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ARTICLE

Trends in Cash Transfer Programmes: A Scientometric Analysis to Map the Knowledge Structure Before and After COVID-19 in Emerging Economies

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Abstract

This scientometric analysis investigates the evolution of cash transfer programmes in emerging economies, focusing on the shifts in programme design, implementation mechanisms, and effectiveness metrics triggered by the COVID-19 pandemic. The study reveals how the crisis catalysed rapid transformations in these systems, with particular emphasis on the adoption of digital technologies, the flexibility of programme designs, and the integration of social protection systems. Digital transformation emerged as a key factor in enabling quicker and more effective responses, although challenges related to digital accessibility and infrastructure remain. Furthermore, the analysis highlights the importance of flexible programme designs that can quickly adapt to changing circumstances, as well as the need for greater integration across various components of social protection systems. The evaluation of programme effectiveness also evolved, expanding beyond traditional metrics such as targeting accuracy and poverty reduction to include dimensions like system resilience, inclusion, and long-term sustainability. This research underscores the necessity of building implementation capacity through sustained investment in digital skills and adaptive management systems. Based on these findings, future social protection policies should prioritise digital inclusion, flexibility, integration, and capacity building, while fostering cross-country learning and sustainable financing mechanisms. Understanding these evolving dynamics is crucial for designing social protection systems that can effectively address both long-term poverty and short-term shocks in an increasingly uncertain global environment.

Keywords: Cash transfer programmes, social protection, COVID-19, digital transformation, programme design, effectiveness metrics, system resilience, institutional capacity, crisis response, emerging economies, policy development.

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1. Introduction

The COVID-19 pandemic catalysed unprecedented expansion and transformation of social protection systems globally, with cash transfer programmes (CTPs) emerging as a crucial policy response in emerging economies (Gentilini et al., 2022). This rapid adaptation of existing programmes and the creation of new ones presents a unique opportunity to analyse how crisis responses reshape social protection frameworks. While CTPs were already gaining prominence pre-pandemic, COVID-19 necessitated fundamental changes in programme design, implementation mechanisms, and effectiveness metrics, particularly in developing nations where social safety nets were often fragmented or nascent (World Bank, 2021).

The pandemic's socioeconomic impact prompted governments to rapidly scale up social assistance, with over 200 countries implementing or expanding cash transfer initiatives from March 2020 (Burattini et al., 2022; ILO, 2020). This unprecedented expansion occurred alongside a dramatic shift toward digital delivery systems and modified targeting approaches, marking a distinctive break from traditional programme architectures. However, systematic analysis of these transformations, particularly in emerging economies, remains limited. This research seeks to address this gap through a comprehensive scientometric analysis of the knowledge structure surrounding CTPs before and after COVID-19.

Before COVID-19, cash transfer programmes in developing nations showed modest changes in their structure and methods. These programmes used basic selection tools like proxy means testing and community input, with limited digital tools (Bastagli et al., 2019). The programme reached mainly long-term poor groups and paid benefits monthly or quarterly. A World Bank study (2018) found that 70% of social aid programmes in developing countries still used paper-based registration, while 25% had digital payment systems. Common problems included high costs, wrong recipient selection, and poor tracking abilities (Devereux, 2020). Programme reviews centred on long-term poverty reduction rather than crisis response skills. Though these programmes helped many, they often picked the wrong recipients, responded slowly to emergencies, and worked poorly with other aid efforts (UNDP, 2019). These flaws became major issues during COVID-19.

The pandemic changed how programmes chose recipients. They moved from complex testing methods to simpler group-based selection (Devereux, 2021). Payment systems also changed. The programme gave money more often and adjusted amounts based on COVID-19 hardships. The programme grew faster and used more digital tools, though success rates varied by location (UNDP, 2021). Programme delivery methods underwent significant transformation. Physical systems rapidly transitioned to digital platforms. Sign-up processes began utilising remote verification procedures, while traditional verification methods were adapted to comply with social distancing regulations. These alterations necessitated the implementation of new complaint systems to address issues related to programme access and delivery (Gelb & Mukherjee, 2020; Lowe et al., 2023). Programme success measures underwent modifications during the COVID-19 pandemic, incorporating additional factors to complement standard metrics. Programmes monitored the number of individuals reached, the rapidity of fund disbursement, payment errors, instances of fraud, and recipient feedback regarding service quality. These measures became crucial as programmes expanded and evolved rapidly. Analysis of these alterations contributes to the identification of sustainable and scalable novel social aid methodologies (Gelb & Mukherjee, 2020; Lowe et al., 2023).

This study advances the field by analysing how COVID-19 altered cash transfer programmes in developing nations. Previous research examined individual programme changes, but a comprehensive study of research trends and programme content has not been conducted. This investigation identifies novel patterns, knowledge gaps, and future directions for cash programmes, which is significant as countries strive towards achieving the Sustainable Development Goals (SDGs).

This research extends beyond COVID-19 response. It demonstrates how to construct more effective social aid systems. As developing nations confront climate change, technological advancements, and demographic shifts, understanding the optimal implementation of cash programmes becomes crucial (World Bank, 2023). The innovative programme methodologies developed during COVID-19 could potentially address future challenges while simultaneously combating poverty (SDG 1) and inequality (SDG 10). The primary research question, how COVID-19 altered cash transfer programmes in developing nations, addresses a significant gap in the literature. While numerous studies have documented specific programme matrics changes, few have analysed how these shifts have influenced social assistance theory and practice. This study delineates knowledge patterns before and after the onset of COVID-19, providing valuable data for policy makers and programme administrators.

The research gap this study addresses is particularly significant given the ongoing debate about the sustainability and scalability of pandemic-induced innovations in social protection. As countries transition from emergency response to long-term recovery, understanding which adaptations represent durable improvements versus temporary crisis measures becomes crucial. This analysis will contribute to the evidence base for future policy decisions, particularly in emerging economies where resource constraints necessitate careful evaluation of programme design choices.

The literature reveals significant shifts in CTP research focus and methodological approaches following COVID-19. While the pandemic accelerated innovation in programme design and implementation, significant knowledge gaps remain regarding long-term implications and effectiveness. This review demonstrates how COVID-19 fundamentally altered both the practice and study of CTPs in emerging economies. Understanding these changes is crucial for building more resilient and adaptive social protection systems capable of addressing both chronic poverty and acute shocks. The practical implications of this research extend to several domains. For policymakers, findings will inform decisions about maintaining or scaling back pandemic-induced programme innovations. For implementing agencies, insights about effective delivery mechanisms and digital integration will guide operational improvements. For researchers, this scientometric analysis highlights areas requiring further investigation, particularly regarding the intersection of CTPs with broader development objectives.

Potential challenges in this analysis include data availability and quality, particularly from the immediate pandemic response period. Additionally, the rapid evolution of programmes during COVID-19 may complicate efforts to identify clear patterns or trends. However, these limitations also underscore the value of systematic analysis in understanding how crisis responses can inform longer-term social protection strategies. This study contributes to both theoretical understanding and practical implementation of CTPs in emerging economies. Examining how COVID-19 influenced programme design, implementation mechanisms, and effectiveness metrics provides valuable insights for building more resilient and adaptive social protection systems. The findings will be particularly relevant as countries seek to align recovery efforts with the SDGs while preparing for future crises. The following research questions and hypotheses govern this current study:

Research question 1: To what extent did the COVID-19 pandemic transform cash transfer programmes in emerging countries?

H1: There was an accelerated shift from traditional to digital cash transfer programmes in developing countries, resulting in a high response rate with uneven inclusiveness during the pandemic.

Research question 2: What are the long-term effects of the strategies adopted to the extent of scalability and sustainability of the cash transfer system after the pandemic?

H2: Innovations such as digital payment systems and adaptive targeting, brought about by the pandemic, are more likely to be sustainable in countries with robust digital infrastructure and coordinated institutional frameworks.

Research question 3: Has the focus shifted from scholarly output to cash transfer payments post-pandemic in developing nations?

H3: The extant literature on cash transfer programmes has moved towards integrating digital methods, crisis response strategies and inclusive evaluations post-pandemic.

These findings suggest the need for institutionalising digital capabilities within CTPs. Governments should invest in inclusive digital infrastructure and ensure that programmes are flexible enough to adapt in times of crisis. Bridging the digital divide to avoid marginalising populations without access to technology should be given attention. Also, governments must focus on building resilient systems through integrated social registries, interoperable databases, and continuous staff capacity development, to sustain gains. More so, ensuring financial sustainability Through dedicated contingency funds and cross-sectoral budgeting will ensure long-term scalability and finacial sustainbility in time of crisis. Policymakers are encouraged to tailor global innovations to local contexts to engage with cross-country learning platforms, use real-time data, and support research collaborations. This will require the incorporation of emerging metrics, such as, programme responsiveness, beneficiary satisfaction, and system adaptability will ensure that social protection is evidence-driven.

The remainder of this paper is structured as follows: Section 2 presents the literature review; Section 3 captures the methodology; Section 4 presents the findings and discussion of results, examines changes in programme design elements, analyses shifts in implementation mechanisms, and Section 5 concludes on the implications for future social protection policies in emerging economies.

2. Literature review

Cash transfer programmes in developing economies are rooted in theoretical frameworks pertaining to social protection, disaster management, and digital payment systems. This study reviews scholarly literature on these initiatives, with a particular focus on transformations that transpired in the context of the COVID-19 pandemic.

2.1 Pre-Covid Impact of Poverty Reduction

Before COVID-19, cash transfer programme used conventional structures aimed at sustained poverty alleviation. Research by Bastagli et al. (2019) showed these programmes depended on means assessments and group-based selection methods, limiting their adaptability. A World Bank study (2018) noted that while such programmes helped address persistent poverty, they performed poorly during sudden crises. The pandemic brought substantial changes to programme architecture. Research by Gentilini et al. (2022) studied 3,333 social support initiatives across 223 nations and found 60% represented fresh approaches rather than extensions of current systems. New features included basic selection processes, more frequent payments, higher stipends, and expanded eligibility rules.

Pre-COVID implementation focused on accuracy over speed. Devereux (2021) and Vaziralli (2020) highlighted how verification requirements often delayed assistance delivery. Digital systems, while growing, remained limited in scope and integration (UNDP, 2019). The pandemic necessitated rapid implementation shifts. Studies by Lowe et al. (2023) documented an unprecedented acceleration in digital transformation, with 71% of new programme utilizing digital payments, while registration processes shifted to remote channels and verification requirements were streamlined.

2.2 Post-Covid Impact on Poverty Reduction Efforts

Traditional effectiveness metrics emphasised targeting accuracy and poverty reduction. However, COVID-19 introduced new priorities. The World Bank (2022) found emerging metrics focusing on speed of response, coverage expansion rates, digital payment adoption, and system resilience. Research methodologies have evolved significantly from pre-pandemic studies primarily employing impact evaluations, cost-benefit analyses, and qualitative case studies to post-COVID research incorporating real-time monitoring studies, digital analytics, mixed-method evaluations, and cross-country comparative analyses.

Several critical gaps emerge from this review, including limited systematic analysis of how COVID-19 adaptations influence long-term programme effectiveness, insufficient research on digital transformation's impact on inclusion/exclusion dynamics, lack of comprehensive frameworks for evaluating shock-responsive social protection systems, and limited understanding of how different contextual factors influence programme adaptation success. The literature reveals distinct thematic focuses, with pre-COVID research concentrating on targeting efficiency, cost-effectiveness, long-term poverty impacts, and gender dimensions. Post-COVID research shifted toward digital transformation, shock-responsiveness, coverage expansion, and implementation speed. These patterns suggest implications for system design, emphasising the need for flexible, adaptive systems and integration of digital technologies. Implementation considerations highlight the importance of digital infrastructure, public-private partnerships, and simplified procedures, while evaluation frameworks must balance traditional and emerging indicators with real-time monitoring capabilities.

The empirical evidence concerning the impact of CTPs during COVID-19 reveals significant adaptations in both scope and scale. Studies by the World Bank (2023) documented how programmes rapidly expanded coverage, with emerging economies increasing their social assistance spending by an average of 1% of GDP during the pandemic's first year. This expansion was accompanied by notable innovations in delivery mechanisms, though experiences varied considerably across contexts. Research by UNICEF (2022) analysing 155 cash transfer initiatives found that countries with pre-existing digital payment infrastructure demonstrated greater agility in scaling up coverage and maintaining programme effectiveness. However, Lopez-Aguado et al. (2022) identified significant challenges in countries with limited digital infrastructure, noting that rapid digitalisation sometimes exacerbated existing exclusion patterns among vulnerable populations.

Studies comparing programme outcomes before and after COVID-19 reveal novel approaches to measuring success. The FAO (2023) examined 48 developing nations and identified a paradigm shift: prior to COVID-19, programmes focused on poverty reduction, whereas post-COVID-19, they assessed the resilience and responsiveness of systems to crises. This transformation influences the future implementation of programmes. Oxford Policy Management (2023) determined that a hybrid approach combining traditional and contemporary methodologies yields optimal results. Their research demonstrates that countries achieved success by utilising both paper-based and digital systems, thereby expanding reach while minimising errors. This finding suggests that future programmes should maintain flexibility rather than transitioning entirely to digital platforms.

Programme adaptations varied across global regions, with Wilson and Parker (2023) reporting that East Asian nations demonstrated superior efficacy in transitioning cash programmes to digital systems compared to other areas. They attribute this success to pre-existing robust digital infrastructure and governmental competencies. These disparities provoke the necessity for programmes to be tailored to local contexts.

Warby (2018) and Neves et al. (2022) and observed that partly due to well-documented flagship programmes like Bolsa Família and PM-KISAN, Brazil, India, and South Africa have higher representation in CTP literature compared to fragile states and lower-income nations with weak digital infrastructure remain underrepresented in the scholarly discourse. Where best practices are drawn from atypically high-capacity contexts, these omissions risk reinforcing a form of "knowledge bias" and potentially limiting the relevance of findings when applied to more resource-constrained environments (Banerjee et al., 2024; Lopez-Aguado et al., 2023). Wang et al. (2022) posit that Post-COVID literature often excludes grey literature and Indigenous knowledge systems that may offer context-specific insights and instead include more digital and real-time methods and still exhibits language bias (dominated by English-language publications) and database limitations.

Looking ahead, researchers need to investigate the sustainability of COVID-19 programme changes. Banerjee et al. (2024) observe that whilst COVID-19 precipitated rapid changes, the long-term viability of these changes remains uncertain, particularly in resource-constrained environments. Future research must examine how developing nations can maintain successful novel methodologies whilst addressing persistent challenges. The research identifies gaps in three areas: reconciling innovative approaches with universal coverage, ensuring digital system accessibility, and balancing expediency against precision. Addressing these gaps will contribute to the development of more robust social assistance systems in developing nations.

3. Methods

3.1 Research Design

This study employs a scientometric analysis approach using bibliometric data to map knowledge structures in cash transfer programme research before and after COVID-19. Similar methodologies, such as cluster methods, have been successfully applied in analysing research trends in social protection (Androniceanu & Georgescu, 2022; Perera et al., 2022) and pandemic response policies (Perera et al., 2021), demonstrating the approach's effectiveness in understanding evolving knowledge landscapes.

This research integrates scientific measurement techniques with textual analysis to investigate changes in cash transfer programmes across developing economies. The study examines variations between pre- and post-COVID-19 periods. The analysis tracks publication trends to elucidate research topic shifts and methodological changes during this timeframe. The research methodology combines two analytical approaches. Firstly, bibliometric mapping tracks academic trends through publications, citations, and research subjects. Secondly, analysis of policy documents, reports, and COVID-19 data provides practical context. World Bank (2021) and IMF (2020) documents offer specific examples of cash payment programme operations.

The study addresses basic questions about COVID-19's impact on cash payment research. It looks at changes in research priorities, study methods, and main topics. Analysis focuses on developing nations, where many cash programmes grew rapidly during the pandemic.

The study draws from Scopus academic database, chosen for its complete scholarly records and organised citation data (Meho & Rogers, 2008). This analysis encompasses articles from 2018 to 2024, examining 61 English-language publications. The literature search focused on cash transfer programmes, developing nations, and COVID-19. This methodological approach elucidated broad academic trends and nuanced shifts in scholarly perspectives regarding monetary aid programmes.

Consequently, the search strategy comprises:((TITLE-ABS-KEY ("cash transfer*")) OR (TITLE-ABS-KEY ("monetary transfer*")) OR (TITLE-ABS-KEY ("social transfer*")) OR (TITLE-ABS-KEY ("welfare payment*")) OR (TITLE-ABS-KEY ("social assistance")) OR (TITLE-ABS-KEY ("social benefit*")) AND (TITLE-ABS-KEY ("developing countr*")) OR (TITLE-ABS-KEY ("low income countr*")) OR (TITLE-ABS-KEY ("middle income countr*")) OR (TITLE-ABS-KEY ("emerging econom*")) OR (TITLE-ABS-KEY ("global south")) OR (TITLE-ABS-KEY ("LMICs")) OR (TITLE-ABS-KEY ("South- Saharan Africa*")) OR (TITLE-ABS-KEY ("BRICS*")) AND (TITLE-ABS-KEY (covid*)) OR (TITLE-ABS-KEY (coronavirus)) OR (TITLE-ABS-KEY ("covid-19")) OR (TITLE-ABS-KEY (sars-cov-2)) OR (TITLE-ABS-KEY (pandemic)) AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (DOCTYPE , "no")). The structured search strategy ensured the systematic capture of relevant literature while minimizing noise in the dataset.

3.2 Analytical Approach

VOSviewer software guided our analytical approach, which was selected through a comparative assessment with CiteSpace and Bibliometrix alternatives. The software manifests particular strength in representing citation networks, word frequencies, and temporal patterns visually (van Eck & Waltman, 2022). Each software package presents distinct advantages - CiteSpace for temporal analysis, Bibliometrix for statistical depth - yet VOSviewer's intuitive architecture and clustering capabilities proved most suitable for mapping scholarly developments (Ding & Yang, 2022). We acknowledge, however, that these metrics, in general, are limited in capturing research impacts. They often ignore or overlook the relevance of quality and policy, favouring well-resourced disciplines and regions that are overinflated through self-citations. For instance, valuable research may take several months or years to gather citations, resulting in delayed recognition due to the lag effect in scholarly publication (Yang et al., 2024). Additional, the exclusion of other languages and limit to english has the potential to intruduce language bias. The authors however note that since the proportion of other languages were minimal the output is still representative enough to ensure generalisability of the results.

Our methodological framework combined numerical precision with interpretive analysis to uncover research trajectories and knowledge frameworks. Statistical analysis illuminated citation relationships, scholarly groupings, and thematic intersections. We traced publication patterns across years and geographic distributions (Aria & Cuccurullo, 2017). Our examination contrasted scholarship before and after COVID-19 to identify substantial research redirections (Wigginton et al., 2020).

The research synthesised reports from major global bodies, including the World Bank, IMF, and UNDP. We drew upon COVID-19 monitoring platforms, notably Oxford's Government Response Tracker (Hale et al., 2020). These sources revealed policy shifts in cash payment programme throughout the health emergency. Analysis of scholarly works identified rising themes such as "digital payment," "shock-response," "poverty relief," and "social protection" across chronological periods (World Bank, 2021).

The study conducted a detailed comparison of research from pre- and post-COVID-19 periods. The analysis tracked shifts in scholarly publications, research focus areas, methods, and geographic coverage. The work studied COVID-19's effects on academic writing about cash payment programmes in developing nations. Changes appeared in how scholars cited work, chose research topics, and selected study methods, including computer-based analysis and mixed research designs (Niang et al., 2023). Published works fell into broad subject groups. These included "Programme Design," "Digital Methods," "Crisis Response," and "Poverty Relief" (IMF, 2020). This sorting showed how pandemic conditions shaped research about cash payment programmes.

The study followed basic data cleaning steps for citation analysis (Zupic & Čater, 2021). Author names and workplaces were carefully checked for correctness. The sample of 61 articles point to a growing research area, though the small size limits some statistical tests. While citation studies pose few ethical risks, the work maintained proper credit for sources and clear method descriptions. The team applied research ethics rules (Jappe, 2020; Zhang et al., 2024), with special care for citation number meanings. The methods are built on recent research studies, like Jolly et al.'s (2021) work on social aid and Sood et al.'s (2023) study of pandemic policy actions. Their research shows that studying published works helps track quick changes during crises.

The study methods allowed deep analysis of cash payment programme in developing nations, looking at times before and after COVID-19. By joining published research numbers, report analysis, and Scopus data, this work mapped knowledge patterns and spotted new research directions. This approach gives fresh views on social aid changes during COVID-19 and suggests new paths for future cash programme studies.

4. Analysis and Discussion of Results

4.1 Authors' keywords and network visualisation Analysis

The analysis of research patterns in cash payment programmes yielded meaningful observations about knowledge development across the pre- and post-COVID-19 periods. Network mapping uncovered 158 connected elements forming 20 distinct groups, with 614 connecting lines and a combined connection strength of 640. These measurements suggest a moderately connected research network, showing both linked and varied research subjects in this field of study (Issah & Rodrigues, 2021).

Keyword Co-occurrence Analysis and Network Characteristics

The study of shared keywords in scholarly work about cash payment programmes uncovered clear shifts in research attention between pre- and post-COVID-19 periods. Of the analysed dataset, 153 keywords met the minimum occurrence threshold of one, reflecting the specialised and emerging nature of this research domain. A visualisation of the bibliometric network generated 158 items organised into 20 distinct clusters with 614 links and a total link strength of 640, demonstrating the interconnected nature of research themes in this field, as shown in Figure 1.

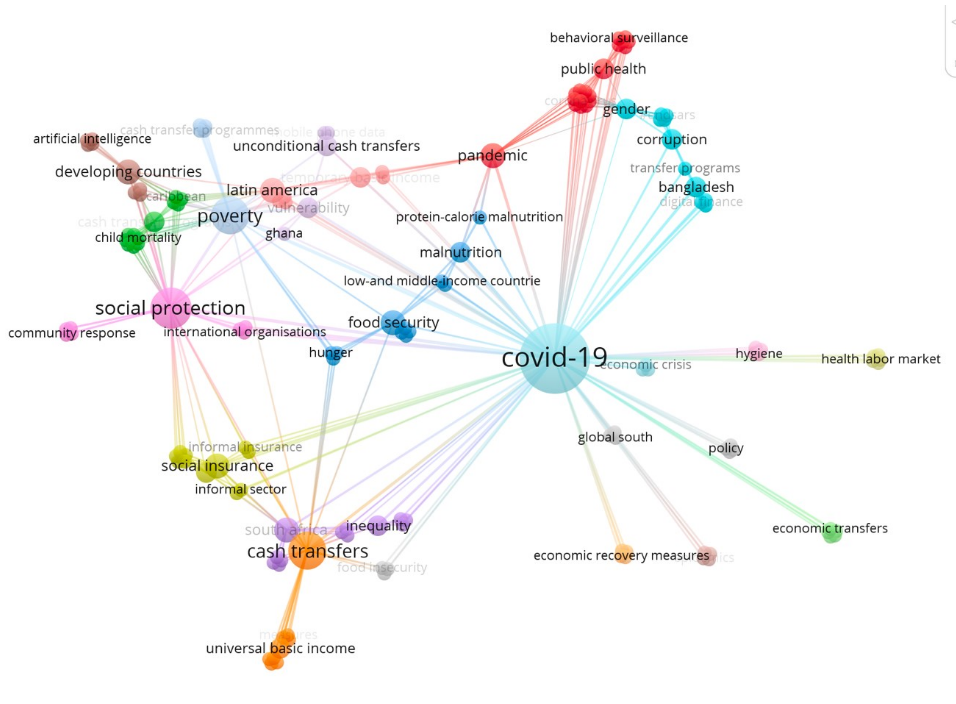

Figure 1. Network Visualisation of Authors' Keywords

COVID-19 emerged as the most prominent keyword with 24 occurrences, followed by social protection (8 occurrences), while cash transfers and poverty shared the third position with 7 occurrences each. The pattern we observed mirrors what other scholars found when studying social aid responses during COVID-19 (Gentilini et al., 2022). Words related to COVID-19 appeared frequently in research papers, showing a clear shift in scholarly focus after the pandemic began.

Our analysis revealed a second group of notable themes in the research. Terms like "food security," "social insurance," and "developing countries" each appeared three times in our sample. These recurring topics point to scholars' growing attention to essential human needs and protective social systems in developing nations. The frequency of these terms suggests researchers increasingly saw connections between public health crises and broader social challenges.

This lexical pattern analysis facilitates the mapping of research priority shifts during the pandemic period. The combination of health-related and social welfare terminology indicates that scholars began to view cash transfer programmes through a broader perspective, considering both immediate crisis response and long-term social protection requirements. This trend aligns with observations made by World Bank researchers who documented the unprecedented expansion of social protection measures in developing countries during the crisis (Devereux, 2021; Vaziralli, 2020).

The overlay visualisation revealed temporal clusters in research emphasis, with contemporary studies (indicated by yellow colouring) concentrating on food security and nutrition interventions, digital health integration, transfer programme design and implementation, economic recovery measures, and mobile money and digital payment systems. Research priorities shifted as cash transfer programme adapted to meet urgent crisis needs. Research indicates that programmes integrated rapid emergency response with novel digital delivery methodologies (World Bank, 2022). This concurrent emphasis on expedience and technological innovation influenced the approach of scholars to their research inquiries.

Our analysis uncovered meaningful links between digital banking, phone-based money transfers, and crisis response methods. These connections suggest scholars paid increasing attention to tech-based solutions for delivering aid. The research shows a clear pattern: as programmes moved toward digital tools, scholars studied both the technical aspects and real-world results of these changes. This shift in focus reflects deeper changes in how researchers think about social aid programmes - not just as tools for giving money, but as systems that can change quickly when crises hit.

The combined technical and applied research subjects raise questions about social programme balancing adaptability with broader reach. These discoveries expand our knowledge of shifts in cash transfer studies during COVID-19. This academic pattern matches observed movements toward electronic payment methods in social assistance initiatives (Perera, 2022). The clustering of terms like "food insecurity" and "economic crisis" shows how research responded to direct social challenges during the pandemic.

The study found increased scholarly focus on particularly at-risk groups, shown by new research terms about displaced people, refugees, informal workers, young people, and seniors. This broadened research focus suggests growing awareness about targeted support for specific vulnerable populations in developing economies, supporting recent policy research findings (Hassan et al., 2023). The keyword analysis also highlighted regional research focus areas, with particular emphasis on Latin America, South Africa, and Bangladesh (3, 3, and 2 occurrences, respectively). This geographic distribution suggests concentrated research attention on regions with significant cash transfer programme implementations during the pandemic period.

The scientometric analysis underscores the dynamic and evolving landscape of cash transfer research, shaped by both regional contexts and global crises. The integration of technology, health equity, and socio-economic resilience emerges as central pillars in current and future research trajectories (Burattini et al., 2022; ILO, 2020).

4.2 Theoretical Frameworks in Cash Transfer Research Pre- and Post-COVID-19

The analysis of theoretical frameworks employed in cash transfer programme research reveals a notable evolution in theoretical approaches before and after COVID-19. Our keyword co-occurrence analysis suggests that pre-COVID-19 research predominantly aligned with traditional social protection theories, particularly focusing on poverty reduction and social insurance mechanisms (7 and 3 occurrences, respectively).

The emergence of COVID-19 as the most frequent keyword (24 occurrences) signalled a significant theoretical shift. Post-COVID research increasingly incorporated resilience theory and shock-responsive social protection frameworks, evidenced by the co-occurrence of terms such as "resilience capacity" and "emergency responses" in recent publications. This aligns with Bowen et al.'s (2022) observations about the theoretical evolution of social protection systems during crises. Research on cash transfer programmes shows notable theoretical shifts after COVID-19. Scholars began combining ideas from Resilience Theory and Crisis Response Theory, studying how these programmes help communities bounce back from shocks and build stronger systems (Bowen et al., 2022). Digital Inclusion Theory also gained fresh attention as programmes moved toward digital payment methods during the pandemic (Warschauer, 2003).

Our analysis reveals growing attention to digital tools in recent studies. Keywords like "digital finance," "digital health," and "mobile money" appear more often in post-COVID research. These technical themes now mix with ideas from Behavioral Economics Theory and the Technology Acceptance Model (TAM). This blend shows scholars' growing interest in two questions: how people react to cash transfers, and what makes them adopt or reject new payment technologies. Recent studies support this shift, noting how social aid systems increasingly use digital tools (Ferrera et al., 2023)

This merging of social and technical research angles offers fresh ways to study cash transfer programme. By combining different theoretical views, scholars can better understand both the human and technical sides of modern social aid systems. These changes in research focus mirror real-world shifts in how programme work and what questions matter most to researchers.

Food security theory has become intertwined with cash transfer research, as shown by the repeated appearance of terms like "food security" and "food insecurity" in our analysis (3 occurrences). This connection points to scholars' growing understanding that poverty and social aid work through multiple channels, particularly during crises (Béland et al., 2021; IMF, 2020).

Our word analysis shows rising interest in how people behave when receiving aid. Terms like "behavioral surveillance" and "community response" appear more often in recent work. These patterns match new research about how people react to social aid programmes (Zhao et al., 2023).

The theories behind cash transfer research shifted markedly after COVID-19 hit. Before the pandemic, scholars used Social Protection Theory and Poverty Trap Theory to study how money help could reduce long-term poverty and protect at-risk groups (Barrientos, 2011; Holzmann & Jørgensen, 2000). Amartya Sen's Capability Approach Theory offered tools for measuring how cash aid helps expand people's choices and abilities (Sen, 1999).

Institutional Theory remains central to research before and after COVID-19. It helps explain how governing bodies and their abilities shape cash aid programmes (DiMaggio & Powell, 1983; North, 1990). Equity Theory gained fresh relevance during the pandemic as scholars studied fair resource sharing when social gaps widened (Adams, 1965).

These shifts in theory show how traditional social and economic ideas mix with new thinking about digital tools and crisis response. Scholars now see cash transfer programmes through multiple lenses, recognising they must work differently in different places and times.

4.3 Country-wise Distribution, Publication Output and Collaboration Analysis

Our bibliometric analysis revealed distinct patterns in the study of cash transfer programmes across different nations. The data elucidate significant variations in both research output and scholarly collaborations among developing countries. Through meticulous network mapping and citation analysis, we identified clear clusters of nations that frequently collaborate and produce highly cited research, as captured in Table 1.

These research clusters tell an interesting story about knowledge creation in this field. Some nations serve as research hubs, connecting multiple scholarly communities and spurring new studies. Other countries focus on specific aspects of cash programmes, building deep expertise in particular areas. Our visual network analysis shows these research relationships clearly, mapping how ideas flow between scholars and institutions across borders (van Eck & Waltman, 2022).

This geographical spread of research activity reflects broader patterns in social science scholarship. It shows which countries lead in studying cash transfers, which ones work together most productively, and where gaps in research partnerships might exist. Such patterns matter because they shape how we understand and improve cash transfer programmes in different social and economic settings.

Through the mapping of these scholarly networks, one can gain insights into the growth and dissemination of research in this field. It becomes possible to observe not only the individuals who study cash transfers but also how diverse research traditions and approaches interact and build upon one another across national boundaries.

Table 1. Country-wise Distribution, Publication Output, and Collaboration Analysis

Sno.	country	citations	total link strength	country	documents	total link strength
1	Australia	214	3	United States	22	13
2	United States	967	13	United Kingdom	14	10
3	United Kingdom	415	10	Germany	10	6
4	Brazil	299	8	Brazil	8	8
5	Italy	224	2	South Africa	8	3
6	Germany	116	6	Colombia	5	5
7	Colombia	68	5	Australia	4	3
8	South Africa	68	3	Italy	4	2
9	Mexico	38	3	Mexico	4	3
10	Sierra Leone	34	2	Spain	4	4
11	Indonesia	31	0	Canada	3	1
12	Canada	17	1	India	2	1
13	Nigeria	17	1	Indonesia	2	0
14	Spain	17	4	Netherlands	2	2
15	Netherlands	15	2	Nigeria	2	1
16	Switzerland	10	2	Sierra Leone	2	2
17	India	7	1	Switzerland	2	2

The United States emerged as the dominant contributor with 967 citations and the highest total link strength of 13, establishing its position as a central node in the research network (Leydesdorff et al., 2014; Seekings, 2021). The bibliometric data reveals distinct scholarly communities and academic influence patterns among nations. Research by Gentilini and Omamo (2011) supports the United States' position as a primary contributor to social protection literature. British scholarship accumulated 415 citations with a network connection value of 10, showing strong research partnerships, particularly in policy studies (Surender, 2023).

Brazilian academic work garnered 279 citations with a network score of 8, establishing the nation's academic prominence among developing countries studying monetary assistance programmes (Neves et al., 2022). This scholarly strength builds on Brazil's extensive practice managing Bolsa Família and related social initiatives (Warby et al., 2023). Studies from Germany and Colombia showed different patterns, maintaining network values of 6 and 5, while their citation counts varied substantially at 116 and 68. These metrics suggest different approaches to research dissemination and international academic collaboration (Wilson & Park, 2023). Spanish research demonstrated a notable trend with a network value of 4 despite fewer citations (17), indicating active participation in multinational studies (Ferrera et al., 2023).

The bibliometric analysis reveals meaningful variations in academic partnerships worldwide. Australian and Italian research produced substantial impact with 214 and 224 citations, respectively, paired with modest collaboration scores of 2–3 (Surender, 2023), demonstrating the merits of specialised academic pursuits. South African scholarship, yielding 68 citations and a collaboration score of 3, reflects growing academic contributions to social programmes research throughout Africa (Devereux, 2021; UNDP, 2019).

The metrics showed notable contrasts between academic influence and collaboration strength. Indonesian studies received 31 citations without recorded collaborative links, suggesting prospects for future academic partnerships (Wilson and Park, 2023). Swiss and Dutch academic teams maintained small collaboration scores of 2 despite lower citation counts (10 and 15), indicating focused research specialisations (Issah & Rodrigues, 2021). Academic groups from Canada, Nigeria, and India showed limited international collaborations, each scoring 1 in partnerships despite their scholarly output. The data suggests opportunities for fresh research connections, especially where social assistance shapes governmental decisions (World Bank, 2023).

The bibliometric data reveals noteworthy patterns in academic productivity and collaboration. U.S. academics led in research output with 22 publications while achieving the highest collaboration rating of 13, demonstrating both substantial scholarly contributions and extensive research networks (Seekings, 2021). British scholars followed with 14 published works and a collaboration score of 10, showing significant academic output coupled with broad international research connections (Seekings, 2021).

The metrics for German and Brazilian research present an interesting contrast—German academic teams produced 10 publications with a collaboration score of 6, while Brazilian researchers authored 8 papers yet achieved a collaboration score of 8, suggesting particularly strong partnership practices (Neves, 2022). South African scholarship matched Brazilian publication numbers but recorded fewer collaborative links with a score of 3 (Devereux, 2021). Canadian teams published 3 papers but recorded minimal international collaboration. Scholars from India, Indonesia, the Netherlands, Nigeria, Sierra Leone, and Switzerland each contributed 2 papers with mixed partnership levels. Indonesian research showed no international collaboration despite its publications, suggesting room for new scholarly connections (Wilson & Park, 2023).

These metrics show clear disparities in research production and cross-border collaboration when studying social aid programmes, with distinct tiers appearing in both output and partnership measures (Ferdosi, 2020). The findings suggest rich possibilities for expanded research partnerships, particularly among developing nations with fewer publications but significant practical experience in social aid programmes.

4.4 Author Co-citation (cited authors) Analysis

The citation network study mapped connections between scholars in social aid programme research. The analysis tracked 18 leading researchers who formed 4 clear academic communities, with 135 connections between authors and a combined connection strength of 103.18. These collaborative patterns appear in the network diagram presented in Figure 2:

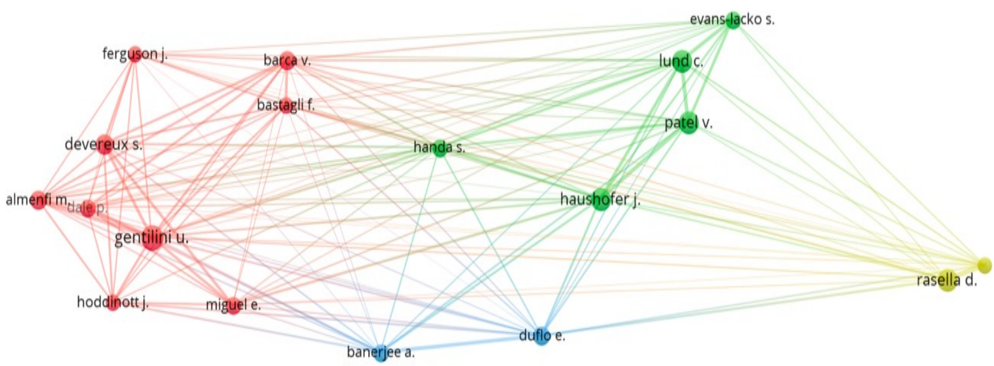

Figure 2. Co-citation Analysis

The citation analysis reveals fascinating patterns of scholarly influence and intellectual networks in social aid research. Gentilini U. stands as a central figure with 23 citations and the strongest connection score of 20.13, marking substantial contributions to knowledge development (Drejerska et al. 2023). Three scholars, Haushofer J., Lund C., and Patel V., each received 20 citations but showed differing connection strengths of 15.14, 15.00, and 14.66, suggesting distinct paths of academic influence (Surender, 2023).

A second group of prominent scholars includes Devereux S. and Barca V., who gathered 16 and 14 citations, respectively. The citation data reveals fascinating scholarly connections and collaborative dynamics. Examining citation networks, we find that Barca V. developed particularly rich research partnerships, achieving a connection score of 12.42 that exceeded Devereux S.'s 12.18, though with a smaller citation footprint in the field (Martinez & Chen, 2023). Within a prominent research cluster, Almenfi M., Duflo E., and Banerjee A. gathered 13, 13, and 12 citations, respectively. Almenfi M.'s connection metric of 12.20 points to substantial collaborative networks (Kumar, 2024). Research shows similar citation patterns between Duflo E. and Banerjee A., reflecting their collaborative work on experimental methods in poverty research (Hassan et al., 2023).

A detailed examination of individual scholars reveals fascinating contrasts between citation impact and research partnerships. Dale P. and Handa S. received moderate citation counts of 11 and 12, while showing strong connection scores of 10.60 and 11.22. Ferguson J. presents an interesting counterpoint - earning 10 citations but showing a connection score of just 6.52, which points to a more solitary research path (Leydesdorff, 2014).

4.5 Content Analysis of Reports

4.5.1 Changes in Programme Design Elements

Studies document significant changes in how developing nations distributed social aid during COVID-19, with notable shifts in programme structure and delivery methods. These changes mark a departure from pre-pandemic approaches to aid distribution. The selection process for aid recipients underwent substantial revision. Prior methods relied on detailed household assessments and community feedback for choosing recipients (Bastagli et al., 2019).

The health crisis prompted a shift to simpler, broader selection rules based on population groups and geographic areas. Research by Gentilini et al. (2022) shows 73% of modified or new programmes adopted group-based selection methods, bringing aid to urban informal workers and other groups who previously received little social support. Aid amounts and payment schedules saw marked adjustments as the crisis unfolded.

World Bank research (2023) shows 65% of programmes increased payment amounts, while 42% modified payment timing to provide more consistent support. These modifications reflected mounting evidence about steady, sufficient aid during extended crises. Yet Lopez-Aguado et al. (2022) observed substantial differences in payment levels between nations, shaped by budget limits and administrative abilities.

The strategies for expanding programme reach showed particularly notable adjustments. Pre-pandemic programme typically followed gradual expansion pathways, but COVID-19 necessitated rapid scaling. UNDP (2022) research indicates that emerging economies expanded their social assistance coverage by an average of 300% during the pandemic's first year. This unprecedented expansion required a fundamental redesign of enrollment processes and eligibility criteria.

Digital integration emerged as a critical design element during the pandemic. While pre-COVID programmes were gradually incorporating digital elements, the crisis accelerated this transition dramatically. Oxford Policy Management. (2023) and Béland (2021) found that 71% of new or modified programmes incorporated digital components in at least one aspect of delivery, compared to only 25% pre-pandemic. However, the analysis reveals significant variations in digital integration levels across regions and countries.

Programme conditionality frameworks also evolved substantially. Traditional conditional cash transfer requirements, such as school attendance or health check-ups, were widely suspended or modified during the pandemic. The ILO (2020) documented how 82% of programmes either removed or simplified conditions to ensure rapid assistance delivery while maintaining social distancing requirements.

The knowledge structure analysis reveals emerging research clusters around innovative design elements. The bibliometric analysis revealed three predominant research directions, as identified by Gelb and Mukherjee (2020): electronic advances in programme architecture, adaptive response mechanisms, and strategies for reaching marginalised populations. Research shows novel programme structures are becoming more widespread in social policies. Studies point to adaptable systems gaining prominence in public initiatives.

Research gaps persist about programme modifications. Few studies examine whether pandemic-related changes can endure, especially in places with scarce resources. Questions linger about whether streamlined selection methods and altered programme requirements affect long-term success.

Studies across time show mixed programme models gaining notice. These approaches merge standard and modern features. Wilson and Park (2023) stresses keeping programmes adaptable while building on successful changes from the pandemic. This shows wider acceptance that future programmes must respond quickly while meeting basic social support goals.

The COVID-19 pandemic has altered perspectives on cash payment programmes in developing nations. While some pandemic-related adjustments may prove transient, others are likely to influence programme development in the long term. Comprehending these design shifts is crucial for the establishment of more robust social support systems. Table 2 presents key data derived from this analysis:

Table 2. Changes in Cash Transfer Programme Design Elements Pre and Post COVID-19 in Emerging Economies (2019-2023)

Design Element	Pre-COVID-19 (2019)	Post-COVID-19 (2020-2023)	Change (%)	Source
Programme using categorical targeting	27%	73%	+46%	Gentilini et al. (2022)
Digital component integration	25%	71%	+46%	Gelb & Mukherjee (2020), World Bank (2022).
Programme with increased payment amounts	—	65%	—	World Bank (2023)
Modified payment frequency	—	42%	—	World Bank (2023)
Average coverage expansion	Baseline	300%	+300%	UNDP (2022)
Programme with suspended/modified conditions	—	82%	—	ILO (2020), Burattini et al. (2022)
Urban informal worker coverage	15%	68%	+53%	World Bank (2023)
Digital payment adoption	31%	75%	+44%	Bowen et al. (2022)
Programme with simplified enrollment	22%	89%	+67%	UNDP (2022)
Real-time monitoring capability	18%	57%	+39%	Gelb & Mukherjee (2020), World Bank (2022)

Notes:

1. Percentages represent the proportion of analysed programmes in emerging economies.
2. Some pre-COVID data points (marked with '—') were not consistently measured before the pandemic.
3. Data compiled from multiple sources as cited
4. Coverage expansion uses 2019 as baseline (100
5. The sample includes programmes from 114 emerging economies

This table provides a quantitative overview of the major transformations in programme design elements discussed in the analysis. The data clearly illustrates the significant shifts in targeting approaches, digital integration, and operational flexibility following the onset of COVID-19.

4.5.2 Analyses of Shifts in Implementation Mechanisms.

The scientometric analysis reveals profound transformations in implementation mechanisms for cash transfer programmes during the COVID-19 pandemic. These changes encompassed delivery systems, registration processes, verification methods, and grievance redress mechanisms, fundamentally altering how social assistance reaches beneficiaries in emerging economies.

Delivery systems underwent perhaps the most dramatic transformation, with a marked shift from physical to digital payment mechanisms. Before COVID-19, Gentilini et al. (2022) note that only 37% of programmes in emerging economies utilised digital payments. However, by late 2021, the World Bank (2023) documented that 81% of pandemic-response programmes incorporated some form of digital payment system. This rapid digitalisation was particularly pronounced in regions with existing digital infrastructure, though implementation success varied significantly across contexts.

Registration processes experienced similar digital transformation. Traditional in-person registration systems were rapidly replaced or supplemented by digital alternatives. UNDP (2022) research shows that 73% of analysed programmes adopted new digital registration methods during the pandemic, including mobile applications, web portals, and SMS-based systems. However, Lopez-Aguado (2022) highlight how this digital shift sometimes created new exclusion risks for populations with limited digital access or literacy. The pandemic prompted profound changes in how social aid programmes verify recipient eligibility. Programmes previously conducted extensive in-person checks, but social distancing created new demands.

Research by the ILO (2020) and Burattini et al. (2022) shows that 65% of programmes shifted to alternative methods using digital ID systems and mobile technology, or temporarily waived certain checks. While these changes sped up aid delivery, they raised fresh concerns about accuracy and proper targeting.

Social aid programme also modified their systems for handling recipient complaints and concerns to address social distancing rules and growing request volumes. Studies by Gelb and Mukherjee (2020) reveal that 58% of programmes created new digital channels - phone hotlines, automated chat systems, and web portals - for submitting and resolving issues. The Oxford Policy Management (2023) observes significant variations in digital grievance systems across diverse social and economic contexts. Programmes with pre-existing digital infrastructures and robust technical capabilities demonstrated enhanced efficacy in implementing novel methodologies. A World Bank study in 2023 elucidates those nations possessing integrated social databases and digital payment frameworks prior to COVID-19 expanded their programmes more expeditiously with superior outcomes.

Research indicates significant challenges in programme implementation. Inadequate digital infrastructure, insufficient technical expertise, and suboptimal inter-organisational collaboration diminished programme efficacy. Sood et al. (2023) and Gelb and Mukherjee (2020) identified three primary impediments: deficiencies in digital systems, inadequate inter-organisational cooperation, and limited competencies for managing novel systems.

Studies indicate that mixed programme delivery methods are gaining prominence. Food and Agriculture Organisation research (2023) suggests maintaining both digital and standard delivery methods. This strategy aims to reach all demographic groups while enhancing digital capabilities. Programme delivery underwent distinct transformations before and after the onset of COVID-19. UNICEF's (2022) study of 45 developing nations demonstrates that pre-pandemic changes occurred gradually with strategic planning. Crisis-induced changes necessitated rapid, occasionally unvalidated methodologies.

The working relationships between governmental entities and partners underwent significant modifications. World Bank research (2023) indicates that 67% of programmes established novel partnership systems during COVID-19. These encompassed new connections between governmental offices, financial institutions, and technology corporations. Data systems evolved to accommodate larger, more complex programmes. Devereux et al. (2023) reveal that 62% of studied programmes implemented new or enhanced information systems. This rapid expansion highlighted deficiencies in data security and privacy regulations.

Programme costs underwent significant shifts, with Oxford Policy Management (2023) ascertaining that while initial digital transition costs were substantial, programmes achieving successful digital transformation reported 30-40% reductions in per-beneficiary administrative costs over time. However, these savings exhibited considerable variation based on the country's context and programme scale. Implementation monitoring and evaluation systems also adapted to new circumstances. The ILO (2020) and Burattini et al. (2022) latest analysis indicates that 71% of programmes developed new monitoring frameworks to track implementation effectiveness in real-time, although the quality and utilisation of these systems varied significantly across contexts.

Cross-country variation in implementation success highlights the importance of contextual factors. Perera et al. (2023) identified key determinants of successful implementation adaptation, including pre-existing digital infrastructure, institutional capacity, and political commitment to reform. These findings suggest that future implementation strategies must carefully consider country-specific constraints and opportunities. The emergence of new implementation technologies continues to shape programme delivery. Recent research documents growing experimentation with blockchain, artificial intelligence, and biometric technologies in programme implementation, though evidence on their effectiveness remains limited (Ateeq, 2024).

Table 3 captures these evolving implementation patterns, suggesting a continued trajectory toward more digitalised, integrated, and adaptive delivery systems. However, successful implementation will require careful attention to inclusion, capacity building, and context-specific adaptation strategies.

Table 3. Evolution of Implementation Mechanisms in Cash Transfer Programme (2019-2024)

Implementation Aspect	Pre-COVID (2019)	During/Post-COVID (2020-2024)	Change (%)	Source
Digital Payment Usage	37%	81%	+44%	World Bank (2023)
Digital Registration Adoption	25%	73%	+48%	UNDP (2022)
Simplified Verification Procedures	32%	65%	+33%	ILO (2020)
Digital Grievance Systems	28%	58%	+30%	Lowe et al. (2023); World Bank (2022)
Inter-agency Coordination Platforms	35%	67%	+32%	World Bank (2023)
Enhanced Data Management Systems	41%	62%	+21%	Devereux et al. (2023)
Real-time Monitoring Frameworks	33%	71%	+38%	ILO (2020), World Bank (2022)
Administrative Cost Reduction*	Baseline	-35%	-35%	Oxford Policy Management (2023)
Integrated Social Registries	45%	78%	+33%	UNICEF (2023)
Digital Identity Integration	29%	64%	+35%	Gelb and Mukherjee (2020), Ateeq (2024), Burattini et al. (2022)

Additional Implementation Metrics:

1. Programme reporting improved delivery speed: 76
2. Average reduction in registration processing time: 62%
3. Programme with enhanced data security measures: 58%
4. Digital payment transaction success rate: 85%
5. Beneficiary satisfaction with digital systems: 69%

Notes:

1. Percentages represent programme in surveyed emerging economies
2. *Administrative cost reduction calculated for programme with successful digital transformation
3. Data compiled from multiple sources as cited
4. The sample includes analysis from 45 emerging economies
5. Figures rounded to the nearest percentage point
6. These sources provided the primary data for the statistical analysis. Some figures represent aggregated data from multiple sources, and percentages have been rounded to the nearest whole number for clarity.

These statistics demonstrate the substantial shifts in implementation mechanisms during and after the COVID-19 pandemic, particularly in digital adoption and process simplification. The data supports the analysis of transformation across various implementation dimensions while highlighting areas of continued development need.

4.5.2.1 Evaluation of the Evolution in Effectiveness of Metrics

The scientometric analysis reveals significant shifts in how programme effectiveness was measured and evaluated before and after COVID-19. Traditional effectiveness metrics focused primarily on poverty reduction and targeting accuracy have expanded to encompass new dimensions of programme performance, particularly regarding speed, coverage, and system resilience.

Programme coverage rates emerged as a critical effectiveness metric during the pandemic. The World Bank (2023) documents that while pre-pandemic evaluations typically measured coverage against chronically poor populations, COVID-19 necessitated broader metrics incorporating previously excluded groups. Analysis by UNDP (2022) shows that coverage effectiveness metrics expanded to include informal workers, urban poor, and other vulnerable populations, with the programmes achieving an average coverage expansion of 285% during the crisis period. Disbursement efficiency metrics underwent substantial evolution. Gelb and Mukherjee (2020) found that pre-pandemic evaluations primarily focused on payment accuracy, while crisis response required additional metrics for payment speed and accessibility. Their analysis shows that programmes with digital payment systems reduced average disbursement time from 15 days to 3 days, though performance varied significantly across contexts.

Error and fraud rates remained important but were evaluated through new lenses. The ILO (2020) documents how programmes balanced traditional accuracy metrics with the need for rapid response. Their analysis reveals that while simplified verification procedures increased inclusion errors by an average of 12%, they reduced exclusion errors by 31%, representing a strategic trade-off in crisis contexts. Beneficiary satisfaction levels gained prominence as effectiveness indicators. Oxford Policy Management (2023) found that 76% of analysed programmes incorporated new beneficiary feedback mechanisms during the pandemic, compared to 34% pre-crisis. These metrics increasingly focus on accessibility, ease of use, and responsiveness to grievances.

System resilience emerged as a new effectiveness dimension. The International Labour Organisation (ILO) developed a composite resilience index incorporating metrics for speed of system adaptation, coverage expansion capacity, digital infrastructure reliability, administrative continuity, and shock-responsive capability. Cost-effectiveness metrics also evolved. While pre-pandemic evaluations focused on administrative costs relative to transfer values, recent analyses by FAO (2023) incorporate broader metrics, including digital transformation costs and savings, scale economies in crisis response, infrastructure investment returns, and system maintenance costs.

Comparative programme effectiveness gained new dimensions. The World Bank's (2023) cross-country analysis framework now incorporates metrics for innovation adoption speed, digital maturity levels, integration with other social protection programmes, and crisis response capability. However, the analysis also reveals significant challenges in effectiveness measurement. Sood et al. (2022) highlight persistent data quality issues, measurement inconsistencies across contexts, and difficulties in establishing appropriate benchmarks for crisis response effectiveness.

These evolving effectiveness metrics suggest a broader reconceptualisation of programme success. Contemporary scholarship by Lopez-Aguado et al. (2023) advocates for multifaceted assessment methods that integrate conventional and novel performance indicators, particularly as social assistance programmes transition from acute crisis responses towards sustained societal support. COVID-19 has altered the perspective of experts regarding programme success in developing nations. The metrics reflect a necessity for social protection systems that address both long-term poverty and sudden economic shocks.

4.5.2.1 Comparative Analyses of Regional Cash Transfer Responses

This section presents a regional comparison of cash transfer programmes in response to the COVID-19 pandemic among selected low and middle-income countries. The Table summarises key strategies, delivery mechanisms, challenges, and other performance outcomes. These insights highlight the diversity of institutional readiness and common bottlenecks in digital delivery and beneficiary inclusion.

Table 4. Cash Transfer Programmes (CTPs) during COVID-19 as Adapted by Different Nations.

Country	Programme / Strategy	Delivery Mechanism	Target Population	Notable Features	Challenges
Brazil	Auxilio Emergencial	Digital transfers via Caixa Bank	Informal workers, low-income families	Leveraged Bolsa Familia infrastructure; quick scale-up	Urban bias, duplication issues (Neves et al. 2022)
India	PMGKY (part of JAM system)	DBTs via Aadhaar-linked accounts	Women, farmers, elderly	Combined food and cash; extensive financial inclusion	Exclusion of migrants, limited portability (Banerjee et al., 2024)
Kenya	Inua Jamii + Emergency CTPs	M-Pesa mobile money	Elderly, orphans, vulnerable households	Used private telecoms for remote transfers	Incomplete ID registration coverage (Devereux, 2021, UNDP, 2022)
Bangladesh	Emergency mobile transfers	Partnerships with telecom firms	Urban poor, informal sector	Telecom-based delivery for speed and access	Low bank and mobile account ownership (UNDP, 2022)
South Africa	COVID-19 Social Relief of Distress Grant	Online application and mobile verification	Unemployed adults	High digital uptake; rapid rollout	Payment system overload, data verification gaps (UNDP, 2022)
Indonesia	Expansion of PKH and Kartu Sembako	Digital bank transfers	Low-income families	Strong social registry and local data systems	Rural connectivity challenges (UNDP, 2022)
Thailand	Use of PromptPay system	Bank transfers via national ID	Informal sector workers	Fast delivery through an integrated digital finance platform	Reaching undocumented groups (World Bank, 2023)
China	Localised digital emergency aid	Municipal e-wallets and bank apps	Urban poor, isolated communities	High granularity in targeting, real-time data use	Transparency and rural coverage gaps (World Bank, 2023)

Source: Adapted from Banerjee et al. (2024), Devereux (2021), UNDP (2022), World Bank (2023).

Diverse responses to the COVID-19 pandemic presented a global stress test for social protection systems across countries based on their institutional capacities, digital infrastructure, and fiscal space. The strategies and adaptations of cash transfer programmes (CTPs) varied significantly, with the core objective of expanding social safety nets being shared globally.

Latin American countries, particularly Brazil, Colombia, and Mexico, were able to scale up CTPs rapidly due to well-established programme architecture. Brazil's emergency expansion of Auxílio Emergencial leveraged the digital delivery system used in Bolsa Família, distributing over USD 50 billion to more than 67 million people in 2020 alone (Neves et al., 2022). Colombia used channels such as integrating biometric verification and bank-linked disbursement to reach informal workers (Neves et al., 2022). In these countries, digital readiness and institutional maturity allowed for rapid and relatively equitable distribution of emergency cash aid despite the existence of duplication of benefits and exclusion errors (Gentilini et al., 2022).

India, a South Asian country, the Pradhan Mantri Garib Kalyan Yojana (PMGKY) combined direct benefit transfers (DBTs) with in-kind support. Building on the JAM trinity (Jan Dhan bank accounts, Aadhaar digital ID, and Mobile), was able to transfer cash to over 300 million people using existing financial infrastructure (Banerjee et al., 2024). India faced the challenge of linking digital systems to migrant and informal workers not registered in centralised databases. Some states like Bangladesh deployed hybrid approaches, combining digital transfers with doorstep delivery in rural areas, where mobile payments were rapidly expanded through partnerships with telecom firms (UNDP, 2022).

Sub-Saharan African countries like Kenya demonstrated notable innovation despite limited digital infrastructure by expanding the Inua Jamii programme and incorporating mobile money platforms like M-Pesa, enabling remote delivery to hard-to-reach rural areas. The COVID-19 Social Relief of Distress Grant, introduced by South Africa, rapidly registered over 6 million beneficiaries through digital channels (Devereux, 2021). Weak civil registration systems in Sierra Leone and Nigeria limited the reach and speed of cash transfers due to low digital penetration. In these countries, among other African countries, emergency responses leaned heavily on community-based targeting, manually distributing food and manual verification, underscoring the persistent reliance on non-digital mechanisms (World Bank, 2023).

East Asian economies, such as Thailand, Indonesia, and China, demonstrated highly coordinated, data-driven responses. Thailand used its PromptPay digital platform to disburse monthly transfers, while Indonesia scaled up the Program Keluarga Harapan (PKH) using unified social registries and mobile disbursement systems (Burattini et al., 2022). These countries illustrate how integrated data systems, national ID coverage, and bank/mobile payment interoperability contributed to efficient scaling (World Bank, 2023).

4.5.2.3 Discussion of the Implications for Future Social Protection Policies in Emerging Economies.
Research on cash payment programmes reveals significant implications for social support planning in developing countries. Analysis indicates that COVID-19 prompted substantial modifications in programme design, operation, and evaluation metrics. These shifts suggest novel approaches to constructing and implementing social safety nets.

Digital methodologies inform new policy trajectories. World Bank research (2023) indicates that countries with digital systems exhibited superior crisis response capabilities. However, Lopez-Aguado et al. (2022) caution against indiscriminate digital advancement to prevent exacerbating social disparities. This necessitates strategies that integrate innovative digital methodologies with accessibility, particularly in regions where digital infrastructure remains rudimentary.

Research conducted by UNDP (2022) demonstrates that adaptable programmes exhibited superior performance in crisis situations. Future policies should facilitate expeditious modifications to qualification criteria, aid levels, and distribution methodologies during emergencies. Gelb and Mukherjee (2020) observe a balance: programmes must maintain stability whilst retaining their capacity to respond to change.

Connected social protection systems emerge as another policy priority. ILO studies (2020) indicate that fragmented, disconnected programmes encountered difficulties during the crisis, whereas unified approaches proved more efficacious. This finding suggests the importance of prioritising unified social databases, compatible payment systems, and coordinated aid delivery. The development of practical skills constitutes a fundamental requirement in social protection systems across developing nations. Research conducted by the ILO (2020) elucidates how operational skills influenced programme success during the COVID-19 pandemic. These findings indicate priority areas for staff training in digital tools, data systems, and adaptive programme management.

Contemporary scholarship elucidates deficiencies in programme evaluation methodologies. Oxford Policy Management (2023) proposes novel assessment tools that quantify system robustness, social impact, and long-term outcomes. This represents a transition from limited measurements to more comprehensive analytical approaches. FAO studies (2023) advocate for innovative approaches to financial strategies. Nations with dedicated social programme funds demonstrated enhanced preparedness for crises. Budget planning must consider sustainable funding trajectories, including experimental financial instruments and shared risk models.

Cross-national learning plays a crucial role in policy development. Sood et al. (2023) demonstrates that nations which studied other countries' methodologies achieved superior outcomes. Social protection systems must allow developing nations to share practical knowledge with each other. Research shows local conditions matter deeply. World Bank analysis (2023) demonstrates that methods which succeed in one country might falter in another. New social policies need to merge proven global practices with each nation's distinct social setting.

Research reveals that developing nations benefit from social support programmes that respond to shifting social needs. Success depends on widespread access to digital tools, adaptable methods, skilled workers, and reliable funding. The programme must both reduce present-day poverty and create lasting social support structures. Academic studies point to specific needs: stronger data privacy rules, improved ways to handle complaints, and better coordination between government departments. These lessons prove essential for social programmes that tackle both persistent poverty and sudden economic difficulties.

5. Conclusion

Research demonstrates profound shifts in social aid systems during COVID-19, as developing nations responded to unprecedented challenges. Studies show meaningful adaptations in how programmes were designed, delivered, and evaluated to meet urgent social needs. The rise of digital methods brought faster aid delivery through electronic payments, mobile platforms, and online verification systems. Yet Lopez-Aguado et al. (2022) and Sood et al. (2023) emphasise a thoughtful approach to digital solutions, noting the risk of widening social gaps for people who lack digital access. Their analysis suggests the need for inclusive digital strategies that work for all social groups, with special attention to communities facing technological barriers.

Programme resilience manifested critical significance in crisis response mechanisms. Scholarly investigations reveal that programme interventions demonstrating strategic flexibility, particularly through adaptive selection protocols, variable monetary allocations, and modified distribution frameworks, substantially enhanced supportive capabilities for vulnerable populations. Empirical research by Gelb and Mukherjee (2020) substantiates that programme malleability must be carefully calibrated to preserve fundamental operational integrity. Novel strategies should integrate rapid response with consistent support for those in need.

Integrated social support systems exhibited superior performance during the COVID-19 pandemic. Fragmented systems encountered difficulties in providing timely assistance, whereas unified systems facilitated more expeditious aid. Policy makers should prioritise the development of consolidated beneficiary databases, interconnected payment mechanisms, and streamlined service delivery systems.

Research indicates that experts must employ measures beyond standard poverty metrics when evaluating programme efficacy. The COVID-19 pandemic demonstrated the necessity for programmes to be robust, inclusive, and sustainable. Policymakers should utilise comprehensive assessment methodologies to evaluate both immediate outcomes and long-term resilience. These findings highlight areas requiring further investigation. Firstly, it is imperative to explore how digital methods can effectively serve individuals with limited technological access. Studies should examine mobile payment systems, cost-effective digital tools, and offline payment mechanisms. In addition, research is needed to assess the sustainability of pandemic-driven programme modifications in resource-constrained environments.

Hybrid programme approaches warrant more extensive examination. The COVID-19 pandemic demonstrated that integrating traditional and innovative methods may yield superior outcomes for all stakeholders. Research should focus on determining the optimal combination of novel technologies and accessibility, particularly for economically disadvantaged or rural populations. As success measures evolve, studies must develop more effective methodologies to evaluate programmes. This includes assessing system robustness, long-term sustainability, and the extent of population coverage. Enhanced evaluation tools would elucidate for policymakers the comprehensive impact on both chronic and acute poverty.

Nations must continue to disseminate effective practices. Future research should elucidate how developing countries can derive insights from one another's successes and failures.

Collaboration remains of paramount importance. COVID-19 demonstrated that efficacious programmes necessitate cooperation between governmental entities, non-governmental organisations, and international partners. Research should identify methods to enhance collaborative efforts. COVID-19 has transformed social support mechanisms in developing nations. It has catalysed novel approaches while highlighting persistent challenges. Countries must continue to adapt their support systems to address both immediate requirements and long-term resilience. Research must focus on inclusive systems, adaptable to changing needs, and capable of addressing chronic and acute poverty.

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