between renewable energy and economic growth	Bibliometric analysis approach from the Web of Science covering 1990 to 2023

Table 2. Major topics, key terms in topics and authors

Topic	Topic Name	Key terms in topics	Authors
1	Monetary policy stability	inflation, model, policy, monetary, financial, rate, shocks, gdp, growth, real, economy, monetary policy, economic, paper, data, macroeconomic, rates, uncertainty, forecasts, models	Clarida *et al.* (2019) Dery & Serletis (2021) Proaño *et al.* (2020)
2	Sustainable banking	financial, banks, bank, banking, growth, credit, study, economic, islamic, sector, economic growth, development, data, effect, rate, significant, variables, impact, results, gdp	Kola *et al.* (2019) Lalon *et al.* (2023) Liyanagamage *et al.* (2021)

Table 2. Continued

Topic	Topic Name	Key terms in topics	Authors
3	Inflation, Interest rate and unemployment	indonesia, economic growth, economic, growth, effect, data, study, rate, significant, inflation, province, unemployment, poverty, research, significant effect, used, investment, analysis, results, variable	Mahrizal & Maidiansyah, (2022) Pasaribu *et al.* (2023) Handriyani *et al.* (2018)
4	Technology and innovation	growth, productivity, economic, capital, countries, innovation, labor, economy, development, economic growth, model, paper, firms, level, knowledge, human, gdp, analysis, results, labor	Sukharev (2016) Mohamed *et al.* (2022) Sugiarto & Iskandar (2023)
5	International trade and productivity	trade, productivity, growth, firms, China, economic, export, countries, firm, manufacturing, paper, labor, exports, economy, effects, foreign, effect, level, results, data	Giordano & Lopez-Garcia (2021) Sudan (2022) Bruhn *et al.* (2019)
6	Economic crisis and policy recommendations	economic, Ukraine, economy, Russian, development, Russia, state, growth, article, labor, financial, market, indicators, analysis, level, main, national, policy, country, regions	Kostiana *et al.* (2020) Serohina & Petryshchenko (2021) Trenev (2018)
7	COVID-19 impacts	pandemic, covid, covid 19, 19, economic, global, 19 pandemic, economy, 2020, crisis, growth, gdp, impact, world, countries, unemployment, measures, market, trade, employment	Tudorache & Nicolescu (2022) Gagnon *et al.* (2023) Onyechege *et al.* (2022)
8	Tourism for economic growth	tourism, economic, growth, tourist, economic growth, tourists, development, tourism sector, study, sector, tourism industry, tourism development, results, industry, impact, countries, gdp, model, long, causality	Nguyen *et al.* , (2023) Obi & Ogbeide, (2022) Shizhao & Mingying ,(2023)
9	Labor market and employment	unemployment, labor, workers, wage, employment, market, job, labor, model, labor market, firms, wages, productivity, paper, effects, labor market, search, data, work, tax	Vallanti & Gianfreda (2021) Durand-Lasserve (2022) Dossche *et al.* (2023)
10	Gender wage gap	employment, labor, market, labor, women, workers, gender, unemployment, youth, age, health, job, labor market, labor market, population, work, education, wage, effects, data	Dumauli (2019) Harman & Bartůsková (2023) Bremmer & Kesselring (2018)

Table 2. Continued

Topic	Topic Name	Key terms in topics	Authors
11	Migration, wage growth and poverty	migration, workers, labor, migrants, employment, migrant, market, immigrants, local, labor, labor market, urban, effects, immigration, job, unemployment, wage, paper, using, effect	Bijwaard & Wahba (2019) Aksu *et al.* (2022) Ma (2020)
13	Green technology and productivity	energy, green, environmental, economic, growth, development, emissions, sustainable, economic growth, productivity, economy, gdp, carbon, consumption, China, co2, study, renewable, countries, sustainability	Wang *et al.* (2023) Islam (2021) Safi *et al.* (2023)
14	Digital economy and green transformation	digital, ict, digital economy, economy, development, growth, economic, internet, technology, labor, productivity, information, technologies, impact, economic growth, countries, automation, digitalization, data, employment	Smirnov *et al.* (2019) Kong & Li's (2022) Rehman & Nunziante (2023)

Figure 1. Study design

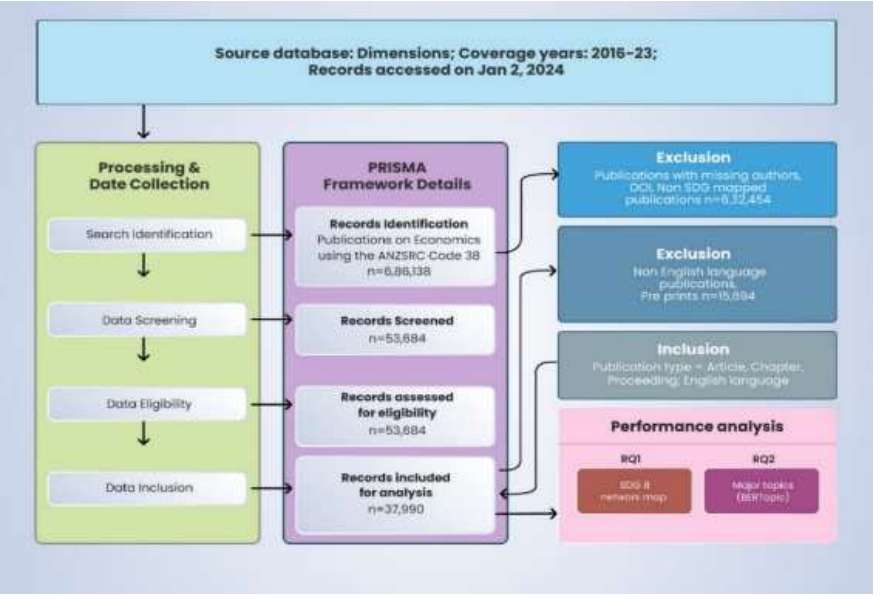

Figure 2. SDG 8 and its subtargets

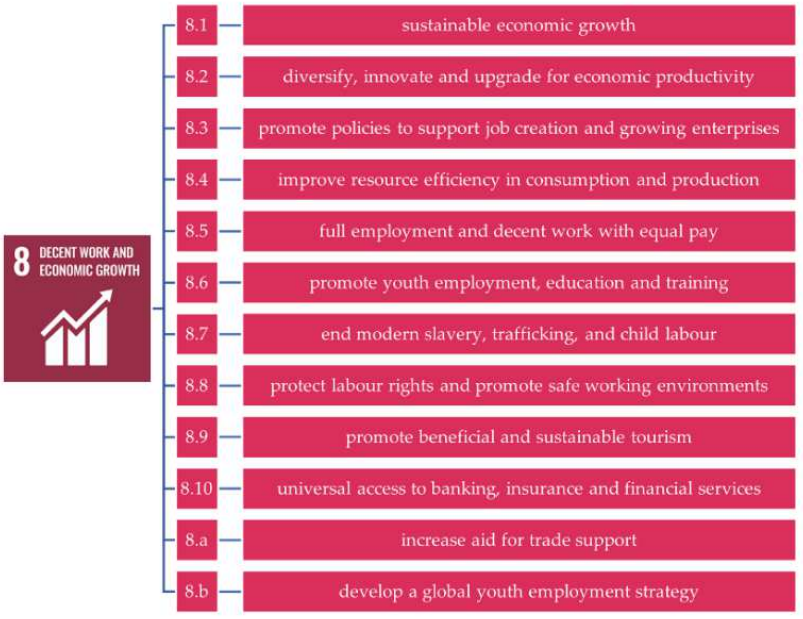

Figure 3. SDG 8 network map