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COVID-19, Remote Work and Labor-Market Inequalities in Sub-Saharan Africa: A Systematic Review and Lessons for the Future

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Abstract

This systematic review examines the relationship between COVID-19, remote work and labor-market inequalities in Sub-Saharan Africa. Using a structured review of empirical studies and reports, the paper synthesizes evidence on unequal access to remote work, labor-market outcomes and their distributional consequences across workers and households. The findings show that the ability to work remotely was highly unevenly distributed. Workers with higher education, higher socioeconomic status, formal employment and occupations compatible with digital work were more likely to have access to remote work, while informal, low-skilled and contact-intensive workers faced greater constraints. These differences were reinforced by unequal access to digital infrastructure, reliable electricity, devices and suitable home-working conditions. The pandemic generated substantial and heterogeneous employment, earnings and income losses. Overall, the review shows that remote work functioned as an unequally distributed form of labor-market resilience, reflecting and potentially reinforcing existing inequalities.

JEL classification

D63, J21, O55

Keywords

COVID-19, labor-market inequalities, remote work, Sub-Saharan Africa

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1. Introduction

1.1 Background

The COVID-19 pandemic generated an unprecedented disruption to labor markets worldwide. Lockdowns, mobility restrictions and social-distancing measures abruptly interrupted economic activity and required firms and workers to adopt alternative ways of organizing work. Working from home (WFH) and other forms of remote work became an important mechanism for maintaining economic activity while reducing physical contact. The pandemic consequently accelerated the adoption of digitally enabled work and brought renewed attention to the relationship between technological change, employment and labor-market inequality.

The scope for remote work varies substantially across occupations and economies. Differences arise from the nature of tasks performed, the degree of physical interaction required, and the extent to which work activities can be undertaken using digital technologies. Occupational structures therefore play an important role in determining the potential for WFH, with substantial variation across industries, occupations and locations. Approximately 37 percent of jobs in the United States are estimated to be compatible with WFH, while the share is considerably lower in lower-income economies (Dingel and Neiman, 2020).

Remote-work potential is also closely related to workers' socioeconomic and labor-market characteristics. Education, skills, occupation, employment status and income influence access to jobs that can be performed remotely, creating differences in workers' capacity to adapt to disruptions that limit physical mobility. Low-wage, less-educated and self-employed workers tend to have fewer opportunities for remote work, while the potential for WFH is generally greater among higher-skilled and higher-paid occupations (Gottlieb et al., 2021). These differences make remote work relevant to broader questions concerning the distribution of employment opportunities and economic security.

Importantly, the technical feasibility of performing a job from home does not necessarily imply that workers can effectively work remotely. The realization of remote-work potential depends on access to internet connectivity, electricity, digital devices and appropriate working environments, as well as organizational capacity and the nature of employer–worker relationships. Incorporating internet access into estimates of remote-work potential substantially reduces the share of jobs that can realistically be performed from home, particularly in poorer economies (Hatayama et al., 2023). Remote work is thus determined by the interaction between the characteristics of jobs and the technological and socioeconomic conditions in which workers operate.

The distribution of remote-work opportunities also has important implications for labor-market adjustment during economic shocks. When physical mobility is restricted, workers

with access to remote-compatible jobs may have greater scope to maintain employment and economic activity, whereas workers whose activities require physical presence may face fewer adjustment options. Differences in remote-work capacity can therefore translate occupational and socioeconomic disparities into differences in employment security, working hours and earnings. Remote work consequently represents an important dimension through which technological access may interact with existing labor-market inequalities (Adams-Prassl et al., 2020; Béland et al., 2020).

The implications extend beyond the workplace. Remote work changes the location and organization of paid employment and may interact with household conditions, including housing, access to technology, family structure and the distribution of unpaid domestic and care responsibilities. These factors can influence workers' ability to participate effectively in remote employment and may have different implications for women and men. The organization of paid and unpaid work is therefore an important consideration when examining the relationship between remote work and labor-market inequality (Alon et al., 2020; Collins et al., 2021).

Against this background, the rapid expansion of remote work during COVID-19 provides an important context for examining how access to digitally enabled employment interacts with pre-existing labor-market inequalities. Understanding this relationship requires consideration not only whether jobs can technically be performed from home, but also of the socioeconomic, occupational, technological and household conditions that determine workers' effective capacity to benefit from remote work. These considerations motivate the systematic review of the evidence on COVID-19, remote work and labor-market inequalities.

1.2 Why focus on Sub-Saharan Africa?

Sub-Saharan Africa (SSA) provides a distinct context for examining the relationship between COVID-19, remote work and labor-market inequality. The region entered the pandemic with high levels of informal self-employment, a large agricultural sector, limited formal wage employment and widespread reliance on occupations requiring physical presence. Only a relatively small share of employment is potentially compatible with WFH, estimated at around 16 percent, compared with substantially higher shares in developed economies (Gottlieb et al., 2021; Aoyagi, 2021).

The potential for remote work is further constrained by limited digital connectivity, high access costs, inadequate devices and unreliable electricity, particularly among poorer and rural populations (Hatayama et al., 2023). At the same time, high informality and limited social protection reduce workers' capacity to absorb disruptions when physical work is restricted. These structural characteristics mean that the relationship between remote work

and labor-market inequality in SSA cannot be assumed to mirror patterns observed in high-income economies.

Focusing on SSA is therefore important for understanding how occupational structure, informality, digital access and socioeconomic conditions shape the distribution of remote-work opportunities and the consequences of pandemic-related labor-market disruptions. A regionally focused systematic review can consolidate the dispersed evidence, identify common patterns and gaps across SSA countries, and assess the extent to which existing evidence supports broader conclusions about remote work and labor-market inequality in the region.

1.3 Research gap and contribution of the review

Despite the rapid growth of literature on COVID-19 and WFH, the evidence remains fragmented across countries, disciplines and dimensions of inequality. Much of the influential literature has focused on the United States and other high-income economies, where remote work was more feasible and employment protection and digital infrastructure were generally more developed (Dingel & Neiman, 2020; Adams-Prassl et al., 2020). Although cross-country studies have expanded the evidence base, relatively less attention has been given to how the interaction between remote work and labor-market inequality operates in SSA, where informality, limited digital infrastructure, occupational constraints and unequal access to skills and technology may substantially restrict the feasibility and benefits of remote work.

Against this background, this study systematically reviews the evidence on COVID-19, remote work and labor-market inequalities in Sub-Saharan Africa. The review focuses on four interconnected dimensions: (i) the feasibility and adoption of remote work; (ii) unequal access to remote work; (iii) labor-market consequences of unequal remote-work capacity; and (iv) the implications for persistent socioeconomic inequalities and labor-market resilience. Particular attention is given to differences by education and skills, occupation, gender, income, rural–urban location, digital access and formal–informal employment.

The central argument guiding the review is that remote work should not be understood as a universally available labor-market adjustment mechanism. In SSA, its potential is conditioned by structural inequalities in occupations, skills, digital access, income, gender, geography and social protection. COVID-19 provides an important lens through which to examine these relationships but understanding them also requires attention to the pre-existing institutional and technological conditions that shaped who could benefit from remote work and who remained exposed to labor-market shocks. By bringing together evidence across SSA countries and dimensions of inequality, this review contributes to a more regionally

grounded understanding of the distributional consequences of remote work during the pandemic and identifies important gaps in the existing evidence.

The remainder of the paper is organized as follows. Section 2 outlines the methodology and conceptual framework. Section 3 describes the included studies and synthesizes the evidence. Section 4 discusses the findings in relation to broader literature. Section 5 presents the study limitations and avenues for future research. Section 6 concludes with policy implications.

2. Methodology

2.1 Review design

This study systematically reviews the literature on COVID-19, remote work, and labor-market inequalities in SSA. It examines how the pandemic-induced expansion of remote work affected employment, working hours, earnings, and job security across workers differentiated by skills, education, gender, occupation, location, and socioeconomic status.

The review follows a systematic search and screening process informed by the PRISMA 2020 framework (Page et al., 2021). Given the heterogeneity of study designs, countries, remote-work definitions, outcomes, and identification strategies, findings are synthesized qualitatively.

2.2 Search strategy

A systematic search is conducted using Scopus, Web of Science, EconLit, JSTOR, ScienceDirect, and Google Scholar. In addition, working papers and reports from reputable international organizations and research institutions are also considered to reduce publication and indexing bias.

The search and reporting procedures follow PRISMA 2020 and PRISMA-S guidance (Page et al., 2021; Rethlefsen et al., 2021). Search terms combine concepts related to COVID-19, remote work, labor-market outcomes, and inequality, including combinations of COVID-19/coronavirus/pandemic, remote work/working from home/telework, and employment/earnings/wages/working hours, alongside terms such as inequality, welfare, gender, skills, education, informality, and SSA. Country-specific research is also conducted[1].

[1] Country-specific research was conducted for individual SSA countries to identify studies that may not have been retrieved through broader regional search terms, including country names in combination with COVID-19, remote work, labor-market, and inequality-related terms.

2.3 Inclusion criteria

Studies are included if they: (i) examine COVID-19 and remote or home-based work; (ii) provide empirical evidence from SSA countries (iii) examine labor-market outcomes or inequalities; (iv) are published in peer-reviewed journals ranked in the SCImago Journal Rank (SJR), or as working papers/reports from credible research institutions or international organizations; book chapters; and (vi) provide sufficient methodological information for assessment.

2.4 Analytical framework

The review is guided by the premise that the distributional effects of remote work during COVID-19 depended on workers' capacity to work remotely, which varied across skills, occupations, digital access, employment arrangements, and household conditions. The framework distinguishes three interrelated dimensions: (i) remote-work feasibility, or whether jobs can technically be performed remotely; (ii) labor-market adjustment, capturing changes in employment retention, working hours, and earnings; and (iii) labor-market inequality, referring to differences in these outcomes across education and skills, gender, income groups, employment formality, and location, and their potential to persist or amplify pre-existing inequalities.

The framework in Figure 1 illustrates how the COVID-19 shock translated into unequal labor-market outcomes through differences in access to remote work. Lockdowns and social-distance measures disrupted face-to-face employment and increased the need for workers and firms to adopt remote work arrangements. The ability to work remotely depends on skills and education, occupation and tasks, and digital access. It is hypothesized that higher-skilled and more educated workers were more likely to be employed in remote-compatible occupations, while access to internet, electricity, and digital devices determined whether remote work was practically possible.

Workers able to work from home were better positioned to retain employment, maintain working hours, and protect earnings during the pandemic. In contrast, workers in jobs requiring physical presence faced greater risks of job loss, reduced hours, and income losses. Because remote-work capacity was unevenly distributed, the effects of COVID-19 differed across education, gender, income, formality, digital access, and location. The framework therefore suggests that remote work may have acted as a mechanism of labor-market resilience for some workers while reinforcing or amplifying pre-existing labor-market inequalities.

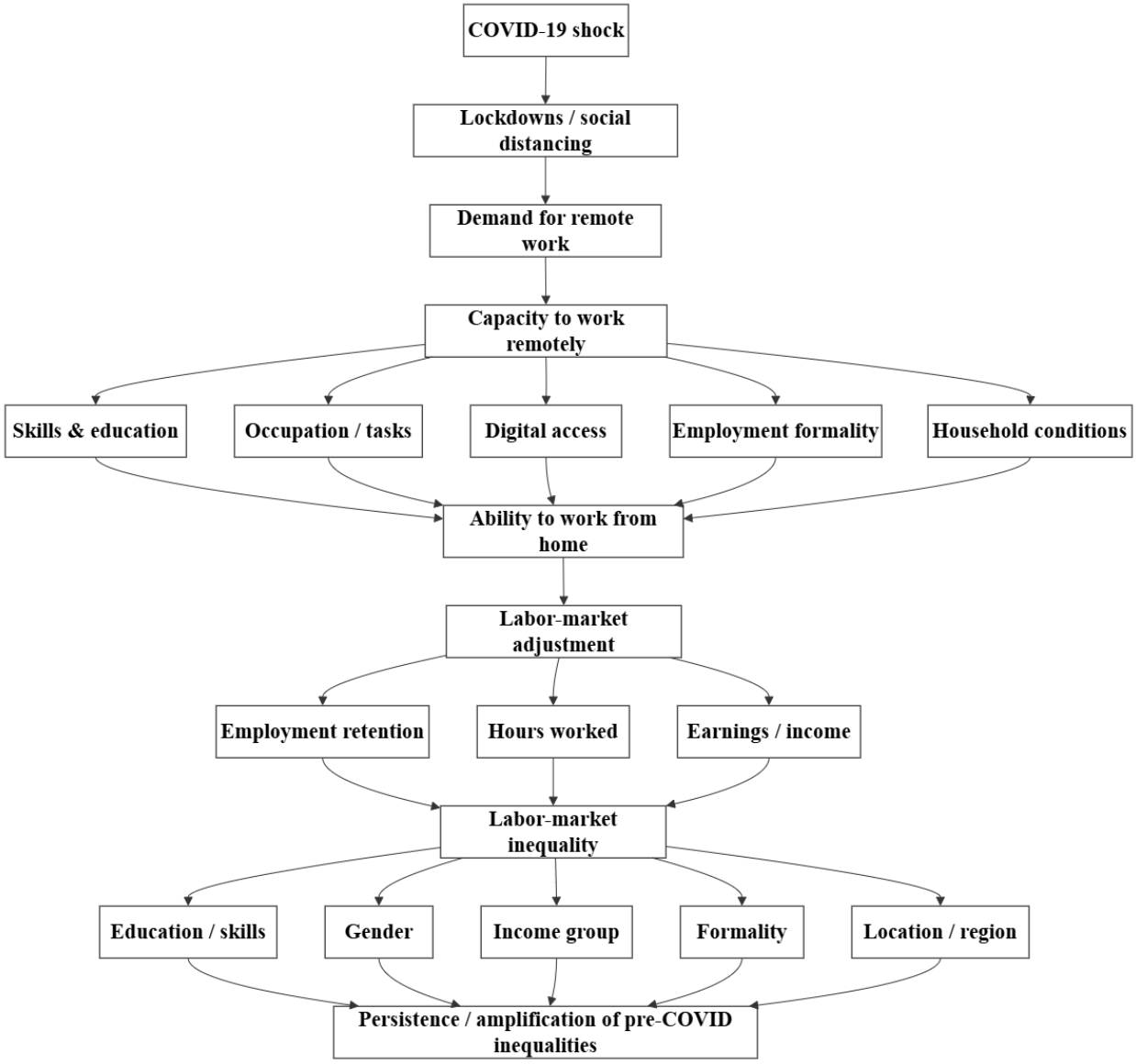


Figure 1. Analytical framework

Source: Author's elaboration based on Dingel and Neiman (2020), Gottlieb et al. (2021), Garrote Sanchez et al. (2021), and Hatayama et al. (2023).

3. Findings

In this section, we present the findings of the systematic review on the relationship between COVID-19, remote work and labor-market inequalities in Sub-Saharan Africa. The reviewed evidence is synthesized to examine how the unequal capacity to work remotely was associated with differences in labor-market outcomes and how these effects varied across

gender and demographic groups, educational and occupational categories, socioeconomic and spatial contexts, and levels of digital access. The synthesis also considers the broader income and distributional consequences of these unequal labor-market adjustments, highlighting both common patterns and cross-country differences in the evidence.

The studies included in this review are summarized in Table 1. The table presents the main characteristics of the selected literature, including authors, study titles, publication outlets, journal rankings, and the SSA countries covered.

3.1 Unequal capacity and access to remote work

The evidence indicates that the capacity to work remotely during COVID-19 was highly uneven among workers in SSA. Remote work was not a universally available response to mobility restrictions; rather, it was concentrated among workers whose skills, occupations, employment arrangements, digital access and household environments were compatible with home-based work. Consequently, the capacity to work remotely constituted an important dimension of pre-existing labor-market advantage.

The clearest evidence comes from South Africa. Using nationally representative longitudinal National Income Dynamics Study-Coronavirus Rapid Mobile (NIDS-CRAM) Survey data, Nwosu et al. (2022) show that the ability to work from home was consistently pro-rich throughout the pandemic. Higher education, better housing conditions and higher socioeconomic status were associated with greater WFH capacity. Workers able to work from home also earned more than those unable to do so, although the study does not establish a causal effect of remote work on earnings. The findings nevertheless demonstrate that the opportunity to remain economically active from home was disproportionately available to workers who were already socioeconomically advantaged.

Human capital and occupational structure were central to this divide. Higher-skilled workers were more likely to occupy occupations involving tasks that could be performed digitally, whereas workers in contact-intensive, manual and place-dependent occupations had limited scope for remote work. Khamis et al. (2021) and Rosenberg et al. (2021) show that work stoppages were substantially greater in industry and services than in agriculture, while managers, professionals and technicians were relatively more resilient. In Ghana, Owusu-Oware (2023) similarly finds that the adoption of home-based work varied considerably across job functions. Partial work virtualization, transition costs, cybersecurity requirements, unreliable infrastructure and inadequate home-working environments constrained implementation, particularly where jobs required physical interaction.

Table 1. Summary of selected studies

Authors	Title	Journal/Organization	SJR[2]	Countries covered
Adisalem and Asegie (2023)	Effects of COVID-19 on the livelihoods of rural women in Ethiopia	Cabi Agriculture and Bioscience	Q1	Ethiopia
Anas and Musah (2025)	Deepening inequalities in Sub-Saharan Africa amidst the COVID-19 crisis: Education and labor market spaces in Perspective	Human Arenas	Q1	Ghana
Aoyagi (2021)	Effects of COVID-19 on regional and gender equality in Sub-Saharan Africa: Evidence from Nigeria and Ethiopia	IMF		Nigeria and Ethiopia
Balde et al. (2020)	Labor market effects of COVID-19 in sub-Saharan Africa: An informality lens from Burkina Faso, Mali and Senegal	UNU-MERIT		Burkina Faso, Mali and Senegal
Brunckhorst et al. (2024)	Long COVID: The evolution of household welfare in developing countries during the pandemic	World Development	Q1	29 SSA countries
Chitiga et al. (2022)	How COVID-19 pandemic worsens the economic situation of women in South Africa	The European Journal of Development Research	Q2	South Africa
Contreras et al. (2024)	Inequalities in job and income loss in countries with high prevalence of informal employment in Sub-Saharan Africa during the COVID-19 crisis	Statistical Journal of the IAO	Q3	Ethiopia, Malawi, Nigeria, and Uganda
Heemann et al. (2022)	The labor market implications of restricted mobility during the COVID-19 pandemic in Kenya: Evidence from nationally representative phone surveys	The World Bank		Kenya
Khamis et al. (2021)	The early labor market impacts of COVID-19 in developing countries: Evidence from High-Frequency Phone Surveys.	The World Bank		12 SSA countries

[2] SCImago Journal Rank (SJR). https://www.scimagojr.com/

Authors	Title	Journal/Organization	SJR[3]	Countries covered
Kugler et al. (2023)	How did the COVID-19 crisis affect different types of workers in the developing world?	World Development	Q1	13 SSA countries
Maviza and Thebe (2024)	Working from home and the triple role of women in the context of COVID-19-induced lockdowns in Zimbabwe	Journal of Asian and African studies	Q2	Zimbabwe
Mukoki et al. (2024)	Female labor force participation under the pandemic: evidence from the 2020 Uganda High-Frequency Phone survey on COVID-19	Cogent Business & Management	Q2	Uganda
Mũrage et al. (2022)	Gendered and differential effects of the COVID-19 pandemic on paid and unpaid work in Nigeria	Cogent Social Sciences	Q2	Nigeria
Nda'Chi Deffo et al. (2024)	Impact of the COVID-19 pandemic on income inequalities in Cameroon: The influence of employment status	Journal of African Economies	Q2	Cameroon
Nwosu et al. (2022)	Socio-economic inequalities in ability to work from home during the coronavirus pandemic	The Economic and Relations Review	Q2	South Africa
Ranchhod and Daniels (2021)	Labor market dynamics in South Africa at the onset of the COVID-19 pandemic	South African Journal of Economics	Q3	South Africa
Rosenberg et al. (2021)	COVID-19 impact on SADC labor markets: Evidence from high-frequency data and other sources	African Development Review	Q1	16 SADC countries
Schotte et al. (2023)	The labor market impact of COVID-19 lockdowns: Evidence from Ghana	Journal of African Economies	Q2	Ghana
Soumanou et al. (2025)	Structural inequalities and COVID-19 unemployment in Cotonou	Revue d'Economie du Developpement	Q4	Benin

[3] SCImago Journal Rank (SJR). https://www.scimagojr.com/

Employment formality represented another important structural divide. Evidence from Senegal, Mali and Burkina Faso shows that informal workers had substantially lower capacity to work from home than formal workers (Balde et al., 2020). Because informal workers were less likely to have jobs compatible with home-based work and had weaker or no employment protection, their ability to use remote work as a coping mechanism was limited.

The digital divide further constrained remote-work access. In Ghana, Anas and Musah (2025) show that young people from poorer and rural households faced greater barriers to internet access and digital technologies. Remote work therefore depended not only on whether an occupation was technically teleworkable but also on whether workers possessed the connectivity and equipment required to perform it. Similar constraints are reported by Owusu-Oware (2023), who identifies unreliable infrastructure and inadequate home-work facilities as important barriers to organizational adaptation.

Household and spatial conditions also shaped this capacity. Evidence from Ethiopia indicates that distance from markets increased the vulnerability of rural women's economic activities to pandemic disruption, whereas access to productive assets such as irrigation reduced vulnerability (Adisalem and Asegie, 2023). These findings suggest that the ability to substitute physical economic activity with remote or digitally enabled work was particularly limited among poorer, rural and asset-constrained households.

The literature reviewed indicates a multi-dimensional distribution of remote-work capacity. Workers with higher education, higher-skilled and teleworkable occupations, formal employment, better digital connectivity and more favorable household conditions were better positioned to maintain economic activity from home. Conversely, informal, low-skilled, self-employed, contact-intensive, rural and digitally excluded workers had substantially fewer opportunities to adopt remote work. Remote work therefore functioned less as a universal pandemic adjustment mechanism than as a form of labor-market capacity unevenly distributed across pre-existing socioeconomic groups.

3.2 Labor-market adjustment and outcomes

Unequal capacity to work remotely occurred within a broader and highly heterogeneous labor-market shock. Across SSA, COVID-19 restrictions generated substantial disruptions in employment, working hours, earnings and economic activity, with the magnitude of the shock varying considerably across countries, sectors and employment arrangements. Khamis et al. (2021) document substantial work stoppages across the SSA countries covered by the High-Frequency Phone Surveys (HFPS). On average, 26 percent of respondents reported stopping work because of the pandemic, although the incidence ranged from 8 percent in Madagascar and 11 percent in Burkina Faso to 50 percent in Nigeria and 62 percent in Kenya.

Work stoppages were particularly pronounced in industry and services, affecting approximately 40 percent and 38 percent of workers, respectively, compared with 22 percent in agriculture. The sectoral pattern is consistent with the greater exposure of mobility- and contact-intensive activities to lockdowns and the comparatively greater ability of some agricultural activities to continue during restrictions.

Evidence from Ethiopia, Malawi, Nigeria and Uganda confirms the scale of employment disruption. Contreras et al. (2024) find that by July 2020, job loss affected approximately 18–30 percent of respondents in Ethiopia, Malawi and Uganda and around 61 percent in Nigeria. In Malawi, Nigeria and Uganda, job losses continued to increase after July 2020, suggesting that the labor-market shock extended beyond the initial lockdown period.

The effects were particularly pronounced among informal and self-employed workers. In Senegal, Mali and Burkina Faso, roughly one-quarter of workers lost their jobs during the initial phase of the pandemic, with informal workers considerably more likely than formal workers to experience employment losses and earnings reductions (Balde et al., 2020). In Ghana, Schotte et al. (2023) estimate that the three-week lockdown reduced employment in treated districts by 34.3 percentage points, with the decline driven primarily by informal self-employment. Although the employment gap narrowed substantially after restrictions were lifted, employment and labor earnings remained below pre-pandemic levels, particularly among self-employed workers and women.

Comparable patterns among formal and informal workers are evident in Nigeria. Mũrage et al. (2022) document substantial income and employment disruption among market traders, shopkeepers, domestic workers and other informal, front-facing workers in Lagos. Mobility restrictions, market closures, reduced operating hours and declining demand constrained their economic activity. Formal workers were also affected through salary reductions and delayed payments, whereas workers in essential services were comparatively protected.

The disruption extended beyond conventional measures of employment. Aoyagi (2021), examining Ethiopia and Nigeria, shows that the high prevalence of informal and agricultural employment partly muted measured employment losses, particularly among women. Similarly, Heemann et al. (2022) find evidence from Kenya that the recovery in mobility was associated with labor-force re-entry, with approximately three-quarters of those re-entering employment finding work. However, increases in hours worked did not translate proportionately into income recovery, while declining household assets suggest that households used asset depletion as a coping mechanism.

The consequences were also visible among specific economic activities. Adisalem and Asegie (2023) report extensive disruption among rural women in Ethiopia: remittances, small-business trade, livestock trading, daily labor, handicrafts and crop production were all substantially affected, with 93.7 percent of surveyed women experiencing disruption to at

least one economic activity. In Cameroon, Nda'Chi Deffo et al. (2024) document workforce reductions and technical unemployment, particularly in wholesale and retail, transport and storage, and business-support services. In Benin, Soumanou et al. (2025) report substantial and persistent unemployment in Cotonou, with unemployment reaching 26.7 percent in 2020 and unemployment spells remaining prolonged thereafter.

The cross-country evidence points to multiple margins of labor-market adjustment. Some workers exited employment, others reduced their hours, while many remained economically active but experienced lower earnings or reduced returns to their activities. Workers in occupations compatible with remote work were generally better able to maintain employment, whereas workers dependent on physical interaction, informal self-employment and face-to-face exchange were more exposed. However, the evidence should be interpreted cautiously: although the studies consistently establish heterogeneous labor-market effects of COVID-19, relatively few directly identify remote work as the causal mechanism. Remote work is therefore best understood as one component of a broader set of adjustment mechanisms through which workers and firms respond to the pandemic.

3.3 Distributional inequalities and persistence

The unequal capacity to work remotely and the heterogeneous labor-market adjustment translated into substantial distributional inequalities across gender, education, age, socioeconomic status, employment formality and location. Importantly, the evidence suggests that the pandemic did not simply generate temporary employment losses; in several settings, it reinforced pre-existing inequalities through slower employment recovery, persistent earnings losses and transitions into lower-return work.

3.3.1 Gender and demographic inequalities

Women were among the groups most consistently exposed to labor-market disruption. In South Africa, Ranchhod and Daniels (2021) show that employment fell sharply during the initial lockdown, with women, Black African workers, young people and less-educated workers experiencing disproportionately large losses. Chitiga et al. (2021) similarly find that women's concentration in low-skilled employment and highly disrupted sectors contributed to larger increases in unemployment and greater poverty vulnerability among female-headed households.

The gender dimension was also evident in Uganda. Mukoki et al. (2024) find a 17 percent reduction in female labor-force participation, with stronger effects under more stringent lockdown conditions. Women with children were particularly affected, highlighting the interaction between employment and unpaid care responsibilities. Evidence from Zimbabwe

further shows that WFH did not necessarily eliminate gender inequalities. Women continued to undertake substantial cooking, cleaning and childcare while performing paid work remotely (Maviza and Thebe, 2024), suggesting that WFH could reproduce gender inequalities rather than simply provide protection from employment disruption.

Similarly, Rosenberg et al. (2021) identify particularly high labor-market risks for women in Angola and Zimbabwe, while young workers faced elevated risks in several Southern African Development Community (SADC) countries. In Nigeria, women, young and less-educated workers experienced disproportionately large employment and income losses (Mũrage et al., 2022). In Benin, women experienced higher unemployment and longer unemployment spells than men, while young workers were particularly vulnerable to prolonged unemployment (Soumanou et al., 2025). Among rural women in Ethiopia, female-headed households were especially vulnerable to disruption of economic activities, with being a female-headed household associated with substantially higher odds of experiencing disruption (Adisalem and Asegie, 2023).

3.3.2 Education, skills and employment formality

Education and employment status emerged as important sources of persistent inequality. Contreras et al. (2024) find that although gender, age and urban–rural differences in job loss became less pronounced over time, education became an increasingly important predictor of joblessness. Less-educated workers were more likely to remain without employment approximately one year after the onset of the crisis.

The broader developing-country evidence reinforces this persistence. Using harmonized High-Frequency Phone Surveys (HFPSs) covering 80 countries, Brunckhorst et al. (2024) find that groups experiencing larger initial employment losses—including women, informal workers and less-educated workers—also tended to recover employment more slowly. Moreover, employment recovery frequently involved transitions into self-employment and agriculture, particularly in poorer economies. Such transitions could represent recovery in employment numbers while simultaneously reflecting deterioration in job quality and returns.

Formality, which is closely connected with educational attainment, was therefore central to the distributional consequences. Informal workers had lower WFH capacity and greater exposure to employment and earnings losses in Senegal, Mali and Burkina Faso (Balde et al., 2020), while informal self-employment accounted for much of the employment decline associated with Ghana's lockdown (Schotte et al., 2023). The Nigerian evidence similarly identifies informal and front-facing workers as particularly vulnerable, reflecting their limited ability to work remotely and greater exposure to pandemic-related employment disruptions (Mũrage et al., 2022).

3.3.3 Socioeconomic, spatial and digital inequalities

The pandemic also exposed strong socioeconomic and spatial disparities. Nwosu et al. (2022) show that WFH capacity in South Africa remained pro-rich throughout the pandemic, meaning that workers most capable of protecting their employment through remote work were disproportionately those who were already economically advantaged.

Household income losses were widespread. Contreras et al. (2024) report that 46 percent of respondents in Ethiopia and more than 75 percent in Malawi, Nigeria and Uganda experienced household income losses between March and June 2020. These losses varied across rural–urban location, age and education, while households dependent on non-farm enterprises were particularly vulnerable. Kugler et al. (2023) similarly document substantial differences in work stoppages between urban and rural workers in Ethiopia, Uganda, Nigeria, Madagascar, Zimbabwe, Burkina Faso and Kenya, with urban workers generally experiencing greater work stoppages.

Digital inequality reinforced these spatial and socioeconomic differences. Poorer and rural households in Ghana faced greater barriers to internet access and digital technologies (Anas and Musah, 2025), limiting their ability to shift toward digitally enabled work. Thus, the digital divide interacted with occupational and socioeconomic inequalities; workers who lacked both teleworkable occupations and adequate connectivity had few alternatives when physical mobility was restricted.

3.3.4 Persistence and amplification of inequality

The strongest evidence of longer-term distributional effects concerns the quality and durability of recovery. In Ghana, employment recovered relatively quickly following the lockdown, but labor earnings remained below pre-pandemic levels, particularly among women and informal self-employed workers (Schotte et al., 2023). In Kenya, increased mobility and labor-force re-entry were accompanied by increases in hours worked without equivalent income recovery, indicating that a return to employment did not necessarily restore pre-pandemic economic security (Heemann et al., 2022).

Brunckhorst et al. (2024) provide particularly important evidence that employment recovery may conceal persistent inequality. Workers who initially suffered larger employment losses often recovered more slowly and were more likely to move into lower-return forms of employment. The pandemic therefore affected both the extensive margin—whether workers remained employed—and the intensive and qualitative margins—hours, earnings and job quality.

Direct evidence of increased income inequality is reported for Cameroon. Nda'Chi Deffo et al. (2024) find that income inequality increased during the period of severe COVID-19 restrictions, particularly among households headed by non-employed individuals. The Gini inequality index for such households increased from 0.463 before the pandemic to 0.520 during restrictions, while restrictive measures increased overall income inequality by at least four percentage points.

4. Discussion

Evidence from South Africa shows that the ability to work from home was consistently concentrated among higher socioeconomic groups, while evidence from Burkina Faso, Mali and Senegal indicates that informal workers had lower capacity to work from home and experienced greater employment and earnings losses (Nwosu et al., 2022; Balde et al., 2020). These findings are consistent with broader evidence linking education, wealth and employment status to the feasibility of WFH in developing economies (Gottlieb et al., 2021).

A central finding of the review is that remote-work capacity was embedded in existing labor-market inequalities. Workers in professional, managerial and digitally enabled occupations were more likely to have jobs that could be performed from home, whereas workers in agriculture, retail, transport, hospitality, personal services and other intensive contact activities had fewer opportunities to do so (Garrote Sanchez et al., 2021; Rosenberg et al., 2021). Employment informality further reinforced this divide. Informal workers in Burkina Faso, Mali and Senegal were substantially more likely than formal workers to experience employment and earnings losses during the early stages of the pandemic (Balde et al., 2020). Thus, remote-work capacity was closely associated with job quality, employment security and socioeconomic advantage.

The findings also highlight the distinction between the feasibility of remote work and its actual adoption during COVID-19 pandemic. A job may be technically compatible with WFH without the worker being able to do so in practice. Digital connectivity, reliable electricity, access to devices, employer capabilities, cybersecurity requirements and household working conditions can constrain effective remote work (Garrote Sanchez et al., 2021; Owusu-Oware, 2023). Evidence from Ghana shows that organizational and infrastructural constraints limited home-based work, while poorer and rural young people faced greater barriers to digital access (Owusu-Oware, 2023; Anas & Musah, 2025). Remote-work inequality in SSA is therefore shaped not only by occupational characteristics but also by the technological and socioeconomic resources required to translate teleworkable jobs into actual remote employment.

These differences in remote-work capacity were reflected in unequal labor-market outcomes. Across SSA, substantial shares of workers stopped working or experienced income losses

during the pandemic, with particularly large effects among informal workers and those employed in activities requiring physical interaction (Khamis et al., 2021; Balde et al., 2020). Evidence from Ethiopia, Malawi, Nigeria and Uganda shows substantial job losses, while Ghana experienced a large employment decline associated with lockdowns, driven primarily by informal self-employment (Contreras et al., 2024; Schotte et al., 2023). However, employment losses alone do not capture the full economic impact. Workers could remain employed while experiencing reduced economic activity or earnings, particularly in informal and household-based activities (Aoyagi, 2021; Khamis et al., 2021).

The distributional labor market consequences of COVID-19 pandemic were particularly important. Women, young workers, less-educated workers and informal workers generally experienced greater or more persistent labor-market disruption (Ranchhod & Daniels, 2021; Brunckhorst et al., 2024). Gender inequalities were further reinforced by unpaid care and domestic responsibilities, including among women working from home (Mukoki et al., 2024; Maviza & Thebe, 2024). Socioeconomic and spatial inequalities also mattered, with poorer and rural households facing greater barriers to digital access and greater disruption of economic activities (Contreras et al., 2024; Anas & Musah, 2025). Evidence from Cameroon further indicates that these unequal labor-market effects translated into higher income inequality during periods of severe restrictions (Nda'Chi Deffo et al., 2024).

The review also reveals considerable cross-country heterogeneity. The magnitude of labor-market disruption differed substantially across Ethiopia, Malawi, Nigeria and Uganda and across the 16 SADC countries (Contreras et al., 2024; Rosenberg et al., 2021). Such differences reflect variation in lockdown intensity, economic structure, informality, sectoral composition, digital infrastructure and firms' capacity to adapt to mobility restrictions and resources availability conditions. This heterogeneity cautions against treating SSA as a homogeneous labor market and highlights the need for country-specific approaches to remote work and labor-market resilience.

5. Study limitations and avenue for future research

An important limitation of the evidence reviewed is that very few SSA studies directly estimate the causal effect of actual remote-work adoption on labor-market outcomes. Much of the literature either estimates potential WFH feasibility or documents the broader employment and income consequences of COVID-19. Studies from Ethiopia, Malawi, Nigeria and Uganda, for example, provide important evidence of job and income losses but do not establish whether workers who retained employment did so because they worked remotely (Aoyagi, 2021; Contreras et al., 2024). Similarly, estimates based on occupational characteristics identify potential exposure but cannot establish the effects of actual teleworking (Garrote Sanchez et al., 2021; Gottlieb et al., 2021). Remote-work capacity may

therefore partly capture the advantages associated with education, occupation, income and formal employment rather than an independent effect of remote work.

Moreover, the evidence base is concentrated around the initial pandemic period, with limited research on whether changes in work organization persisted after mobility restrictions were lifted. This represents an important gap because the longer-term implications of COVID-19 may depend less on temporary lockdown-related telework than on whether firms retained remote or hybrid working arrangements. Persistent adoption could expand access to employment for workers living far from major economic centres or facing mobility and care constraints, but it could also reinforce inequalities if high-quality remote work remains concentrated among highly educated workers with reliable digital connectivity.

Future studies should use longitudinal and quasi-experimental designs to identify the causal effects of actual remote-work adoption on employment retention, earnings, hours worked, productivity and job quality. Technology induced persistent transitions in employment and WFH should be separated from transitory and mobility restrictions related ones. Greater attention should be given to measuring effective rather than potential remote-work capacity, incorporating internet connectivity, electricity, device ownership, digital skills and household working conditions. Research should also examine intersectional inequalities, particularly the interaction between gender, education, informality, income, age and location, and expand evidence from underrepresented countries, particularly in Central and Eastern Africa.

6. Concluding remarks and policy implications

The evidence reviewed in this paper indicates that COVID-19 did not affect workers in SSA uniformly. Rather, the pandemic interacted with pre-existing inequalities in education, occupation, employment formality, socioeconomic status, gender, location and digital access to determine who could remain economically active when mobility was restricted. Remote work therefore emerged not simply as a technological response to the pandemic, but as an unequally distributed form of labor-market resilience.

The findings have important implications for labor-market policy and future pandemic preparedness. Expanding broadband connectivity and reliable electricity is necessary but insufficient; policies must also address digital skills, access to devices, affordable connectivity, employer capacity, cybersecurity and suitable home-working conditions (Garrote Sanchez et al., 2021; Owusu-Oware, 2023). At the same time, remote work cannot protect workers whose jobs require physical presence. Informal workers, self-employed workers and those in contact-intensive occupations require complementary social and labor-market protection because digitalization cannot make all jobs remote-compatible (Balde et al., 2020). Pandemic preparedness should therefore combine digital resilience with inclusive

social protection, including mechanisms for rapidly expanding cash transfers, temporary income support and employment protection during mobility restrictions.

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