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# The impact of Covid-19 on poverty alleviation: Empirical evidence from Somalia

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**Abstract:** This study provides valuable insights into the impact of COVID-19 on poverty alleviation in Somalia, focusing on three factors namely, government intervention, financial literacy and digital financial inclusion are linked to poverty alleviation. This study utilized a quantitative research approach employing a descriptive research design. The data collection aspect was carried out by the researchers through face to face and an online self-administered questionnaire which can be filled out by respondents from various backgrounds. A survey was conducted with 277 micro-entrepreneurs using both on line and face to face methods. The data obtained is process using SPSS. The findings indicated positive and significant relationship with all three factors namely government intervention, financial literacy and digital financial inclusion in Somalia. The findings of this study suggest that the government of Somalia should focus on these three areas to help to alleviate poverty. By providing social safety nets, increasing financial literacy, and promoting digital financial inclusion, the government can help to improve the lives of millions of people in Somalia. To achieve long-term poverty reduction and development, it is crucial for Somalia to move away from dependency on external assistance and prioritize self-sufficiency. One limitation of this study is its relatively small sample size of 277 micro-entrepreneurs. In a larger sample size, there could be more diverse perspectives and experiences that could potentially yield different results. Therefore, further research with a larger sample size is needed to obtain a more comprehensive understanding of the impact of COVID-19 on poverty alleviation in Somalia.

**Keywords:** Covid-19; Poverty Alleviation; Government; Somalia

**JEL Classification:**



## Introduction

Poverty is a complex and multidimensional problem that affects individuals, families, societies, and nations on various levels. It is not confined to a single definition or dimension but rather encompasses a range of interconnected factors such as low income, limited access to essential services, inadequate education, healthcare and sanitation as well as social exclusion and vulnerability. At the global level, poverty is a widespread issue that transcends borders and impacts countries worldwide. National governments recognize the urgent need to address poverty and have prioritized poverty alleviation efforts. This commitment is reflected in initiatives like the Millennium Development Goals (MDGs), established to eradicate poverty and hunger globally (Sumner, 2003). The MDGs serve as a framework to guide countries' efforts to combat poverty. They emphasize

the importance of addressing not only income poverty but also other dimensions of poverty, such as access to education, healthcare, and clean water. By focusing on these interconnected aspects, the MDGs aim to create a holistic approach to poverty reduction. In recent years, the academic community has shown an increased interest in studying poverty due to its significant impact on society. Researchers and scholars from various disciplines have delved into the causes, consequences and potential solutions to poverty. This academic attention has contributed to a deeper understanding of poverty and has paved the way for innovative approaches and interventions to alleviate poverty and promote sustainable development (Sumner, 2003).

Somalia confirmed its first case of COVID-19 on March 16, 2020. In response, the government took several measures, including banning international and national flights, closing schools and launching a public awareness campaign. The government also formed a COVID-19 task force to update the public on the pandemic. Despite these measures, the number of cases continued to increase. By August 26, 2020, Somalia had reported 3,269 cases and 93 deaths. The COVID-19 pandemic has had a significant impact on Somalia, both economically and socially. The tourism and hospitality industries have been decimated and education and healthcare have been negatively impacted (WHO, 2020). The Somali government is working to address the challenges posed by the COVID-19 pandemic. The government has received international assistance, including financial and technical support. However, more must be done to help Somalia recover from the pandemic. Somalia has been severely affected by prolonged civil war and various types of violence, leading to its status as one of the poorest countries in the world. The division of the Somali Democratic Republic in 1991, resulting in a political rift, is the primary factor contributing to this situation. The level of poverty in Somalia is both extensive and severe, with nearly 70 percent of the population living below the poverty threshold in 2022 (World Bank, 2022).

Due to prolonged civil war and various forms of violence, Somalia has become one of the world's poorest nations. The collapse of the Democratic Republic of Somalia in 1991, leading to a political split, is the primary catalyst for this situation. The extent and severity of poverty in Somalia are widespread, with around 70 percent of the population residing below the poverty line in 2022 (World Bank, 2022). The increasing drought is estimated to have led to almost half of the population being at risk of a lack of access to sufficient food. As of July 2022, the number of individuals forced to leave their homes reached one million, driven by rural residents seeking better access to food and vital services in urban regions. Somalia has been plagued by poverty for decades, and Microfinance has recently gained attention as an effective strategy for addressing the issue of poverty in the country. Microfinance institutions aim to cater to individuals who are economically disadvantaged and lack access to traditional financial services. These organizations provide loans and savings accounts. However, the outbreak of COVID-19 has brought new challenges to the microfinance industry and its clients. (Economics, 2023). The country was already facing a high poverty rate before the pandemic, with over 70% of the population living below the poverty line. The pandemic has exacerbated the situation by disrupting economic activity and leading to job losses, reduced income, and increased food insecurity (Economics, 2023).

However, the pandemic has made it more difficult for microfinance institutions to operate in Somalia. Lockdowns, travel restrictions and social distancing measures have limited their ability to reach clients and provide services. Additionally, many of their clients have been negatively impacted by the pandemic and may be unable to repay their loans. COVID-19 was a global issue that affects all nations and all segments of society, making it one of the most pressing problems humankind has ever faced (WFP, 2020). The epidemic has left major scars on the world's economic and social, and political stability, in addition to causing severe healthcare difficulties. Reversing 30 years of economic progress, the worldwide pandemic's economic impact might push another half a billion people, or 8% of the entire human population, into poverty (Sumner et al., 2020).

Despite implementing various poverty reduction strategies, including microfinance services, poverty remains rampant in Somalia, with a poverty rate of 73% (UNDP). The COVID-19 pandemic has further worsened the situation, negatively impacted microfinance institutions (MFIs) and increased credit risks. Given these challenges, it is imperative to examine the impact of covid-19 on poverty reduction in Somalia and recommend effective interventions. There has been research on poverty in Somalia. However, most existing studies have not explicitly focused on the impact of the COVID-19 pandemic on poverty alleviation efforts in the country. This represents a significant gap in the literature, as the pandemic has had a significant impact on the economy and vulnerable populations in Somalia. In particular, there is a need for research to examine the impact of the COVID-19 pandemic on poverty alleviation efforts in Somalia (Economics, 2023).

The study sets out to accomplish specific objectives: firstly, to establish the correlation between government intervention and the exacerbation of poverty caused by COVID-19; secondly, to determine how financial literacy relates to the impact of COVID-19 on poverty; and thirdly, to explore the connection between digitalization and the increase in poverty due to COVID-19. By focusing on these objectives, the research aims to shed light on the intricate interplay between governmental policies, financial knowledge, digital access, and poverty levels during the ongoing pandemic. The study's findings on the impact of COVID-19 on poverty alleviation in Somalia holds valuable insights for policymakers, donors and practitioners involved in designing and implementing poverty reduction programs. The study findings offer crucial guidance for shaping effective strategies and interventions to address the economic challenges exacerbated by the pandemic and support long-term poverty reduction efforts in the country.

### **Global poverty during the COVID-19**

The COVID-19 pandemic has caused a significant rise in extreme poverty across the globe. A report from the World Bank reveals that efforts to reduce poverty have been making progress over the past thirty years. Unfortunately, in 2020, the pandemic halted this progress and led to a sharp increase in poverty worldwide. This increase meant more people were living in extreme poverty, defined as surviving on less than \$2.15 per person per day (adjusted for purchasing power) in 2017. The global extreme poverty rate rose to 9.3% in 2020, up from 8.4% in 2019.

The global labour market experienced a substantial impact from the COVID-19 pandemic, as stated in the Asia-Pacific Employment and Social Outlook 2020 report. The report suggests that approximately 81 million jobs were lost in 2020 due to the economic consequences of the crisis. In nearly all economies with available quarterly data, employment levels declined compared to the previous year. The pandemic's impact on employment was extensive, resulting in a surge in underemployment. Many workers faced reduced working hours or were unable to work altogether. In the Asia-Pacific region, it is estimated that working hours decreased by about 15.2% in the second quarter and 10.7% in the third quarter of 2020 compared to pre-crisis levels.

### **Poverty and COVID-19 in Africa**

Africa, often regarded as the poorest continent globally, has witnessed some progress in poverty reduction in recent years. According to the World Bank (2018), Between 1990 and 2013, there was a notable decrease in the proportion of people living in extreme poverty in Africa, dropping from 57% to 43%. Although this improvement is noteworthy, poverty outcomes on the continent still remain far from achieving the targets outlined by the Sustainable Development Goals. Unfortunately, the advent of the COVID-19 pandemic has had a devastating effect on Africa, causing a regression in poverty reduction progress that had been steadily advancing for over two decades. As stated in the United Nations Conference on Trade and Development (UNCTAD) publication "Reaping the Potential Benefit of the African Continental Free Trade Area for Inclusive Growth" (2021), the pandemic disrupted economies. By the year 2020, it is estimated that the COVID-19 pandemic forced approximately 55 million Africans into the depths of extreme poverty. This setback has been substantial and threatens to impede further advancements in poverty reduction. The consequences of poverty in Africa are amplified by the circumstances faced by vulnerable households. Nguimkeu & Okou, (2022) highlight that households reliant on daily informal incomes and experiencing hunger are compelled to continue their economic activities, even during the pandemic. Unfortunately, this increases their vulnerability to potential infections, as emphasized by the World Health Organization (WHO) in 2020. African governments have responded to the crisis by implementing increased social assistance measures in the form of cash and in-kind transfers. These measures aim to provide support to the poor and vulnerable. By 2020, cash and in-kind transfers accounted for 74% of all social protection programs in Africa, surpassing the global average of 62%. However, the effectiveness of these social transfers in lifting people out of poverty has been limited. The average amount provided has been insufficient to improve the consumption levels of people experiencing poverty significantly.

### **Poverty in Somalia**

Somalia is recognized as one of the least developed countries in Sub-Saharan Africa, primarily due to prolonged civil conflict and governmental instability. The poverty situation in Somalia is dire, with approximately 70 per cent of the population living in poverty, placing it sixth in terms of poverty prevalence in the continent. The combination of widespread and severe poverty poses significant challenges to socioeconomic and

economic progress unless appropriate policies are implemented. Somalia faces a grave and widespread poverty situation, with a projected GDP per capita of \$502 in 2021. As of 2019, around 69% of the population lived below the poverty line. The effects of an intensifying drought have exacerbated the crisis, leaving approximately 50% of the population in desperate need of food. The dire circumstances have forced rural families to flock to cities for necessities, resulting in one million people being displaced as of July 2022. The increasing number of internally displaced people is expected to further contribute to heightened vulnerability and poverty in the country (World Bank, 2022).

The Somali Poverty and Vulnerability Assessment report highlights that approximately 90% of Somali families lack access to at least one fundamental necessity, such as money, energy, education, clean water, or sanitation facilities. Those residing in remote areas, internally displaced persons, and nomadic communities face even more significant challenges accessing essential services. Although urban areas generally have better conditions, they still struggle with issues such as hunger, with 64% experiencing extreme poverty and 41% facing non-monetary poverty. Limited access to education poses a significant risk to both economic progress and human capital development in Somalia. Cultural considerations often result in children starting school later, and more than 27% of primary school attendees are older than 13. Additionally, the distance between homes and schools hinders access, with approximately one in three Somali households requiring at least a 30-minute walk to reach a school. Promoting education availability is crucial for breaking the poverty cycle and improving overall well-being in the long run.

### **The Baxnaano Program: Addressing Poverty and Promoting Social Protection in Somalia**

Poverty is prevalent in Somalia, particularly in rural regions and among internally displaced individuals (IDPs). A significant proportion of the Somali population, around 70%, lives below the poverty threshold. Additionally, an overwhelming 90% of Somalis experience multidimensional poverty, indicating their lack of access to essential amenities like education, water, sanitation and electricity (World Bank, 2022). Somalia is also vulnerable to natural disasters, such as droughts, which have exacerbated the humanitarian crisis in the country. The current drought has displaced millions of people and is driving the country to the brink of famine.

Social protection programs can help to address poverty and inequality in Somalia by providing support to poor and vulnerable households. These programs can help to mitigate the negative impacts of shocks and crises, and they can also promote human capital development. Somalia's 2019 Social Protection Policy is an important step in the right direction. The policy has led to the launch of the Baxnaano program, which provides cash transfers to poor and vulnerable households with children under five.

The Baxnaano program is a national safety net in Somalia that provides cash transfers to poor and vulnerable households. The Baxnaano program targets poor households with children under five living in communities where the program is operating. Households selected for the Baxnaano program receive a monthly cash transfer of 100,000 Somali

shillings (approximately \$10). The cash transfers are intended to assist households in fulfilling their fundamental requirements, including necessities like food, housing, and healthcare. Baxnaano is a promising program that can potentially improve the lives of millions of Somalis. The program transfers cash to 200,000 poor and vulnerable households with children under five. The transfers are linked to nutrition, so households must meet specific nutritional requirements to receive the payments. The program is being implemented in selected rural areas across the five Federal Member States and Somaliland. Furthermore, Baxnaano program is a significant step in Somalia's efforts to reduce poverty and inequality. The program has the potential to improve the lives of millions of Somalis, and it is a model for other countries that are seeking to reduce poverty and inequality through social protection programs. The Baxnaano program has been running since 2017, reaching over 200,000 households. The program has been successful in reducing poverty and improving the nutritional status of children. This program is an integral part of the Somali government's efforts to build a more inclusive and resilient society. The program is helping to reduce poverty, improve nutrition, and protect children. This program is a valuable investment in the future of Somalia. The program is helping to build a more resilient and inclusive society, and it is laying the foundation for long-term economic growth.

#### **Government intervention and poverty reduction**

Mcgonagle, (2020) suggest that the COVID-19 pandemic has led to significant changes in attitudes towards poverty, inequality, and government intervention. These attitude changes are hypothesized to result from increased awareness and understanding of the impact of the pandemic on people experiencing poverty. The researchers conducted exploratory analyses and found that the shifts in attitudes regarding dispositional attributions for poverty (how individuals perceive the causes of poverty) and tolerance for inequality (individuals' acceptance of social and economic disparities) are essential factors in predicting individuals' willingness to engage in and support efforts aimed at helping people experiencing poverty.

According to (Gerritse, 2020), there is a significant negative relationship between socioeconomic circumstances and confirmed COVID-19 cases and deaths per million people. Specifically, a one standard deviation improvement in socioeconomic conditions is associated with a 50% reduction in COVID-19 cases and deaths per million people. Additionally, the study suggests that when socioeconomic conditions are considered in conjunction with government emergency policies, there are further insights.

Yan et al., (2021) examine the role of government interventions in supporting microfinance institutions during the COVID-19 pandemic. It highlights the various measures taken by governments worldwide, such as loan moratoriums, loan guarantees and capital injections, to ensure the continuity and effectiveness of microfinance in poverty alleviation during the crisis. A study done by Wright et al., (2020) highlight the relationship between income and compliance with stay-at-home orders during the COVID-19 pandemic. They found that lower-income groups were less likely to adhere to these orders, resulting in a higher risk of exposure to the virus. By providing income

support to individuals in lower-income brackets, more generous income support programs can potentially motivate them to stay at home. When individuals have the financial means to meet their basic needs, they are less likely to engage in activities that require leaving their homes, such as going to work or participating in crowded social gatherings. As a result, compliance with social distancing measures may increase, leading to a reduction in the overall infection rate.

According to the study conducted by Ashraf, (2020), government announcements on public awareness campaigns, testing and quarantine policies, and income support initiatives have been found to yield predominantly positive effects on market returns. This suggests that such announcements and measures taken by the government contribute to boosting investor confidence and market sentiment, potentially leading to favourable outcomes in financial markets. This finding indicates that government-implemented social distancing measures can have positive and negative economic impacts. The study's conclusion has several important policy implications. Firstly, it suggests that government efforts to promote public awareness programs and disseminate information regarding testing and quarantining policies can positively influence market performance. These measures likely contribute to investor confidence and reassure market participants of the government's preemptive measures in the face of the pandemic. Secondly, the study highlights the positive impact of income support packages on market returns. Such packages can assist individuals and businesses affected by social distancing measures, mitigating the economic downturn and fostering stability. This finding suggests that governments should consider implementing robust income support measures during times of crisis to stimulate economic activity and bolster market sentiment. However, it is essential to acknowledge that the study mentions both positive and negative economic impacts of government social distancing measures. While specific policies and announcements may yield positive market returns, others might have adverse effects. It is crucial for policymakers to carefully assess and monitor the economic implications of different measures to strike a balance between public health and economic stability.

*H<sub>1</sub>: There is a significant relationship between government intervention and covid-19 causing poverty in Somalia.*

### **Financial literacy and poverty reduction**

Financial literacy refers to individuals' knowledge of financial concepts, skills, and capabilities that enable them to handle money and make informed financial decisions. Several studies, including those conducted by Lusardi & Mitchell, (2009) emphasize that households with limited financial literacy and cognitive abilities often face challenges in managing their day-to-day expenses, economic transactions, and financial resources. This difficulty is particularly pronounced among individuals experiencing poverty, who are more likely to have lower levels of financial literacy and encounter ongoing financial constraints. The lack of skills and ability to manage their already limited resources worsens the material hardships associated with their low and unstable incomes. Cohen & Nelson,( 2011) assert that financial literacy plays a vital role in supporting impoverished

individuals by enhancing their understanding of financial matters and empowering them to make informed choices. Furthermore, it aids them in developing effective strategies to navigate their financial circumstances.

Financial literacy is a vital component of endeavours to alleviate poverty. It encompasses the knowledge, skills and comprehension required to make well-informed financial decisions and proficiently handle personal finances. The significance of financial literacy lies in its direct and indirect contributions to poverty reduction. It directly influences financial inclusion, ensuring that individuals have access to and can effectively utilize financial services. Additionally, financial literacy indirectly impacts poverty by fostering entrepreneurship and enabling individuals to leverage financial resources more effectively. The literature offers multiple studies that have presented evidence supporting the link between financial literacy, financial inclusion, and entrepreneurial behaviours Churchill & Marisetty, (2020); Timbile & Kotey, (2022).

Research by Timbile & Kotey, (2022) indicates that financial literacy has a positive influence on the accessibility and utilization of beneficial financial services. The World Bank (2018) acknowledges the significance of financial literacy in attaining widespread access to financial services. Moreover, previous research conducted by Atkinson & Messy, (2013), Calcagno & Monticone, (2015) and (Klapper et al., 2013) establishes a substantial association between financial literacy and higher levels of financial inclusion.

Financial literacy can have a positive impact on poverty reduction by bolstering entrepreneurial endeavours. Oseifuah, (2010) evidence of financial literacy positively influencing entrepreneurial intentions and business growth. The role of entrepreneurs in poverty reduction is evident in countries like Kenya (Misango & Ongiti, 2013) and China (Si et al., 2015). In emerging economies, financial constraints often pose significant barriers to entrepreneurship (Peprah & Koomson, 2015), which can be alleviated through enhanced financial literacy. Lower levels of financial literacy contribute to financial vulnerability, hampering asset accumulation and household consumption, thus exacerbating poverty.

*H<sub>2</sub>: There is a significant relationship between financial literacy and covid-19 causing poverty in Somalia.*

### **Digital financial inclusion and poverty reduction**

Digital financial inclusion, which refers to using technology to extend access to financial services, has emerged as a powerful tool for promoting poverty reduction. A study done by Kelikume, (2021) highlighted the significant effects of financial inclusion, establishing a clear relationship between higher levels of financial inclusion and increased poverty reduction. The advent of digital technologies, such as mobile banking, online payment platforms, and digital wallets, has revolutionized the way financial services are delivered and accessed. These innovations have significantly expanded financial inclusion by



overcoming traditional barriers such as distance, infrastructure limitations, and high transaction costs.

Numerous studies and literature have highlighted the significance of financial inclusion in promoting economic growth and reducing poverty. For instance, Brune et al., (2011) researched rural Malawi. They discovered that increased access to financial services among low-income households positively impacted their well-being by providing funds for agricultural inputs conducted a study that supports the significance of financial inclusion in reducing poverty and income inequality. Their research indicates that financial inclusion is vital for achieving inclusive growth. By providing access to financial services, individuals and households can make informed decisions regarding long-term consumption and investments, allowing them to engage in productive activities. Additionally, financial inclusion assists in building financial resilience, enabling individuals and households to better cope with unexpected short-term shocks. Overall, the study underscores the crucial role of financial inclusion in promoting economic well-being and reducing poverty.

Additionally, Diniz et al., (2012) conducted research highlighting the positive contributions of financial inclusion to local socioeconomic development and overall well-being. By expanding access to financial services, communities are provided with opportunities to enhance their economic prospects, fostering entrepreneurship, job creation, and income generation.

*H<sub>3</sub>: There is a significant relationship between digital financial inclusion and covid-19 causing poverty in Somalia.*

## **Research Method**

This study utilized a quantitative research approach employing a descriptive research design. The quantitative approach was chosen as it allows for the statistical and numerical analysis of the impact of independent variables (government intervention, financial literacy and digital financial inclusion) on the dependent variable (poverty alleviation) in Somalia. The research population for this study consists of individuals from Somalia.

The data collection aspect was carried out by the researchers through face to face and an online self-administered questionnaire which can be filled out by respondents from various backgrounds. For sampling design, the method chosen was purposive sampling, where respondents are chosen based on participants who are most likely able to understand the specific goals this research seeks to uncover a total of 277 respondents participated in the study by completing the questionnaire. The collected quantitative data was then processed using SPSS for further analysis. Exploratory Factor Analysis (EFA) was employed to group the data based on their respective variables. This analytical technique facilitated a deeper understanding of the relationship between the variables under investigation.

The questionnaire utilized in this study encompassed various variables aimed at comprehensively examining the relationships between government intervention, financial literacy, digital financial inclusion, and poverty alleviation in Somalia. Here's an elaboration on the variables used:

**Government Intervention:** This variable likely included questions related to the extent and effectiveness of government policies and measures implemented in response to the COVID-19 pandemic. Questions might have focused on the provision of social welfare programs, economic stimulus packages, healthcare services, and other forms of support intended to alleviate the socio-economic impact of the pandemic.

**Financial Literacy:** Questions pertaining to financial literacy likely assessed respondents' knowledge, skills, and behaviors regarding financial management. This could include understanding of basic financial concepts (e.g., budgeting, saving, investing), awareness of financial products and services, ability to manage debt, and competence in making informed financial decisions.

**Digital Financial Inclusion:** This variable probably covered aspects related to access to and usage of digital financial services and technologies. Questions may have addressed respondents' access to bank accounts, mobile money services, digital payment platforms, and other forms of financial technology (FinTech) tools. Additionally, it might have assessed familiarity with and utilization of digital financial services for transactions, savings, payments, and accessing credit.

**Poverty Alleviation:** This variable likely involved questions aimed at measuring the socio-economic status and well-being of respondents in relation to poverty. It may have included indicators such as income levels, employment status, access to basic necessities (food, shelter, healthcare), household assets, and overall living standards. Additionally, questions might have explored perceptions of poverty, experiences of financial hardship, and aspirations for improvement in socio-economic conditions.

**Model specification**

This study utilizes cross-sectional data collected at a single point in time. The linear regression method, specifically Ordinary Least Squares (OLS), is employed to specify the model in this study. OLS is considered one of the most robust methods in regression analysis, and it is based on certain assumptions. The regression model used in this study is as follows:

$$PA_t = \beta_0 + \beta_1 GI_t + \beta_2 FL_t + \beta_3 DFI_t + \varepsilon \dots\dots\dots (1)$$

- PA = poverty alleviation
- GI = government intervention
- FL = Financial literacy
- DFI = Digital financial inclusion

## Result and Discussion

This paper measures the impact of covid-19 on poverty alleviation in Somalia. A total of 277 respondents were obtained for analysis.

**Table 1** Demographic characteristics of the respondents

Factors	Percentage
<b>Gender</b>	
Male	80.9
Female	19.1
<b>Total</b>	<b>100</b>
<b>Age</b>	
18-35	84.1
36-50	13.0
51 and above	2.9
<b>Total</b>	<b>100</b>
<b>Educational background</b>	
Secondary school	6.1
Diploma	6.1
Batchelor degree	40.1
Postgraduate degree	47.7
<b>Total</b>	<b>100</b>
<b>Source of Income</b>	
Wage	52.0
Income from farming	4.6
Income from business	38.3
Income from rent	5.1
<b>Total</b>	<b>100</b>

In accordance with the provided data, the survey reveals that the majority of our respondents were male (80.9%), while 19.1% were female. These findings can be attributed to the prevailing trend observed in Somalia, where the male gender dominates education, the workforce, and different aspects of life. About 84.1 per cent of our respondents were in the age range of 18 to 35, highlighting a significant representation of the youthful population among Somalis. This finding suggests that the majority of Somalis are relatively young. As for education, the majority of the respondents (47.7 %) are postgraduate level, followed by 40.1 % at is undergraduate level. Finally, regarding the source of income, the data obtained reveal that wages account for the largest rate of income, at 52.0%. Income from farming accounts for 4.6 % of income, income from business accounts for 38.3% of income, and income from rent accounts for 5.1%.

### Reliability Test

In this study, Cronbach's alpha was employed to assess the reliability of the measurements used. Cronbach's alpha is a widely used test to evaluate the internal consistency and reliability of a scale or measurement. A Cronbach's alpha value above 0.6 is generally considered indicative of high reliability. The alpha coefficient ranges from 0 to 1, where values closer to 1 suggest a higher level of consistency among the items in the

measurement. Based on Table 2 indicated that the variables government intervention, financial literacy, digital financial inclusion, and poverty alleviation were 0.638, 0.660, 0.694 and 0.648, respectively.

**Table 2** Reliability

Variables	Cronbatch's alpha
Government intervention	0.638
Financial literacy	0.660
Digital financial inclusion	0.694
Poverty alleviation	0.648

**Correlation test**

The correlation between variables indicates the direction and strength of the relationship between them. Table 3 presents Pearson's correlation coefficients for the four constructs, ranging from 0.438 to 0.584. All variables exhibit a positive correlation, meaning that when the value of one variable changes, the value of the other variable tends to change in the same direction. In this study, digital financial inclusion demonstrates the highest correlation coefficient with poverty alleviation, at 0.584. On the other hand, government intervention exhibits the lowest correlation coefficient with poverty alleviation, showing a value of 0.438.

**Table 3** Correlation

		Government Intervention	Financial Literacy	Digital Financial Inclusion	Poverty Alleviation
Pearson Correlation	Government Intervention	1	.535**	.487**	.438**
	Financial literacy	.535**	1	.522**	.457**
	Digital Financial Inclusion	.487**	.522**	1	.584**
	Poverty alleviation	.438**	.457**	.584**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Estimation of model parameters**

This study used ordinary least squares (OLS) to show the relationship between our variables. The model is specified in the methodology section and the result of the model parameters is presented in Table 4.

**Table 4** Unstandardized coefficients

Unstandardized Coefficients				
Variable	Beta	Std. robust Error	t-Statistic	Prob.
(Constant)	5.615	0.954	5.889	0.000
Government Intervention	0.134	0.054	2.466	0.014
Financial literacy	0.155	0.061	2.544	0.012
Digital Financial Inclusion	0.407	0.054	7.485	0.000

Based on the results presented above, it is evident that government intervention, financial literacy and digital financial inclusion have a positive and significant impact on poverty alleviation in Somalia, with significance at a 5% level of analysis. Therefore, Hypotheses H1, H2, and H3 are accepted, confirming the relationship between these variables. The model demonstrates a good fit in estimating the parameter, with an R-squared value of 62%, indicating that 62% of the variation in the dependent variable can be explained by the independent variables. Furthermore, the F-statistics test is significant at the 1% level, indicating the joint significance of the variables. To ensure the absence of multicollinearity among the independent variables, collinearity tolerance and VIF statistics were examined. All variables exhibited collinearity tolerance values below one and VIF values below 3, indicating no significant multicollinearity issues.

Additionally, the condition index was below 30, further supporting the absence of multicollinearity. A serial correlation was assessed through the Durbin-Watson test, which indicated that the data did not suffer from serial correlation problems, as the Durbin-Watson value was neither below 1.5 nor above 2.5. Overall, the findings suggest that Government Intervention, Financial literacy, and Digital Financial Inclusion directly contribute to poverty alleviation in Somalia. Specifically, a 1% increase in these variables leads to an approximate increase in poverty alleviation of 0.014, 0.012, and 0.000, respectively.

## Discussion

The COVID-19 pandemic has had a devastating impact on Somalia, with the country's poverty rate rising to 73% in 2021. However, the results demonstrate that government intervention, financial literacy and digital financial inclusion have the potential to contribute positively to poverty alleviation in Somalia. Specifically, a 1% increase in these variables corresponds to an estimated increase in poverty alleviation of approximately 0.014, 0.012, and 0.000, respectively. Therefore, Hypotheses H1, H2, and H3 are accepted, affirming the significance of these variables in addressing poverty challenges.

Government intervention can help to alleviate poverty by providing social safety nets, such as food assistance and cash transfers, to those who are most in need. This can help to prevent people from falling into poverty in the first place and can also help to lift people out of poverty if they do fall in. Government intervention has a positive and significant effect on poverty alleviation in Somalia. This indicates that government intervention in

poverty alleviation efforts has a beneficial and substantial impact in Somalia. When the government takes proactive measures to address poverty, it can implement policies, programs and initiatives that directly target poverty reduction and promote inclusive economic growth. These interventions may include social safety nets, targeted subsidies, investment in education and healthcare, infrastructure development, job creation, and support for entrepreneurship and small businesses.

The government's efforts in providing social welfare programs, improving access to education, healthcare and enhancing employment opportunities have contributed significantly to improving the living conditions of the population.

As Somalia progresses beyond its state of fragility, it needs gradually shift from depending on humanitarian aid to adopting developmental approaches. The country faces severe drought conditions, exacerbated by five consecutive seasons of inadequate rainfall. If humanitarian food assistance is not sustained, the number of people facing food insecurity in Somalia may increase from 7.1 million to 8.3 million. This could potentially lead to famine-like conditions for particularly vulnerable groups by mid-2023. However, efforts are being made to address this humanitarian crisis through grants, social safety net programs primarily aimed at impoverished rural households and the inflow of remittances. In 2022, the collective efforts of various partners resulted in the mobilization of over \$1.5 billion in relief funds. Thus, H1 is accepted, which aligns with (Ashraf, 2020) and Wright et al., (2020).

Enhancing financial literacy can empower individuals to make informed financial decisions, leading to increased savings and investment. This, in turn, contributes to the gradual reduction of poverty. The positive and significant impact of financial literacy on poverty alleviation in Somalia is evident. Financial literacy equips individuals with the necessary knowledge and skills to make prudent financial choices, such as saving, investing, and managing debt. With greater financial literacy, individuals can better safeguard themselves from financial difficulties and work towards securing a brighter future for themselves and their families. Thus, H2 is accepted, which aligns with (Cohen & Nelson, 2011) and Oseifuah, (2010).

Enabling digital financial inclusion allows individuals to access various financial services, including savings accounts, loans, and insurance, which helps them manage their finances more efficiently and work towards building wealth. The positive and significant relationship between digital financial inclusion and poverty alleviation in Somalia indicates that expanding digital financial services has a valuable and noteworthy impact on reducing poverty. By embracing digital financial inclusion, individuals gain more significant financial opportunities, enabling them to navigate their economic circumstances more effectively and contribute to their long-term financial well-being. By increasing access to digital financial services such as mobile banking, digital payments, and microfinance, individuals and communities gain better opportunities to manage their finances, access credit, save money, and engage in economic activities. These digital financial tools enable people, especially those in underserved areas, to participate more

effectively in the formal economy, access financial services, and improve their livelihoods. Thus, H3 is accepted, which aligns with (Diniz et al., 2012) and (Park & Mercado Jr, 2018).

## **Conclusion**

This study provides valuable insights into the impact of COVID-19 on poverty alleviation in Somalia, focusing on three factors namely, government Intervention, financial literacy and digital financial inclusion are linked to poverty alleviation. The findings of this study reveal a positive and significant association between government intervention, financial literacy, digital financial inclusion and poverty alleviation in Somalia. These results suggest that effective government policies and interventions, coupled with improved financial literacy and increased access to digital financial services, can play a crucial role in reducing poverty rates in the country. The statistical significance of these associations at a 5% level of analysis further strengthens the credibility of the findings. The study's methodology and strong model performance ensure that the estimated model parameters accurately capture the relationships between the variables under investigation.

The findings of this study suggest that the government of Somalia should focus on these three areas to help to alleviate poverty. By providing social safety nets, increasing financial literacy and promoting digital financial inclusion the government can help to improve the lives of millions of people in Somalia. The study highlights the need for continued and targeted government intervention to alleviate poverty. Policymakers should focus on implementing a comprehensive strategies that address the specific challenges faced by vulnerable populations such as providing the essential care needed for the society such as food and medicine, targeted financial support and access to basic services.

Efforts to enhance financial literacy should be prioritized. This can be achieved through educational campaigns, workshops and training programs that equip individuals with the necessary knowledge and skills to manage their finances effectively. Collaborations between government agencies, financial institutions and civil society organizations can facilitate disseminating of financial literacy initiatives.

Furthermore, recognizing the potential of digital financial services, efforts should be made to increase access to digital platforms and promote their usage among underserved communities. This may involve improving internet connectivity, ensuring affordability and addressing digital literacy gaps to ensure marginalized groups can fully benefit from digital financial inclusion.

However, to achieve long-term poverty reduction and development, it is crucial for Somalia to move away from dependency on external assistance and prioritize self-sufficiency. Shifting towards developmental approaches involves creating an enabling environment that encourages economic growth, fosters entrepreneurship and promotes investment in sectors that generate sustainable employment opportunities.

One limitation of this study is its relatively small sample size of 277 micro-entrepreneurs. It is important to note that the findings and conclusions drawn from this study may not be representative of the entire population of micro-entrepreneurs in Somalia. In a larger sample size, there could be more diverse perspectives and experiences that could potentially yield different results. Therefore, further research with a larger sample size is needed to obtain a more comprehensive understanding of the impact of COVID-19 on poverty alleviation in Somalia.

#### Author Contributions

Conceptualisation, Dzuljastri Abdul Razak and Bile Abdisalan Nor; Methodology, Dzuljastri Abdul Razak and Bile Abdisalan Nor.; Investigation, Dzuljastri Abdul Razak and Bile Abdisalan Nor;; Analysis, Dzuljastri Abdul Razak and Bile Abdisalan Nor.;; Original draft preparation, Dzuljastri Abdul Razak and Bile Abdisalan Nor.; Review and editing, Dzuljastri Abdul Razak and Bile Abdisalan Nor.

#### Conflicts of Interest

The authors declare no conflict of interest.

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