

Resilience after COVID-19: A Global Review of Recovery Strategies and their impact on Demographic and Economic Sectors

Resilencja po COVID-19: globalny przegląd strategii odbudowy i ich wpływu na sektory demograficzne i gospodarcze

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Abstract

The coronavirus (COVID-19) pandemic has significantly disrupted the global economy. Understanding its impact on various economic, demographic, and social sectors during the economic recovery phase is crucial, particularly for governments that are attempting to implement post-pandemic public policies. This review aims to summarize and analyze post-COVID-19 economic recovery strategies, focusing on prioritized sectors, the demographic groups most affected, and the existing research gaps, particularly in relation to long-term socioeconomic impacts. Studies published between January 2020 and May 2024 that addressed post-pandemic recovery strategies were included in the review.

Key words: post-pandemic economic recovery, economic resilience, economic sectors, demographic impacts, impact on women

Streszczenie

Pandemia koronawirusa (COVID-19) znacząco zakłóciła gospodarkę światową. Zrozumienie jej wpływu na różne sektory ekonomiczne, demograficzne i społeczne w fazie ożywienia gospodarczego po pandemii ma kluczowe znaczenie, szczególnie dla rządów, które próbują wdrożyć polityki publiczne po pandemii. Niniejszy przegląd ma na celu podsumowanie i analizę strategii ożywienia gospodarczego po COVID-19, skupiając się na priorytetowych sektorach, najbardziej dotkniętych grupach demograficznych i istniejących lukach badawczych, w szczególności w odniesieniu do długoterminowych skutków społeczno-ekonomicznych. W przeglądzie uwzględniono badania opublikowane między styczniem 2020 r. a majem 2024 r., które dotyczyły strategii ożywienia gospodarczego po pandemii.

Słowa kluczowe: odbudowa gospodarcza po pandemii, resilencja ekonomiczna, sektory gospodarki, skutki demograficzne, wpływ na kobiety

1. Introduction

The COVID-19 pandemic has drastically altered the global landscape, wreaking chaos, and confusion in many economic sectors as well as the already-affected work environment (Ali et al., 2022). Countries have begun to plan the process of economic recovery and activation, which has caused significant changes in job trends and work dynamics (Varona et al., 2021). Because of this constant dynamic, knowledge of these changes is crucial for all

parties involved, particularly the scientific community and those in positions of authority. New potential for transformation arises as nations and organizations move beyond the first shock of the crisis's magnitude to recovery plans. The *McKinsey Institute*, which monitors global economic trends, claims that COVID-19 has brought discussions about the future of work into the present and highlights the need to adopt a long-term strategy that not only builds on traditional models but also develops strategies to increase resilience against future crises (Hite et al., 2020). At least in part, the recent surge in interest in resilience can be attributed to reactions to extreme occurrences and shocks that have prompted changes in public policy. The greater frequency of economic crises in recent decades, as well as their severity in economic and social terms, has motivated the analysis of factors that allow economies to adapt to economic shocks. In particular, the literature documents elements related to macroeconomic resilience (Alessi et al., 2020).

This has led to a range of adverse effects including increased global unemployment, workplace discrimination, harassment, and a surge in mental health issues among workers (Agba et al., 2020). The pandemic has highlighted shortcomings in occupational safety and health as well as a lack of social presence due to remote work (Agba et al., 2020; Karl et al., 2022). Despite these challenges, the pandemic has accelerated the adoption of teleworking and flexible work schedules, offering some benefits in terms of flexibility and work-life balance. Moreover, heightened risks to worker health have prompted greater emphasis on health awareness and safety campaigns in the workplace. Although slower economic recovery following COVID-19 is anticipated, it will leave society and the workplace with new norms and practices, lessons to be learned, and adjustments to be made, not to prevent future pandemics but to more accurately manage them calmly and transparently (Jayeoba, 2020).

Energy is another important factor that must be considered. Energy is a critical factor in production, which is fundamental to the global economy, and economic growth is closely linked to energy consumption. Previous studies have documented this relationship (Goswami et al., 2020; Li et al., 2021; Baky Haskuee et al., 2023). During the COVID-19 pandemic, global energy consumption and pollution emissions decreased. With the International Monetary Fund (IMF) predicting economic recovery in the USA by 2022, a corresponding environmental risk is associated with this recovery. While Japan's response to these shocks is significant, the UK's response is expected to be moderate (Baky Haskuee et al., 2023). Current economic recovery plans focus on economic growth and employment creation, and often overlook energy efficiency. This oversight risks a retaliatory rebound in carbon emissions as in the post-2008 financial crisis scenario. To prevent this, it is essential to incorporate energy efficiency into economic recovery plans (Li et al., 2021). Furthermore, ecological restoration offers a sustainable approach for economic reactivation, restoration of degraded landscapes, and provision of lasting employment opportunities, while achieving climate and biodiversity conservation goals. Restoring 350 million hectares of degraded forestland globally could generate net benefits of \$2–\$9 trillion USD over 50 years or approximately \$170 billion USD per year, considering public benefits alone (Goswami et al., 2020). Furthermore, the pandemic has brought attention to several other problems such as increasing global unemployment, discrimination at work, mental health struggles, and gaps in workplace safety (Ijaf Othman et al., 2021). Despite these challenges, the rapid adoption of remote work and flexible schedules has introduced new opportunities for work-life balance and telecommuting (Shirmohammadi et al., 2022). Regarding climate change impacts, research is still determining how these can (or cannot) accelerate economic growth. Since Kuznets' famous Environmental Kuznets curve theory, many empirical studies have examined the link between economic growth and environmental deterioration (Tiba et al., 2017; Purcel, 2020). However, the relationship between these two variables remains inconclusive as the results of these studies have been mixed, mainly because of different country/regional samples, periods, and econometric approaches (Stern, 2004; Tiba et al., 2017; Purcel, 2020).

The economic recovery process following COVID-19 is closely tied to the United Nations' Sustainable Development Goals (SDGs) (Comfort, 2023), which require strategies that balance economic revitalization with social equity, environmental sustainability, and resilient infrastructure. Key SDGs include Decent Work and Economic Growth (SDG 8); Industry, Innovation, and Infrastructure (SDG 9); Gender Equality (SDG 5); Reduced Inequalities (SDG 10); Climate Action (SDG 13); and Life on Land (SDG 15) (Sampedro, 2021). Given the pandemic's disproportionate impact on women and vulnerable groups, recovery plans must promote inclusive policies while addressing the environmental risks from increased energy consumption. This study explored how post-COVID-19 recovery strategies can enhance both economic resilience and sustainability by advancing SDG objectives through an integrated policy approach that supports long-term global sustainability.

2. Rationale

Of the economic and social catastrophes that the world has experienced since the COVID-19 pandemic, the job market has been severely impacted. Individuals have lost their jobs, which has led to changes in the labour structure and composition of employees in businesses, such as those who had previously worked from home but now had to physically return to their jobs (Fana et al., 2020; Mawani et al., 2021). However, not all groups, including diverse businesses, locations, and people, have experienced these effects equally (Fana et al., 2020). Women have experi-

enced disproportionately higher rates of job loss, compounded by increased caregiving responsibilities. Consequently, the pandemic and its aftermath continue to significantly impact employability (Stefanova et al., 2023; Yavorsky et al., 2021). In fact, as economies struggle to recover and individuals strive to regain their livelihoods, certain population groups are disproportionately affected. The groups most affected in the post-COVID era are low-income individuals, students, and young adults (18-19 years) (Agudelo Hernández et al., 2023). These individuals often face systemic barriers that prevent them from accessing quality employment opportunities and maintaining overall wellness. The pandemic has exacerbated inequalities, with individuals from these groups experiencing higher rates of unemployment and financial instability (Agudelo Hernández et al., 2023; Zhang et al., 2021). As a result, many countries have implemented various economic recovery strategies and research has suggested recommendations, including but not limited to: (a) To create stronger policies to help both workers and businesses, ensuring clear rules for flexible work and robust social safety nets (Feng et al., 2022). (b) To create all-inclusive healing and alleviation strategies to mitigate the short-term problems (Jomo et al., 2020); equipping young workers aged 15–24 years with the right and relevant skills to respond to significant changes in labor market demand in the post-COVID era (Rotar, 2022). (c) To support small and medium-sized enterprises in adopting new technologies and practices (Rotar, 2022). (d) To expand social protection programs and strengthen social protection systems to provide more comprehensive coverage (Rotar, 2022). (e) To accelerate the adoption of digital technologies (Habiyaemye et al., 2022); and (f) to prioritize bolstering these vulnerable areas and jobs in labor policies (Astorkuiza Bustos et al., 2022).

Therefore, and despite this wide array of recovery strategies proposed and implemented globally, there remains a notable gap in both policy and research regarding their differential impacts on various demographic groups. Existing studies have largely focused on macroeconomic outcomes, often overlooking the specific challenges faced by vulnerable populations, particularly women. Furthermore, many recovery plans have prioritized short-term economic growth without adequately addressing the long-term structural inequities exacerbated by the pandemic (OECD, 2020).

The purpose of this scoping study is to investigate the various economic recovery measures that have been put into practice globally and assess their effects on various economic sectors. By examining the existing literature, this review aims to map key themes, identify trends, and explore research gaps, providing a comprehensive overview of economy evolution and future opportunities and challenges. Thus, our review offers novel insights beyond existing literature by focusing specifically on the temporal impacts of globally implemented economic strategies. Additionally, we provide a brief overview of how economic recovery efforts have uniquely affected women. However, a review by Mawani et al. (Mawani et al., 2021) evaluated national, regional, and international initiatives to safeguard employment, businesses, and employees and further mapped key themes related to women's labor market participation and identified specific trends and gaps in this area. In fact, we go further if we emphasize the need for gender-specific approaches to labor practices and social protection policies to achieve equity across genders. The diversion of resources from gender protection programs during the crisis suggests the necessity to reinstate, boost funding, and support such initiatives (Mawani et al., 2021). Furthermore, our review aims to provide a comprehensive picture of how different industries and demographics have been affected, highlighting both the opportunities and challenges for an inclusive and sustainable labor market. The findings will help stakeholders, policymakers, and researchers to develop strategies for a more resilient and equitable workforce. This review will contribute to discussions on post-COVID recovery and guide efforts to create an inclusive and sustainable labor market, highlighting how different industries and people have been affected and identifying factors that boost inclusive growth.

3. Objectives and research questions

This scoping review aims to achieve five key objectives: First, to summarize the existing research on economic recovery strategies implemented and recommended after the COVID-19 pandemic. Second, to identify the economic sectors that have been prioritized in post-pandemic recovery strategies. Third, to analyze the demographic groups most affected during the pandemic and how they continue to face setbacks during the economic recovery process. Fourth, to evaluate the impact of the post-pandemic economic recovery on women. Lastly, to highlight the limitations and gaps in the current body of research on post-pandemic recovery, particularly in relation to gender equity and long-term socioeconomic impacts.

To structure this review we have formulated the following research questions: (1) What are the main economic recovery strategies implemented and recommended after the COVID-19 pandemic and what evidence exists regarding their effectiveness? This question aims to explore the diverse approaches taken by countries and sectors, with a focus on evaluating the success of these strategies in fostering sustainable economic growth. (2) Which economic sectors have been prioritized in post-pandemic recovery strategies and how has their recovery differed from other sectors? This question seeks to understand sectoral differences, including which industries have recovered more rapidly and which have lagged. (3) Which demographic groups, especially women, were most affected by the pandemic and how have they experienced setbacks in the post-COVID-19 economic recovery process? It

is important to understand the intersectional impacts of the pandemic and recovery strategies on vulnerable populations, particularly women, migrants, and workers.

These research questions will help structure the review and provide a thorough understanding of the complex dynamics of global economic recovery efforts.

4. Methods and analysis

4.1. Protocol design

The Preferred Reporting Items for Scoping reviews and Meta-Analyses (PRISMA-ScR) recommendations were followed to develop this scoping review (Tricco et al., 2018). For this procedure, all suggested data listed in the PRISMA-P checklist were supplied. The review process was designed to capture a complete range of studies on economic recovery strategies post-COVID-19.

4.2. Eligibility criteria

We established clear inclusion and exclusion criteria for the selection of studies to ensure the relevance and focus of this review.

Inclusion criteria

Studies published in English or Spanish from January 2020 to May 2024 that propose strategies for post-COVID economic reactivation, including peer-reviewed publications and gray literature.

Exclusion Criteria

Studies exclusively focused on economic impacts during COVID-19 rather than post-COVID, and those examining the impact of COVID-19 on physical and mental health without proposing any economic reactivation strategy.

4.3. Information sources

To identify relevant studies for this scoping review, we will conduct a search query across selected academic databases. The primary databases to be searched included Web of Science, PubMed, Scopus, Sociological Abstracts, and Sociology: A SAGE Full-Text Collection. A dataset of studies published from January 2020 to May 2024 will be built based on the results from the selected databases.

4.4. Search strategy

A study dataset, based on queries from the chosen databases, will be constructed starting in January 2020:

(economic reactivation OR economic recovery OR economic revival OR economic rebound OR economic resilience) AND (COVID-19 OR coronavirus OR pandemic) AND (post-COVID OR post-pandemic OR after COVID OR post-lockdown) OR (employment OR women employment OR female employment OR employment of women OR gender employment).

The search results are shown in Appendix I.

4.5. Data management

Covidence, a comprehensive online review management platform developed by Veritas Health Innovation in Melbourne, Australia (www.covidence.org), will be utilized to store the citations. Before the title/abstract screening phase, Covidence will be employed to remove duplicate entries after importing references. Mendeley® and Zotero® will be used for subsequent reference management and bulk uploading of any outstanding full-text articles following the initial screening process.

4.6. Selection process

The study selection will be conducted by Jhoana Romero (JR), Mónica Mesa (MM), Juan Aristizabal (JA) and Cesar Minoli (CM). JR holds a Ph.D. in Mathematics and has strong experience in scoping and systematic reviews. MM holds a Ph.D. in engineering and has strong experience in public policies and engineering modelling. JA holds a master's degree in economics and has experience in the regional economy. CM holds a Ph.D. in Mathematics and has experience with data analysis and pattern recognition. To find possible papers, the authors will separately examine the abstracts and titles of the studies found through database searches, according to the eligibility requirements. They will get access to the complete text of the pertinent manuscripts in the ensuing stage. After retrieving the articles, the authors will independently review their entire texts to ensure that they satisfy the requirements for eligibility. The PRISMA flow diagram describes the selection of studies.

4.7. Data collection process

A data extraction form will be used by the reviewers (JR, MM, JA, and CM) to separately extract data from the included studies.

4.8. Data items

Data from the selected papers will be extracted by each reviewer using the Covidence platform. The extracted data are listed in Table 1. Reviewers may collect additional data beyond what is included in the table if they believe it is necessary to address the research question. We will not get in touch with the authors of papers that are part of the review to ask for more details or clarification.

Table 1. Data extraction form.

Information	Description/Example
Publication details	The paper's title, a hyperlink to the paper, the journal where it was published.
Publication date	Month and the year of publication (2020-2024).
Type of study	Peer-reviewed articles, reports, summaries, reviews, empirical investigations, and opinion articles.
Study classification	Quantitative, qualitative, model-based, etc.
Geographic scale	Global refers to studies conducted across multiple countries or worldwide, national is used when the research is focused on a single country, and local applies to studies conducted in a specific region or locality.
Exact location	The precise location where the research was conducted.
Economic sector of focus	Example: tourism, health-care sector, agriculture, politics, business, transportation, technology, education, landscapes, sports, construction, environment, etc.
Demographic inequalities or most affected population	Gender, race, age, nationality, migrants, etc.
Strategy implemented for economic reactivation	Example: Protecting jobs, cash transfer, government invest, environmental sustainability, creation of new graduate careers, keep only jobs, bankruptcy procedures implementation, ecological restoration, etc.
Population	Research involving women, men, both.
Impact on women	Description of how women have been affected by the economic recovery measures. Example: <i>Women experienced higher job losses in service sectors and increased caregiving responsibilities during the post-COVID recovery period.</i>
Data	The manuscript uses data? If yes what kind of data and link to the data.
Key findings	The main results or conclusions of the study. Example: <i>Increased job loss in service sectors due to COVID-19.</i>
Recommendations	Recommendations for economic re-activation.
Limitations/gaps	Limitations mentioned in the study. Example: <i>Small sample size, language bias.</i>

4.9. Risk of bias in individual studies

We will not assess study quality or formal risk of bias or use them to exclude studies, according to the scoping review guidelines.

4.10. Data synthesis

In this scoping review, data synthesis follows a structured process involving several steps. Information pertinent to each study aspect was extracted separately using Table 1, which organizes the key data categories. Grouping variables and specific parameters helps to identify shared assumptions and trends across studies. After extraction, a detailed descriptive analysis highlighted significant findings and patterns, followed by a narrative summary outlining the study outcomes, research gaps, and recommendations. Graphical summaries show the relationships among variables within the defined groups. Emphasis is placed on strategies implemented for economic reactivation worldwide.

5. Results

The scoping review's initial search yielded 167 studies, after eliminating duplicates. Through a complete examination of abstracts and full texts, guided by predetermined inclusion and exclusion criteria, 40 articles were deemed eligible for inclusion, as illustrated in Figure 1. All authors verified the preliminary screening, which incorporated title and abstract evaluations. They also performed the full-text article selection and results analysis, with these processes undergoing similar validation.

5.1. Synthesis of results

5.1.1. Temporal, geographical and methodological distribution of research

We examined the temporal distribution of the academic publications. Our findings indicate that most of the research was concentrated in the years following the pandemic, with 27.5% of the studies published in 2020 and 25% in 2021. The publication rate decreased slightly in the following years, with 20% of the studies released in

2022 and 22.5% in 2023. Only 5% of the studies have been published until May 2024 (Figure 2). These results suggest that the immediate wake of the COVID-19 pandemic has spurred significant academic interest and research activity in economic reactivation strategies. As time progressed, the publication rate declined, which could indicate that the initial urgent research needs were met or that the focus shifted to implementing and evaluating the proposed strategies.

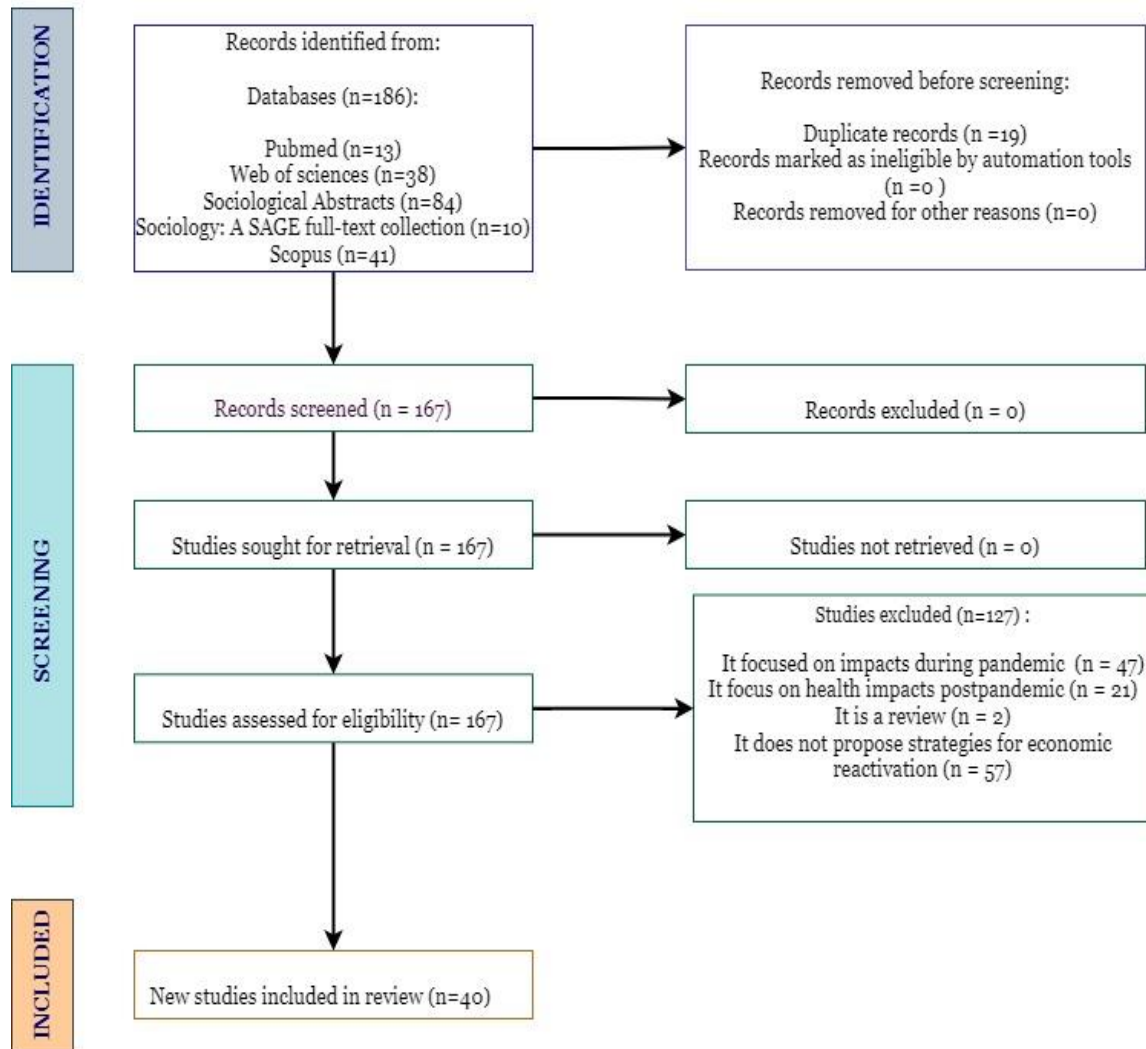


Figure 1. PRISMA-P diagram.

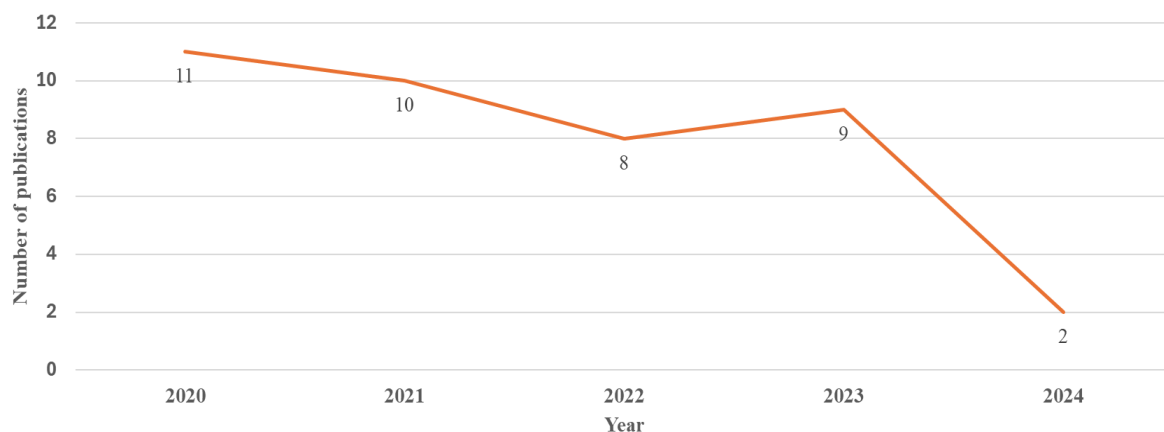


Figure 2. Yearly patterns of research on economic reactivation post-pandemic.

We also performed a geographical classification of the studies. Our analysis revealed that 42.5% of the studies were conducted on a global scale (involving several regions and countries), whereas 57.5% focused on national scales. Among the national studies, the United States and India led with three studies each, followed by Australia, South Africa, and Colombia with two studies each. Other countries, including the United Kingdom, South Korea, Poland, the Philippines, Mexico, Japan, Indonesia, Greece, Canada, Brazil, and Albania, each had one study (see Figure 3). The high percentage of global-scale studies highlights the widespread recognition of the pandemic's international impact and the need for broad coordinated economic recovery strategies. A significant number of national-scale studies have highlighted the importance of adopting approaches that address specific country contexts and challenges. The distribution of studies across diverse countries suggests a shared interest and effort worldwide to understand and respond to the economic repercussions of the pandemic, although the varying number of studies per country may reflect differences in research capacity, resource availability, and severity of COVID-19's economic impact in each location.

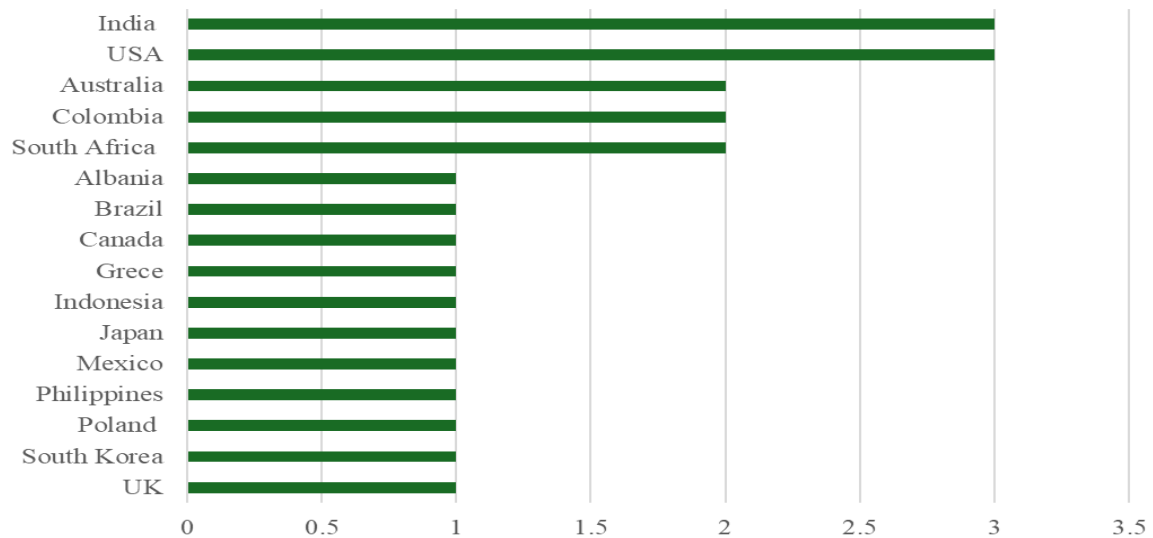


Figure 3. National geographic representation of studies conducted in economic reactivation post-pandemic.

We categorized the selected studies into quantitative, qualitative, model-based or mixed. We found that most of them (43%) were qualitative, 35% were quantitative, 15% were model-based and just 7% utilized mixed methods. It is important to highlight that some papers using model-based methods employed methodologies. For example, Dartanto et al. (Dartanto et al., 2023) utilized a two-variable probit model to assess the impact of competencies on finding new employment during the COVID-19 crisis, while considering possible issues of endogeneity, reverse causation, and selection bias in the sample. Maxim and Zander (Maxim et al., 2020) used the ORANI-G model, a comparative static, multisector CGE model initially developed for Australia's economy and applied to policy decisions. Mohapatra (Mohapatra, 2021) utilized panel autoregressive models to analyze outcomes in South Asia and West Africa. Rochedo et al. (Rochedo et al., 2021) developed a model that captures the evolution of various sectors, including energy, industrial processes, AFOLU (agriculture, forestry, and other land use), waste, and others, along with their respective greenhouse gas emissions (GHG) up to 2100. Yoon (Yoon, 2023) applied a dynamic regression model to assess the impact of the Korean New Deal on economic revitalization.

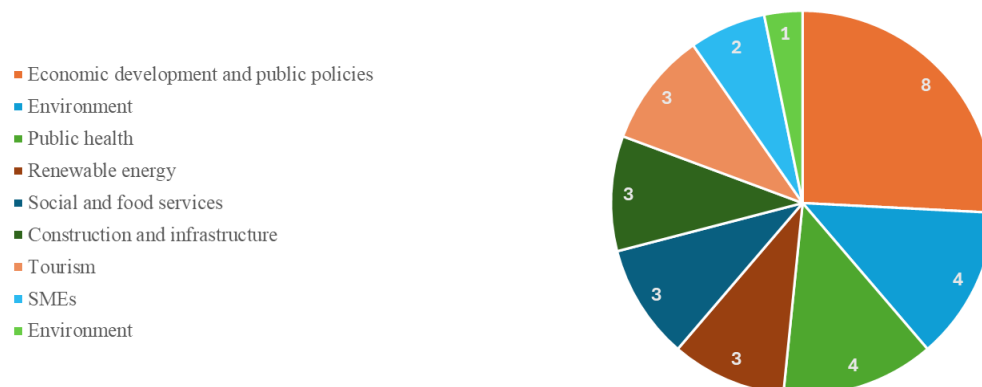


Figure 4. Number of studies within the principal economic sector focused on the 40 selected studies based on economic reactivation post-pandemic.

Accounting for 20% of the papers, the field of economic development and public policies examined approaches and initiatives designed to boost economic expansion, enhance governance, and execute public policies that promote development and resilience in the aftermath of the pandemic (Marks et al., 2020; Umiński et al., 2021; Kaneva et al., 2022; Cowell et al., 2023; Golemi et al., 2023; Rodriguez Fernandez et al., 2023; Villano et al., 2023; Yoon, 2023). Examples in some countries follows. In Virginia (USA), economic development organizations are grappling with incorporating racial and economic inclusion into their recovery plans, revealing a need for clearer definitions and actionable strategies (Cowell et al., 2023). In Santa Marta (Colombia), the solidarity economy is viewed as a key player in mitigating the exacerbated effects of social issues like poverty and exclusion caused by the pandemic (Fernández et al., 2023). In Central Europe and the Baltic states, tax policies are being scrutinized for their role in economic development, with recommendations for tax cuts and stimuli to foster recovery (Kaneva et al., 2022). In Canada, community economic development initiatives are proposed to address inclusive revitalization, capital access, and environmental stewardship, with a strong emphasis on social innovation and finance (Marks et al., 2020). South Korea's aggressive economic policies, particularly the *Korean New Deal*, show mixed results in stimulating quarterly growth but not significantly impacting annual growth rates, suggesting a need for more effective measures (Yoon, 2023). Poland's post-pandemic recovery strategy leverages foreign direct investment (FDI) as a stabilizing force, recommending policies to attract more foreign investors (Umiński et al., 2021). Albania's progress in gender balance in political decision-making and the labor market is evaluated, showing some gains but also setbacks due to the pandemic, indicating areas needing further improvement to align with international gender equality goals (Golemi et al., 2023).

The environment sector, represented by 10% of the papers, explored sustainability practices, the impact of human activities on natural ecosystems, ecosystems restorations as potential for jobs creation, and strategies for mitigating environmental degradation (Diesendorf, 2020; Goswami et al., 2020; Kedia et al., 2020; Maxim et al., 2020; Brancalion et al., 2022). Ecosystem restoration is emphasized as a dual-benefit strategy, promoting both economic development and job creation, with grassroots organizations playing a critical role in maximizing these opportunities (Brancalion et al., 2022). The temporary reduction in greenhouse gas emissions (GHG) during the COVID-19 pandemic highlighted the need for sustainable economic practices, suggesting a shift towards renewable energy and a degrowth in physical consumption, particularly by the wealthiest 10%, to achieve a steady-state economy (Diesendorf, 2020). In India, the potential for ecological restoration in rural areas is explored to generate high-volume employment for urban migrants who reverse-migrated due to the pandemic (Goswami et al., 2020). An analysis of India's economic recovery package identifies gaps and proposes further steps for greening the recovery process, based on insights from industry representatives and experts (Kedia et al., 2020). Additionally, a novel approach using a computable general equilibrium model suggests green tax reform (GTR) policies that could yield a triple dividend of lower emissions, higher gross domestic product (GDP), and increased employment. This model, applied to the Australian economy, indicates that reducing the goods and services tax (GST) within the GTR framework holds the highest potential for achieving these outcomes, followed by payroll tax reduction (Maxim et al., 2020).

Another 10% of the papers focused on public health topics, including the roles of workers (including caregivers and childcare providers), public health initiatives, pandemic response strategies, and the overall impact of COVID-19 on healthcare systems. These studies highlighted the significant challenges faced by low-income women, who were disproportionately affected by the pandemic in their roles as mothers, providers, and homemakers. The crisis revealed gaps in existing social protection systems, such as the child support grant, and underscored the need for transformative social policies that focus on production, redistribution, social cohesion, adequacy, and protection. Despite these issues, gender-sensitive COVID-19 recovery policies are still lacking. Moreover, many essential workers during the pandemic were migrants, playing a crucial role in maintaining vital services like healthcare (Anderson et al., 2021; Mohapatra, 2021; Bichkoff et al., 2023; Zembe-Mkabile et al., 2023).

Renewable energy was highlighted in 7.5% of the papers, focusing on its innovations using technology (Strachan et al., 2022; van de Ven et al., 2022), policy measures, and role in economic recovery. Studies have shown that post-COVID-19 emission trajectories depend on how governments' economic responses shape infrastructure, energy use, and investments. Although many recovery packages aim to incorporate climate action, there is a significant gap between these pledges and the actual investment required. Closing this gap requires a significant increase in effort. Achieving a fair transition to a low-carbon economy will require more than just creating new 'green jobs'; it also demands a wider range of skills, particularly transferable 'soft' skills. COVID-19 has acted both as a disruption and catalyst for this green transition. Additionally, an analysis of recovery plans conducted in six regions found that funding solar photovoltaics could maximize both emissions reductions and job creation, with particularly strong effects in the EU and China, although the results vary depending on the energy-economy model used (Rochedo et al., 2021; Strachan et al., 2022; van de Ven et al., 2022).

Social and food services also constituted 7.5% of the papers, exploring essential services like food security, social welfare programs, and community support mechanisms. This body of research highlights how the COVID-19 pandemic has affected various aspects of society, including the critique of international financial policies that may exacerbate gender inequalities, the impact of the pandemic on economic recovery efforts, and the fundamental

changes to family and work dynamics (Bohoslavsky et al., 2021; Yavorsky et al., 2021; Casquilho-Martins et al., 2022).

The construction and infrastructure sectors were examined in another 7.5% of the papers, focusing on rebuilding efforts, infrastructure projects, and their role in economic revitalization. For instance, *South Africa's ZAR 2.3 Trillion Infrastructure Investment Plan* aims to create millions of jobs and potentially shift the long-term growth trajectory through strategic state participation and fiscal stimulation (Habiyaemye et al., 2022). In contrast, India's migrant workers crisis during the COVID-19 lockdown exposed significant gaps in wage and employment security, emphasizing the need for a robust labor governance architecture (Jayaram et al., 2020). Additionally, the concept of *epinomics* emerged, highlighting the importance of public health stabilization before economic recovery, with public-private partnerships playing a crucial role in addressing immediate employment and infrastructure needs (Vaslavskiy, 2021).

Tourism, accounting for 7.5% of the papers, assessed recovery strategies, the impact of the pandemic on travel and tourism, and measures to boost this sector. For example, in Mexico, the focus was on leveraging national tourism to mitigate the downturn caused by both COVID-19 and security issues, with research suggesting that national tourism can buffer against international tourism fluctuations (Andrés Rosales et al., 2023). Globally, the pandemic disrupted the tourism industry significantly, altering travel behaviors and requiring thorough recovery plans (Roxas et al., 2022). Studies from Japan highlighted dramatic decreases in tourist arrivals and associated economic impacts, emphasizing the need for sustainable recovery strategies that also maintain reduced GHG achieved during the pandemic (Kitamura et al., 2020).

Small and medium-sized enterprises (SMEs) were the focus of 5.0% of the papers, exploring challenges faced by these businesses during the pandemic and strategies for their recovery and growth. For instance, in the Philippines, the pandemic resulted in widespread business closures, supply chain disruptions, and job losses, forcing the private sector to reassess strategies for business continuity and survival (Reyes, 2022). The insights from industry leaders highlight the importance of public-private collaborations and a shift toward innovative business practices (Reyes, 2022). In Africa, SMEs faced similar challenges, compounded by dependence on foreign investment and markets, as well as a lack of infrastructure and access to finance (Gebremichael et al., 2023). The results highlight the importance of developing a customized and long-term recovery strategy that addresses the unique challenges faced by SMEs. This plan should focus on improving management capabilities, upgrading infrastructure, and developing robust capital markets to promote resilience and expansion in the aftermath of the pandemic (Gebremichael et al., 2023).

5.1.3. Demographic sector of focus

55% of the screened papers focused on specific demographic sectors (see Figure 5).

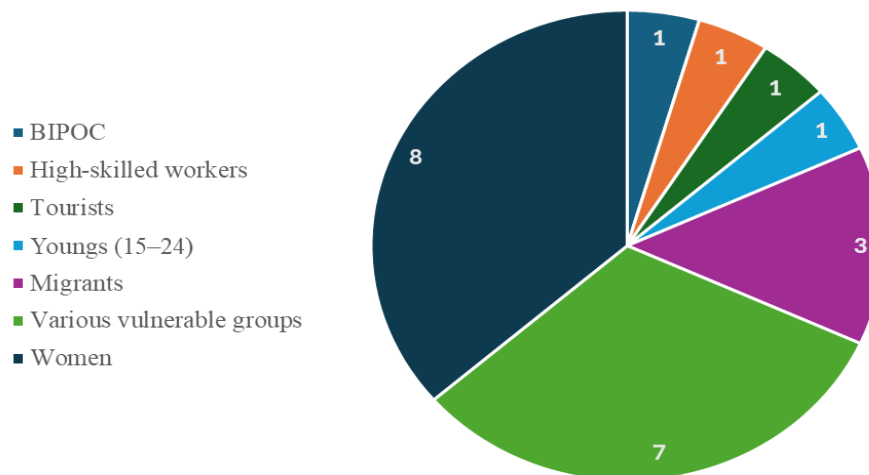


Figure 5. Number of papers in demographic sector focused on the selected 40 papers based on economic reactivation post-pandemic.

Among these, 2.5% of the papers concentrated on BIPOC (black, indigenous, and people of color), high-skilled workers, tourists, and young individuals aged 15–24, respectively (Diesendorf, 2020; Andrés Rosales et al., 2023; Bichkoff et al., 2023; Dartanto et al., 2023). The arrival of international visitors generates significant economic benefits for Mexico's tourist destinations, enhancing competitiveness and favoring the country's trade balance. However, there is a need to diversify tourist sources beyond the United States, Canada, and Spain (Andrés Rosales et al., 2023). The financial impacts on communities like *The Canal* have been severe, with BIPOC individuals, particularly black and hispanic people, facing disproportionate cases, mortalities, and economic hardships. The pandemic has hit women, non-white workers, lower-wage earners, and those with low education levels the hardest,

with 70% of hispanic adults lacking sufficient emergency funds. Small businesses have also suffered, with about 50% unable to rehire laid-off employees, and millions facing the end of unemployment benefits (Bichkoff et al., 2023). Moreover, the pandemic has driven many workers to shift from the formal to the informal sector or leave the workforce entirely, with reemployment primarily occurring in urban areas among those with elementary education in the Java-Bali region (Indonesia), indicating limited livelihood alternatives (Dartanto et al., 2023). Implementing a job guarantee could stabilize the economy by providing employment during downturns, maintaining skills, and offering an incentive for workers to seek higher-paid private and public sector jobs, without significantly competing with existing jobs due to generally lower wages (Diesendorf, 2020).

Migrants were the focus of 7.5% of the papers (Goswami et al., 2020; Jayaram et al., 2020; Anderson et al., 2021). The impact of post-COVID reactivation on migrant people is multifaceted and complex. During the national lockdown, millions of poor urban migrants in India lost their employment and were forced to *reverse-migrate* to rural areas, which were already struggling with severe economic and ecological degradation, and ill-equipped to provide livelihood opportunities for the sudden influx of people (Goswami et al., 2020). This migrant crisis highlighted the need to re-conceptualize India's labour reforms, but the response has often been inadequate (Goswami et al., 2020). Regional and central governments have tended to dismantle labour protections to support an economic model that exploits vulnerable migrant workers, thus hindering efforts to achieve inclusive and equitable growth (Jayaram et al., 2020). Furthermore, the role of migrants in addressing labour and skills shortages is highly politicized, with their interests often underrepresented in policy debates. This highlights the importance of considering the political factors influencing systemic resilience when evaluating and addressing the role of migrants in post-pandemic economic recovery (Anderson et al., 2021).

A significant portion, 17.5%, of the papers were focused not only on specific demographic sectors but on various vulnerable groups simultaneously, highlighting the profound impact of the post-pandemic recovery on these populations (Marks et al., 2020; Lim et al., 2021; Umiński et al., 2021; Casquilho-Martins et al., 2022; Habiyaemye et al., 2022; Sennoga et al., 2022). These groups include individuals facing economic hardships, those with limited access to healthcare, low-wage workers, people with disabilities, and communities have been historically marginalized or discriminated against. The studies emphasize that the pandemic exacerbated existing inequalities, making it crucial to implement targeted policies that address the specific needs and challenges faced by these vulnerable populations.

Women were the focus of 20% of the papers. During the pandemic, low-income women bore the brunt of the crisis in their roles as mothers, providers, and homemakers, exposing the inadequacies of existing social protection paradigms such as the child support grant (CSG). This highlighted the need for a transformative social policy framework that incorporates production, redistribution, social cohesion, adequacy, and protection (Zembe-Mkabile et al., 2023). Recent austerity policies have disproportionately affected women's human rights, reinforcing gender inequalities in domestic and care work, thus exacerbating their vulnerability to the pandemic's economic impacts (Bohoslavsky et al., 2021). In response, strategies such as creating cooperatives in urban and rural areas have been proposed to support women's economic activities and contribute to post-pandemic recovery (Rodriguez Fernandez et al., 2023). Despite the pressing need, there is a notable lack of gender-sensitive COVID-19 recovery policies due to insufficient data points and a historical oversight of gender differences in economic responses to crises (Mohapatra, 2021). Redesigning the value chain to engage local communities, including women and indigenous peoples, can help rebuild local economies and enhance tourists' experiences (Roxas et al., 2022). Studies emphasize the importance of recognizing intersecting identities in assessing pandemic impacts, providing nuanced insights into how men and women were differently affected (Yavorsky et al., 2021). While progress in reducing gender gaps in employment was reversed in 2020, there were promising strides in reducing the gender pay gap and increasing women's political participation in Albania (Golemi et al., 2023). Moreover, women's involvement in the informal business sector significantly contributes to economic growth, particularly in sub-Saharan Africa, where it accounts for a substantial portion of GDP and employment (Gebremichael et al., 2023).

5.1.4. Strategies implemented for economic reactivation post-pandemic

Various strategies implemented for post-pandemic economic reactivation were analyzed and categorized into seven key areas. These categories include modifications in government economic policies and business support with 20% of the strategies, and community and collaborative efforts, also accounting for 20%. Sustainable and green recovery strategies were represented in 17.5% of the manuscripts, while direct financial and social support constituted 15%, along with employment and skills enhancement strategies, each representing 12.5%. Infrastructure and technological development strategies were addressed in 7.5% of the manuscripts. Table 2 summarizes the strategies implemented by country.

The change in government economic policies and business support emerged as a crucial strategy. These strategies include various measures such as Structural Adjustment Programs (SAPs) of the International Monetary Fund (IMF) and the World Bank, administrative austerity, cuts in social services, health, education, and labor deregulation. Additionally, investment in social care infrastructure was highlighted (Bohoslavsky et al., 2021). The overall increase in employment and investment to GDP ratio positively affected economic growth, with labor taxation

corresponding with goals like no poverty, reduced inequalities, and decent work and economic growth (Kaneva et al., 2022). The European Central Bank (ECB) launched the Pandemic Emergency Purchase Program (PEPP) to support credit for large employers and provide liquidity to the banking sector (Kedia et al., 2020). In South Korea, the *Korean New Deal* was implemented to revitalize the economy through aggressive fiscal policies and supplementary budget investments (Kedia et al., 2020). Economic stimulus measures, such as the *Go To Travel Campaign*, were also part of the recovery efforts (Kitamura et al., 2020). Maintaining openness to foreign direct investment (FDI) to enhance resilience and recovery, promoting the country as an attractive FDI destination, and avoiding excessive protectionism in FDI policies were critical strategies (Umiński et al., 2021; Jacek Lewkowicz et al., 2024). Promoting gender quotas in politics, economic empowerment of women, and decent work for all have been significant components of the policy changes (Golemi et al., 2023).

The strategy of community and collaborative efforts has been implemented in various geographical sectors worldwide. For example, national tourism promotion (Andrés Rosales et al., 2023), strengthening collaboration and partnerships among local, regional, and state organizations (Goldin, 2022), identifying support resources at the local, state, and federal levels and assisting in disseminating this information to businesses (Goldin, 2022), contributing input to comprehensive community plans and providing feedback on infrastructure and public services to enhance commerce (Goldin, 2022), establishing cooperatives of small and medium-sized farmers and producers in both urban and rural areas (Rodríguez Fernandez et al., 2023), attracting investments or aiding micro, small, and medium enterprises (MSMEs) in recovery (Jayaram et al., 2020), accelerating nation-to-nation dialogue with first nations, indigenous communities, and promoting reconciliation (Marks et al., 2020), employing an intersectional lens to include the most vulnerable in the economy and society (Marks et al., 2020), learning lessons from neighboring countries (Marks et al., 2020), fostering public-private collaborations, enhancing systemic resilience through migrant labor flexibility (Anderson et al., 2021), and building community resilience (Niu et al., 2022).

The strategy of sustainable and green recovery for economic reactivation after COVID-19 includes several key initiatives. For example, leveraging ecosystem restoration activities to create jobs (Brancalion et al., 2022) and transitioning to a steady-state economy through degrowth while promoting low-carbon employment opportunities (Diesendorf, 2020). Additionally, efforts are focused on ecological restoration and labor-intensive agriculture (Goswami et al., 2020), implementing green recovery strategies, carbon pricing schemes, and investing in clean energy (Rochedo et al., 2021). Redesigning the value chain to enhance sustainability and economic resilience is also a crucial aspect (Roxas et al., 2022). Reform actions aim to maximize developmental impact (Sennoga et al., 2022), and there is a strategic investment in onshore wind energy to support the transition to a greener economy (van de Ven et al., 2022).

Direct financial support acting as an economic reactivation strategy post-pandemic involves several key measures. These include cash transfers, social relief packages, and a caregiver's allowance (Zembe-Mkabile et al., 2023), as well as the implementation of recovery and resilience plans directed to protect vulnerable groups (Casquilho-Martins et al., 2022). Another aspect of this strategy is the provision of a childcare subsidy for the early education and childcare sectors, supported by multifaceted fiscal policies such as the JobKeeper, JobSeeker, and JobMaker schemes, alongside other stimulatory packages (Lim et al., 2021). Additionally, the release of severance for time of service (CTS) (Silupú Prado et al., 2024) and progressive state and federal childcare policies (Yavorsky et al., 2021) play a significant role. Increasing the budget for solidarity organizations further supports the comprehensive approach to economic reactivation (Villano et al., 2023).

The employment and skills enhancement strategy for economic reactivation encompasses several crucial measures aimed at revitalizing the workforce post-pandemic. Key findings include enhancing social skills, digital literacy, and vocational education for young workers to facilitate reemployment, addressing transitions in the informal sector, and managing workforce dropout due to the pandemic's effects, with a focus on optimizing job seeker ecosystems to leverage social skills in job search processes (Dartanto et al., 2023). Developing more suitable careers is another critical aspect (Hite et al., 2020). Additionally, increasing access to tertiary education and vocational training programs for women is emphasized (Mitali Nikore, 2020). Investment in people and skills extends beyond green jobs to include necessary skills for existing jobs, engaging with organizations to anticipate and support upskilling and retraining (Strachan et al., 2022). Lastly, developing dynamic capabilities forms a vital part of this strategy (Gebremichael et al., 2023).

The infrastructure and technological development strategy for post-COVID economic reactivation includes several key initiatives. Firstly, there is an emphasis on the expansion of affordable housing to address housing shortages and improve living conditions (Bichkoff et al., 2023). Secondly, infrastructure stimulus is a crucial component, aimed at boosting economic growth through extensive investment in public infrastructure projects (Habiyaemye et al., 2022). Thirdly, the implementation of public infrastructure projects through public-private partnerships (PPP) is highlighted, with a focus on sustainable public infrastructure to reopen national and global economies. This approach involves attracting private investment to complement public funding in infrastructure projects, ensuring a comprehensive and sustainable development strategy (Vaslavskiy, 2021).

Table 2. Strategies implemented for economic reactivation post-pandemic by country, source: Authors' own elaboration.

Country	Strategy	Reference
Albania	Change in government economic policies and business support	(Golemi et al., 2023)
Australia	Direct financial and social support	(Lim et al., 2021)
Brazil	Sustainable and green recovery	(Brancalion et al., 2022)
Canada	Community and collaborative efforts	(Marks et al., 2020)
Colombia	Community and collaborative efforts	(Rodriguez Fernandez et al., 2023)
	Direct financial and social support	(Villano et al., 2023)
India	Employment and skills enhancement	(Mitali Nikore, 2020)
	Sustainable and green recovery	(Goswami et al., 2020)
Indonesia	Employment and skills enhancement	(Dartanto et al., 2023)
Japan	Change in government economic policies and business support	(Kitamura et al., 2020)
Mexico	Community and collaborative efforts	(Andrés Rosales et al., 2023)
Philippines	Community and collaborative efforts	(Reyes, 2022)
Poland	Change in government economic policies and business support	(Umiński et al., 2021)
South Africa	Infrastructure and technological development	(Habiaremye et al., 2022)
	Direct financial and social support	(Zembe-Mkabile et al., 2023)
South Korea	Change in government economic policies and business support	(Yoon, 2023)
UK	Employment and skills enhancement	(Strachan et al., 2022)
USA	Infrastructure and technological development	(Bichkoff et al., 2023)
	Direct financial and social support	(Yavorsky et al., 2021)
	Community and collaborative efforts	(Cowell et al., 2023)

5.1.5. Reported impact of economy recovery post-pandemic on women

37.5% of the total screened manuscripts reported impact on women during COVID-19 pandemic and during the post-covid era. The COVID-19 pandemic has significantly affected women, increasing their responsibilities as primary caregivers and exacerbating emotional stress and household management burdens (Zembe-Mkabile et al., 2023). Specific impacts on women have been noted, highlighting the need for tailored research and support (Bichkoff et al., 2023). The pandemic undermined women's human rights, worsening gender inequalities in domestic and caregiving roles, and increasing their vulnerability to both the health crisis and subsequent economic downturn (Bohoslavsky et al., 2021). Women faced a heightened burden of unpaid domestic work and increased economic vulnerability (Casquilho-Martins et al., 2022). Evidence from Germany, the UK, and the US demonstrates that labor market shocks disproportionately affect women and young workers with fewer skills, amplifying existing disparities (Dartanto et al., 2023). Women played a crucial role in agricultural cooperatives and SMEs, promoting inclusivity and economic empowerment (Rodriguez Fernandez et al., 2023). However, women workers reported common issues such as loss of payments due to market fluctuations, fast fashion demands, and lack of legal protection, which were not confined to the lockdown period (Jayaram et al., 2020).

Persistent systemic barriers continue to hinder women and gender-diverse individuals, with the economic, social, and health impacts of COVID-19 disproportionately affecting women, particularly women of color and recent immigrants (Marks et al., 2020). Women's employment may decline due to increased caregiving responsibilities or reduced job availability, a phenomenon known as the *discouraged worker* effect during crises (Mohapatra, 2021). Despite having similar access to internet and technology, women's lower participation in high-opportunity fields like STEM represents a new form of gender-based labor inequality (Monachos et al., 2023). Over the past 70 years, women in India have often remained on the margins of the formal economy, fulfilling supportive roles without substantial recognition. Addressing the impacts of the COVID-19 crisis requires targeted interventions to support women in both informal and formal sectors, ensuring they are not left behind in economic recovery (Mitali Nikore, 2020). Enhanced local tourism opportunities have emerged (Roxas et al., 2022). Gender inequalities in the labor market have worsened, highlighting persistent disparities in opportunities and outcomes based on gender (Yavorsky et al., 2021). Despite improvements in economic position and political participation, significant inequalities persist in leadership roles and private sector employment opportunities (Golemi et al., 2023). Women constitute a large portion of the informal business sector and employment in Africa, resulting in significant impacts due to the pandemic (Gebremichael et al., 2023).

5.1.6. Main findings

The impact of COVID-19 on socioeconomic conditions can provide critical insights for shaping economic recovery strategies post-pandemic. The COVID-19 lockdown worsened hunger and food insecurity among low-income households that depend on the comprehensive social grant (CSG) (Zembe-Mkabile et al., 2023). Residents living along The Canal (New Orleans, USA) experienced profound socioeconomic impacts, including substantial job losses and financial stress exacerbated by housing instability and debt (Bichkoff et al., 2023). There was a significant shift to the informal sector during the pandemic, profoundly affecting labor market dynamics (Dartanto et al., 2023). Both formal and informal sectors saw decreases in employment, further complicating the economic landscape (Sennoga et al., 2022). The pandemic led to severe economic disruptions in the Philippines, marked by business closures and widespread job losses. With limited participation in the policy process, the private sector took the initiative to organize activities to complement government initiatives (Reyes, 2022). Additionally, consumption loss ranged from 12,704 billion yen (−39.1%) to 20,540 billion yen (−65.1%), and the reduction in carbon footprint (CFP) ranged from 89,488 kt-CO₂eq (a decrease of 64.2%) to 54,030 kt-CO₂eq (a decrease of 37.5%) (Kitamura et al., 2020).

Supporting cooperatives and local production can play a vital role in stabilizing and promoting economic growth in vulnerable sectors. These initiatives impulse community resilience, enhance economic sustainability, and create more equitable opportunities for development, as seen in solidarity economy models that promote social inclusion and facilitate economic recovery in post-pandemic era in Santa Marta (Colombia) (Fernández et al., 2023). Public health scholars and social science researchers have expressed concerns over the insufficient evidence guiding gender-sensitive COVID-19 recovery policies. They advocate for moving beyond the *tyranny of the urgent*, which prioritizes immediate biomedical responses over comprehensively addressing social and gender-related issues (Mohapatra, 2021). Social-capital relationships, which incorporates trust, norms, and networks, facilitates cooperation and collaboration within a society. Strong social-capital contributes to more efficient transactions, lower transaction costs, and enhanced economic productivity, fostering innovation, entrepreneurship, and efficient resource allocation. Moreover, it leads to better governance, reduced corruption, and improved institutional quality, all conducive to sustained economic development (Villano et al., 2023). Migrant workers play a crucial role in maintaining the resilience of essential services during times of crisis, with policies and institutions significantly shaping their impact on resilience (Anderson et al., 2021). Thus, community-capital resilience is essential for effectively navigating and coping with the challenges posed by COVID-19 (Niu et al., 2022).

Environmental sustainability and green technology can significantly aid economic recovery after COVID-19 by creating substantial employment opportunities through restoration activities. For instance, Brazil has the potential to generate between 1.0 to 2.5 million direct jobs if it meets its restoration goal of 12 million hectares (Brancalion et al., 2022). Ecological restoration activities hold high employment potential, with the capacity to employ approximately 5.2 million people. This not only addresses environmental restoration needs but also significantly contributes to job creation and economic growth, enriching biodiversity, enhancing rural environmental quality, and contributing to global environmental goals (Goswami et al., 2020). In India, the rationale for greening economic packages stems from the necessity for government interventions to steer practices away from 'business as usual' towards a sustainability-focused development path. The sustainability agenda should be viewed not as a disruptor but as a corrector, essential for fostering resilient and environmentally responsible economic growth (Kedia et al., 2020). Achieving a sustainable recovery from the post-COVID-19 recession is feasible through the adoption of a green technology revolution (Maxim et al., 2020). Green recovery packages have the potential to decrease global emissions by approximately 10–13% by 2025 and 6–15% by 2030, with enhanced green recovery packages prioritizing closing the investment gap more than the emission gap (Rochedo et al., 2021). Moreover, green recovery plans allocating more than 50% of investment to solar photovoltaics not only facilitate significant reductions in CO₂ emissions but also help the creation of green jobs, particularly notable in regions like USA and China (van de Ven et al., 2022).

Gender inequality and addressing austerity measures can play a crucial role in fostering economic recovery post-COVID-19. Austerity measures have a disproportionate impact on women, further exacerbating gender inequalities (Bohoslavsky et al., 2021). Public empathy towards the conditions facing migrant workers must recognize the migrant crisis as a direct result of the absence of labor governance architecture in the urban labor markets that employ them. This lack of regulation fuels the impunity of employers in perpetuating extractive labor practices, highlighting the urgent need for comprehensive labor governance reforms. Prioritizing the protection of migrant workers through stronger institutional mechanisms can ensure fairer, more just working environments and safeguard labor rights, improving overall labor standards (Jayaram et al., 2020). In India, a consistent decline in women's labor force participation rates from 1970 to 2018, coupled with persistent wage gaps, highlights the systemic challenges women face in both rural and urban areas (Mitali Nikore, 2020). Globally, the under-representation of women in parliament and the labor market persists as a significant issue, reflecting broader societal and structural challenges. Discriminatory laws, cultural norms, and biases hinder women's access to political leadership roles, limiting diversity in decision-making processes and affecting policy outcomes. Despite some progress in narrow-

ing the gender pay gap, significant disparities still exist in women's labor force participation and leadership representation. This highlights ongoing challenges in achieving gender equality across various facets of employment, necessitating continued efforts to address these barriers and promote women's full participation and advancement in the workforce (Golemi et al., 2023). Addressing these gender inequalities and reforming austerity measures can create a more inclusive and resilient economic recovery, ensuring that women and marginalized groups are not left behind.

Global trade and relationships can significantly aid economic recovery post-COVID-19 by leveraging international connections and investments. The deterioration of political and trade relations with China poses a significant downside risk for Australia, given that mainland China is Australia's primary export destination, accounting for approximately 38% of merchandise goods and 19% of service exports in 2019. This underscores the critical importance of managing these relations carefully to safeguard Australia's export-dependent sectors (Lim et al., 2021). Foreign Direct Investment (FDI) plays a crucial and stabilizing role in Poland's economy, especially during crises. By injecting capital, technology, and managerial expertise, FDI enhances productivity, fosters innovation, and stimulates economic growth. During periods of economic instability or downturns, FDI provides a crucial lifeline by supporting employment, sustaining economic activity, and buffering against external shocks. Moreover, FDI brings access to new markets and international networks, further strengthening Poland's economic resilience and competitiveness in the global economy. Therefore, fostering an attractive investment environment remains essential for leveraging FDI as a stabilizing force in Poland's economic development strategy. While foreign-owned entities bring significant economic benefits to host countries, fostering a conducive environment for domestic firms to grow and compete alongside them is crucial for maximizing overall economic resilience and recovery. This requires balanced policies that promote innovation, skills development, and inclusive growth while harnessing the potential benefits of foreign direct investment (Umiński et al., 2021).

Domestic tourism served as a protective buffer against fluctuations in international tourism during the pandemic, significantly contributing to the growth of the tourism sector in most Mexican states (Andrés Rosales et al., 2023). The *Europe 2020 Strategy* targets in employment and poverty reduction were at risk before the pandemic, and the crisis further exacerbated these challenges (Casquilho-Martins et al., 2022). Many economic development organizations are committed to inclusivity, but there remains a pressing need for dialogue to define inclusivity clearly and develop effective strategies to translate this commitment into tangible outcomes (Cowell et al., 2023). Recognizing the rebound effect in energy efficiency measures is crucial; effective policy interventions can mitigate this effect, maximizing energy savings and environmental benefits (Diesendorf, 2020). Tax policy is one of the most effective instruments for aiding economic recovery and ensuring sustainable development. Governments can stimulate growth, support public services, and promote long-term economic stability through optimized tax strategies (Kaneva et al., 2022). The *Build Back Better* slogan adopted by numerous civil society organizations advocates for a COVID-19 recovery that enhances community sustainability and resilience beyond pre-pandemic levels. Social innovation, such as social finance, underscores the importance of innovative strategies in addressing complex societal issues while promoting sustainable development (Marks et al., 2020). Sustainable tourism practices, when effectively implemented, can drive economic recovery by minimizing negative environmental impacts, respecting local cultures, and contributing positively to the well-being of local communities (Roxas et al., 2022). Enhancing policy changes to improve childcare affordability is another vital strategy (Yavorsky et al., 2021). Despite South Korea's supplementary budget investment impacting quarterly growth rates, it failed to increase the annual growth rate, highlighting the complexity of fiscal interventions (Yoon, 2023). Worldwide, governments implemented fiscal policies such as stimulus packages, unemployment benefits, and business support measures to mitigate economic downturns. However, the unprecedented scale of the crisis underscored the limitations of fiscal interventions alone. Strong rule of law, effective governance, and low corruption are crucial for a stable environment conducive to sustainable socio-economic development, enabling effective responses to crises and fostering trust among citizens and businesses (Jacek Lewkowicz et al., 2024).

Under the best-case scenario, an estimated 2.23 million jobs could be created over five years with 50% state participation in infrastructure investment. This substantial job creation highlights the critical role of public sector involvement in driving economic growth and employment opportunities (Habiyaemye et al., 2022). The introduction of teleworking during the COVID-19 pandemic poses challenges for the post-pandemic era, necessitating companies to invest in technological infrastructure, overhaul work organization, and integrate these changes within a broader regulatory framework. The costs associated with implementing and setting up teleworking, including purchasing and installing equipment, are substantial, and evaluating the return on this investment should be done over the medium term to assess its effectiveness and benefits (Monachos et al., 2023). Additionally, the pandemic has underscored the necessity of substantial investments in public infrastructure to bolster economic recovery. Public-private partnerships (PPPs) play a critical role in facilitating large-scale infrastructure projects, particularly amidst high public debt and budget deficits. They enable governments to leverage private sector expertise and funding, thereby enhancing project efficiency, reducing fiscal strain, and fostering sustainable economic development (Vaslavskiy, 2021).

Finally, the importance of workforce development and skills enhancement in the post-pandemic era cannot be overstated. Given the numerous demands of a post-pandemic workplace, it is crucial for human resource development professionals (HRD) to prioritize self-care practices, as maintaining their effectiveness and resilience is essential for supporting organizational success and employee well-being (Hite et al., 2020). While the focus on green jobs is important, it should not overshadow the broader spectrum of skills required for the future workforce. Interpersonal skills are as crucial as technical skills for a successful green transition, highlighting the need for effective communication, collaboration, and leadership to address complex environmental challenges and promote sustainable practices (Strachan et al., 2022). Additionally, Africa faces significant challenges, including gaps in managerial skills, infrastructure, capital markets, access to finance, and support for entrepreneurial endeavors, which further emphasizes the need for targeted workforce development strategies (Gebremichael et al., 2023).

5.1.7. Recommendations for economic reactivation post-pandemic

Several key recommendations for economic reactivation emerged. Social and community protection was the most frequently recommended strategy, with 12 manuscripts (30%) emphasizing its importance. Environmental and infrastructure sustainability followed, cited in 6 manuscripts (15%). Policy and governance improvements were suggested in 5 manuscripts (12.5%), while economic stimulus measures, skills development and education changes, and technological advancement each accounted for 4 recommendations (10%). Protection of women's rights was highlighted in 3 manuscripts (7.5%), and tourism investment was recommended in 2 manuscripts (5%) (See Figure 6).

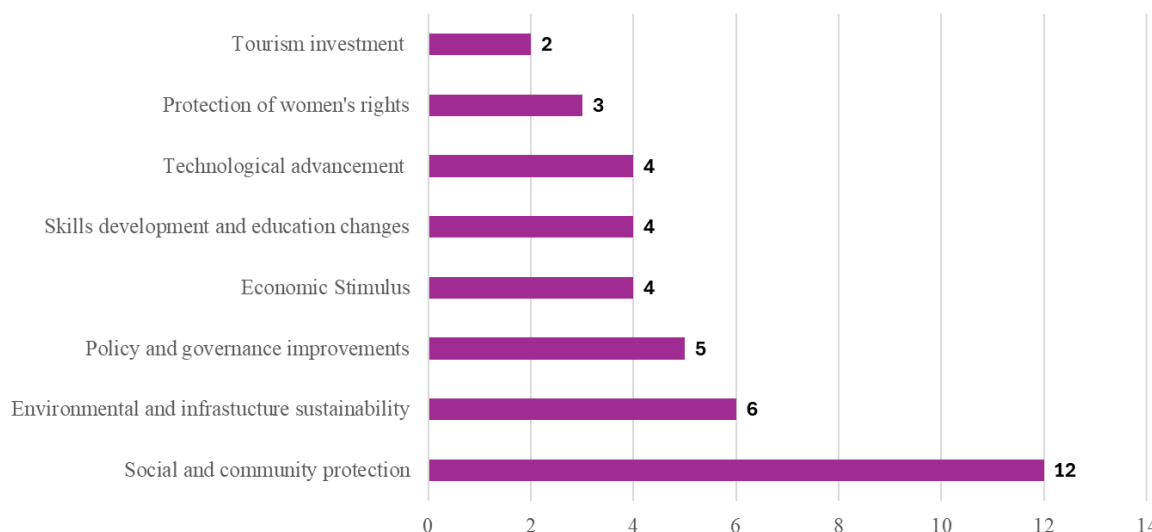


Figure 6. Number of papers in proposed recommendations of economic reactivation post-pandemic on the selected 40 papers.

Economic stimulus plays a vital role in reactivating economies following the COVID-19 pandemic. Sustained investment in infrastructure and employment-intensive projects is crucial for stimulating economic growth (Habiyaemye et al., 2022). To enhance growth effectively, implementing targeted measures to reduce the taxation burden through strategic tax incentives, while cutting non-productive public expenditures, is essential. This approach fosters a more favorable environment for businesses, encouraging investment and entrepreneurship, thus promoting job creation and economic dynamism. Concurrently, reallocating resources from non-essential public spending to productive sectors can improve efficiency and maximize the impact of government expenditure (Kaneva et al., 2022). Achieving economic reactivation also requires strategically sequencing reform actions, scrutinizing the effects of deficit and public debt financing, enhancing economic governance through structural reforms, strengthening public investment management, and improving domestic resource mobilization. These integrated efforts will not only stimulate recovery but also promote long-term sustainability, resilience, and equitable development (Sennoga et al., 2022). Additionally, focusing on attracting Foreign Direct Investment (FDI), particularly in greenfield projects and Knowledge-Intensive Business Services (KIBS), is crucial. Avoiding protectionist policies and creating a welcoming environment for FDI through streamlined regulations, investment incentives, and infrastructure development can spur innovation, job creation, and productivity. Embracing open-market principles and fostering global partnerships will inject capital, facilitate knowledge transfer, and position economies for sustainable growth and competitiveness in the global market (Sennoga et al., 2022).

To sum up:

1. Environmental and infrastructure sustainability are crucial for economic reactivation following COVID-19. Implementing a job guarantee program focused on low-carbon jobs, alongside environmental tax reforms and strategic sustainable development planning, can drive both economic recovery and environmental protection

(Diesendorf, 2020). Large-scale restoration activities in degraded lands can generate employment opportunities while improving biodiversity, offering a dual benefit of economic and environmental enhancement (Goswami et al., 2020). Addressing the need for deep structural and policy changes is essential; policymakers must integrate green technologies, renewable energy investments, and sustainable practices into economic policies to promote long-term resilience and social equity (Kedia et al., 2020). Moreover, tackling pre-existing economic weaknesses, such as weak productivity growth, through investments in technology, education, and infrastructure, will bolster long-term economic strength and create sustainable employment opportunities (Lim et al., 2021). A multifaceted approach, including establishing national community investment funds, advocating for local and social procurement policies, and ensuring equitable funding for marginalized groups, is also vital for fostering comprehensive economic reactivation (Lim et al., 2021). Lastly, emphasizing sustainable recovery by reducing greenhouse gas emissions and integrating green technologies into recovery plans supports climate goals, stimulates innovation, and enhances global competitiveness, ensuring a resilient future (Marks et al., 2020).

2. Policy and governance improvements are essential for effective economic reactivation following COVID-19. Urgent policy actions are required to expand affordable housing, develop pandemic-resistant workforce strategies, and restructure social services to be more accessible and culturally informed (Bichkoff et al., 2023). Policymakers should adopt *epinomics* strategies that blend fiscal prudence with targeted demand stimulation and strengthened social safety nets. This approach helps support economic recovery while ensuring fiscal sustainability and resilience. Leveraging Public-Private Partnerships (PPPs) for infrastructure development can also mobilize private sector investment, create jobs, and enhance productivity, setting the stage for sustainable growth (Vaslavskiy, 2021). A more efficient set of economic policies is needed to address the adverse effects of the pandemic on the nation's economic life and well-being (Yoon, 2023). Moreover, fostering more collaborative governance involving the government, private sector, and other societal sectors can improve policy effectiveness and responsiveness (Reyes, 2022). Finally, improving institutional quality, including the rule of law and government effectiveness, alongside fiscal measures, is crucial for building a robust and effective governance framework (Jacek Lewkowicz et al., 2024).
3. In the context of economic recovery after the pandemic, safeguarding women's rights is essential for promoting sustainable growth. Implementing economic policies that safeguard women's rights and bolster social security is crucial for achieving this objective (Bohoslavsky et al., 2021). Enforcing legal protections against gender discrimination in the workplace, such as ensuring equal pay, anti-harassment measures, and support for career advancement, guarantees women equal opportunities in the labor market. Additionally, expanding social security programs to provide comprehensive support—such as maternity leave, childcare assistance, and retirement benefits—helps reduce economic insecurity and encourages increased workforce participation. Promoting women's economic empowerment through targeted programs, like access to finance for women entrepreneurs, further supports economic stability and growth. Advocating for policy interventions to stabilize demand and enhance workforce training is also important. By ensuring consistent demand in the restoration sector and expanding training programs, the workforce is better prepared to meet industry needs and drive economic recovery (Brancalion et al., 2022). Furthermore, maintaining political commitment to implementing recovery plans with a focus on social protection and gender equality in labor markets will promote an inclusive and resilient economy, thereby facilitating sustainable growth and reducing disparities (Casquilho-Martins et al., 2022).
4. In the aftermath of the pandemic, skills development and educational reforms are critical for economic recovery and future growth. The government should focus on equipping young workers, aged 15–24, with essential skills such as digital literacy and social skills to enhance their reemployment prospects (Dartanto et al., 2023). Investing in targeted education and training programs will help young people meet the demands of a rapidly evolving labor market and contribute effectively to economic resurgence. Additionally, Human Resource Development (HRD) can play a key role by supporting resilience, managing shocks, and fostering sustainable career cultures through skills development and employee well-being initiatives (Hite et al., 2020). Prioritizing comprehensive upskilling and retraining initiatives is crucial for addressing broader skill needs across emerging industries and technologies (Strachan et al., 2022). Such initiatives should be inclusive, targeting diverse sectors and demographics, to ensure that all segments of society can participate meaningfully in the economy. By investing in continuous learning and adaptation, policymakers can build a resilient workforce that can navigate evolving economic landscapes and contribute to sustainable development goals (van de Ven et al., 2022).
5. In the post-pandemic era, robust social and community protection measures are vital for achieving equitable economic recovery. Reinstating the caregiver's allowance and adopting a universal basic income (UBI) are essential strategies for ensuring comprehensive social protection (Zembe-Mkabile et al., 2023). These initiatives provide financial stability to caregivers and all citizens, fostering economic security and promoting inclusive recovery. The caregiver's allowance acknowledges the crucial role of caregivers, while UBI offers a

safety net that stimulates consumer spending, reduces poverty, and supports overall economic stability (Cowell et al., 2023). Additionally, prioritizing the protection of migrant workers by enhancing legal frameworks, ensuring fair wages, and providing access to essential services is crucial for fostering equitable and sustainable recovery (Jayaram et al., 2020). Measures to support women's economic resilience, such as targeted cash transfers and extended leave benefits, are essential for mitigating the adverse impacts of economic downturns and ensuring continued participation in the workforce (Maxim et al., 2020). Strengthening integrated social security schemes, enhancing worker financial literacy, and improving childcare affordability are also critical for bolstering social protection and economic resilience (Anderson et al., 2021; Yavorsky et al., 2021). Fostering community cohesion and infrastructure, improving institutional resilience, and enhancing transnational policy frameworks for migrant labor are crucial for creating a robust and inclusive economic environment (Niu et al., 2022; Golemi et al., 2023). Finally, promoting gender equality by supporting caregiving responsibilities, ensuring equal access to education and employment, and advancing women's representation in political decision-making will drive inclusive growth and resilience in the post-pandemic recovery phase (Gebremichael et al., 2023).

6. For effective economic recovery, leveraging technological advancements is crucial. Continued support for cooperative development and technological progress is essential for sustaining economic activities and maintaining international market standards (Rodríguez Fernandez et al., 2023). Companies should invest in advanced technologies and IT infrastructure to facilitate teleworking, creating a cohesive strategy that includes robust technological solutions and reliable infrastructure (Monachos et al., 2023). This investment will enhance productivity, attract top talent, and enable businesses to adapt to evolving market demands, fostering resilience and driving sustainable economic growth. Integrating green recovery packages with carbon pricing mechanisms is also vital for long-term mitigation and economic recovery (Rochedo et al., 2021). By investing in sustainable infrastructure, renewable energy projects, and green technologies, and combining these with carbon pricing incentives, governments can encourage businesses to adopt greener practices, stimulate job creation, and accelerate the transition to a low-carbon economy. Additionally, increasing budgets, developing new strategies, and improving information systems are necessary steps to support technological advancement and ensure effective implementation of these initiatives (Villano et al., 2023).
7. Promoting national tourism and addressing security concerns are essential strategies to attract international tourists and diversify sources of international visitors (Andrés Rosales et al., 2023). By focusing on national tourism, destinations can stimulate local economies and enhance their appeal to a broader audience. Additionally, redesigning tourism products and services to align with changing consumer preferences and safety expectations is crucial (Roxas et al., 2022). This involves creating sustainable, culturally immersive experiences, incorporating digital solutions for seamless booking, and prioritizing health and safety measures. These efforts will not only rejuvenate the tourism sector but also contribute to local economies, job creation, and resilience in the face of global uncertainties.

5.1.8. Reported limitations

70% of the total screened documents reported limitations in their studies. Political and economic challenges present significant limitations that impact various aspects of development and policy implementation. One major challenge is posed by neoliberal economic ideologies, which often prioritize market-driven approaches over socio-economic sustainability. This is compounded by vested interests that resist change and the need for public pressure to drive socio-economic change towards sustainability (Diesendorf, 2020). Additionally, there are significant hurdles in the adoption of new technologies, market integration, and the sustainability of cooperative initiatives, which can hinder economic and social progress (Rodríguez Fernandez et al., 2023). The variability in employment potential data and actual employment numbers based on budget and economic viability further complicates long-term planning and policy effectiveness (Goswami et al., 2020). Urban labor markets face the absence of a comprehensive labor governance architecture, leading to unregulated and often exploitative labor conditions (Jayaram et al., 2020). Moreover, the wide-ranging impacts of economic stimulus measures, sectoral feedbacks, and societal changes due to the pandemic are often not fully considered, leading to incomplete and potentially ineffective policy responses (Rochedo et al., 2021). Lastly, there is a notable lack of research on the effectiveness of green stimulus measures and the specific impacts of COVID-19 on the transition to a sustainable economy, leaving policymakers without crucial information to guide their decisions (Strachan et al., 2022).

Methodological limitations significantly impact the robustness and reliability of studies and policy analyses. Key challenges include the lack of disaggregated data at the municipal level and the absence of COVID-19-specific variables in analyses, which hinders precise understanding and targeted interventions (Andrés Rosales et al., 2023). Survey design issues, higher incompleteness rates for online surveys, and the absence of detailed data on undocumented residents and indigenous populations further complicate data accuracy and comprehensiveness (Bichkoff et al., 2023). Studies focusing only on periods up to the beginning of the COVID-19 pandemic leave uncertainties regarding the long-term effectiveness of recovery measures and differences in implementation among countries.

(Casquilho-Martins et al., 2022). Additionally, social desirability bias, where respondents provide socially acceptable answers rather than truthful responses, can distort survey results and lead to overreporting of positive behaviors or underreporting of negative behaviors (Cowell et al., 2023). The need for longer study periods, longitudinal worker data, causal inference methodologies, and specific datasets to mitigate sample selection bias underscores the complexity of obtaining reliable data (Habiyaemye et al., 2022).

Data limitations further exacerbate these methodological challenges. Reliance on simplified estimation methods and assumptions due to data constraints can lead to potential inaccuracies (Roxas et al., 2022; Sennoga et al., 2022). The assumption of accurate data availability often does not hold true, leading to flawed models and analyses (Yavorsky et al., 2021). Focusing only on certain sectors, such as power and biofuels, and ignoring wage dynamics, long-term impacts, inflationary effects, and material costs can result in incomplete assessments of green investments' effectiveness in achieving emission cuts (Yoon, 2023). The lack of longitudinal data on post-pandemic effects and the need for longer-term analyses to fully understand the effectiveness of economic policies in response to the pandemic highlight the importance of extended study periods (Kitamura et al., 2020; Villano et al., 2023; Yoon, 2023). Methodological limitations also include the need for additional approaches like qualitative methods, the complexity of disentangling the effects of migrant workers from other factors affecting resilience, and the reliance on literature reviews and secondary data due to movement restrictions and data blackouts in specific regions (Anderson et al., 2021; Gebremichael et al., 2023; Jacek Lewkowicz et al., 2024).

Sector-specific and geographic biases pose significant limitations to the comprehensiveness and applicability of studies. The qualitative nature of some studies and their focus on localized populations, such as in Cape Town, limit their ability to capture broader national or global contexts, thereby reducing the generalizability of the findings (Zembe-Mkabile et al., 2023). Studies specific to Latin America face similar challenges, as their conclusions may not be applicable to other regions, further emphasizing the issue of geographic bias (Bohoslavsky et al., 2021). Survey responses often exhibit geographical bias, leading to potential underrepresentation of certain stakeholder groups and creating uncertainties regarding the impact of legislative changes on restoration efforts (Brancalion et al., 2022).

Methodological constraints, such as the use of static Computable General Equilibrium (CGE) models, also contribute to sector-specific and geographic biases. These models are unable to quantify the intertemporal effects of policies like the Green Technology Revolution (GTR), necessitating dynamic studies to pinpoint short- and long-term impacts, including emissions reduction (Maxim et al., 2020). The reliance on convenience samples further limits the generalizability of findings, and cross-sectional studies hinder the evaluation of medium- and long-term impacts. Additionally, contextual variables are often not considered, and in-depth comparative analyses between countries are not feasible, exacerbating the limitations associated with sector-specific and geographic biases (Silupú Prado et al., 2024).

6. Conclusions

This scoping review examined various aspects regarding to economic recovery following the COVID-19 pandemic. It provided a synthesis of extant research on implemented and recommended strategies for economic recovery. The review also identified the economic sectors prioritized in these recovery strategies. Furthermore, it investigated how diverse demographic groups, significantly impacted by the pandemic, continued to experience challenges during the recovery phase. The review assessed the specific implications of economic recovery efforts on women and highlighted the limitations and gaps in previous research on the subject.

The majority of academic publications on economic reactivation strategies were concentrated in 2020 and 2021 following the COVID-19 pandemic, with a subsequent decline in the next years, suggesting that initial urgent research needs were addressed or focus shifted to strategy implementation and evaluation. Similarly, our geographical analysis revealed that 42.5% of studies were conducted on a global scale, while 57.5% focused on national contexts, with the United States and India predominating, highlighting both the international impact of the pandemic and the necessity for country-specific economic recovery strategies.

The literature review indicated that 82.5% of the analyzed studies concentrated on particular economic sectors. The most prominent area, accounting for 20% of the research, investigated economic growth strategies and government policies for post-COVID-19 recovery, featuring examples from nations such as the United States, Colombia, and South Korea. Environmental research (10%) concentrated on eco-friendly practices and restoring ecosystems to generate employment, while public health investigations (10%) examined the pandemic's effects on healthcare systems and workers, with a focus on women and essential personnel. Other sectors, including renewable energy, social services, construction, tourism, and small and medium-sized enterprises (SMEs), were each explored in smaller proportions of the studies. These papers discussed economic rejuvenation, infrastructure initiatives, and recovery plans customized to meet specific industry and national requirements.

55% of studies focused on specific demographic sectors, with 20% concentrating on women, highlighting their disproportionate economic challenges during the pandemic, especially in low-income roles and unpaid care work. Migrants were the focus of 7.5% of studies, emphasizing the complexities of migrant labor during the recovery,

particularly in India where millions of urban migrants were forced to reverse-migrate to rural areas. A further 17.5% of studies addressed multiple vulnerable groups simultaneously, including low-wage workers, disabled individuals, and marginalized communities, underscoring the exacerbation of pre-existing inequalities due to the pandemic. Additionally, 2.5% of papers focused on groups like BIPOC, young individuals, high-skilled workers, and tourists, reflecting the diverse economic impacts and recovery needs of various populations. 37.5% of the screened manuscripts highlighted the disproportionate impact of COVID-19 on women, exacerbating caregiving burdens, gender inequalities, economic vulnerability, and labor market disparities, particularly for women of color and those in informal sectors.

Post-pandemic economic reactivation strategies were categorized into seven key areas: changes in government policies and business support (20%), community and collaborative efforts (20%), sustainable and green recovery (17.5%), direct financial and social support (15%), employment and skills enhancement (12.5%), and infrastructure and technological development (7.5%). Government policy changes, including Structural Adjustment Programs and labor deregulation, were critical, while initiatives like South Korea's New Deal and the European Central Bank's PEPP supported economic recovery. Collaborative efforts fostered partnerships and promoted resilience, while green recovery emphasized ecological restoration and low-carbon jobs. Direct financial support included cash transfers and caregiver allowances, while employment strategies focused on digital skills and vocational training. Infrastructure initiatives aimed to stimulate growth through public-private partnerships and housing expansion.

The socioeconomic impact of COVID-19 has exacerbated inequalities, worsened food insecurity, and shifted labor market dynamics, with significant job losses in both formal and informal sectors. Economic disruptions, particularly in vulnerable communities, highlighted the need for targeted recovery strategies that support cooperatives, local production, and sustainable development. Green recovery initiatives, such as ecological restoration and investment in green technologies, present opportunities for job creation and long-term economic growth. Gender inequalities and austerity measures continue to challenge inclusive recovery, while fiscal policies, public-private partnerships, and workforce development will be essential for building resilient post-pandemic economies.

Key recommendations for post-pandemic economic recovery emphasize social and community protection as the most frequent strategy, cited in 30% of reviewed manuscripts, followed by environmental and infrastructure sustainability (15%). Policy and governance improvements were noted in 12.5%, while economic stimulus measures, skills development, and technological advancement each accounted for 10%. Women's rights protection (7.5%) and tourism investment (5%) were also highlighted. These strategies include sustainable infrastructure investments, governance reforms, fostering foreign direct investment, promoting gender equality, advancing technological infrastructure, and prioritizing local tourism to drive long-term, inclusive economic growth.

The majority of studies on economic and policy responses face significant limitations due to political and economic challenges, methodological constraints, and data inadequacies. Issues include the dominance of neoliberal ideologies, resistance to change, difficulties in adopting new technologies, and inconsistent employment data. Methodological flaws such as lack of disaggregated data, survey design issues, and reliance on simplified estimation methods further hinder accuracy and comprehensiveness. Sector-specific and geographic biases also limit the generalizability of findings, with static models and convenience samples failing to capture dynamic and long-term effects. These limitations underscore the need for more detailed, longitudinal, and context-specific research to guide effective policy-making and economic recovery.

The lack of longitudinal studies assessing the long-term outcomes of recovery measures is another key gap identified by this review. Most of the literature focuses on short-term impacts and immediate policy responses, with little attention paid to how these interventions will perform over time or their capacity to withstand future crises. This gap presents a critical avenue for future research, as understanding the long-term efficacy of recovery strategies is essential for developing policies that are both adaptive and sustainable. From a policy perspective, governments should prioritize the integration of gender equity and social justice into their recovery frameworks. This includes investing in social protection programs that support women, low-wage workers, and marginalized communities, as well as expanding access to affordable childcare and flexible work arrangements. Additionally, green recovery initiatives should be scaled up, particularly in lower-income countries, where they can serve as a dual-purpose strategy for economic growth and environmental sustainability.

As a final thought, the findings of this scoping review underscore the need for a more inclusive and equitable approach to economic recovery, one that prioritizes gender equity, addresses structural inequalities, and fosters long-term resilience. As the world moves beyond the immediate crisis, it is imperative that policymakers and researchers focus on creating recovery strategies that not only rebuild economies but also promote social justice and sustainability. Only by addressing the root causes of inequality can we ensure that future crises do not disproportionately affect the most vulnerable, and that economic recovery is both resilient and inclusive.

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Appendix I: Search strategy

The following search strategy was conducted on May 16, 2024, in each database.

(economic reactivation OR economic recovery OR economic revival OR economic rebound OR economic resilience) AND (COVID-19 OR coronavirus OR pandemic) AND (post-COVID OR post-pandemic OR after COVID OR post-lockdown) OR (employment OR women employment OR female employment OR employment of women OR gender employment).

Database	Records retrieved
Web of Sciences	38
PubMed	13
Scopus	41
Sociological Abstracts	84
Sociology: A SAGE Full-Text Collection	10