

Research Article

Social Protection Cash Transfers and Gendered Equality: An Analysis of Gendered Differences in Poverty Reduction and Income Distribution

Julius Okello

School of Social Sciences, University of KwaZulu-Natal, South Africa

Article history

Received: 04-05-2024

Revised: 10-06-2024

Accepted: 04-07-2024

Email: okelloj@ukzn.ac.za

Abstract: This research investigates key determinants of poverty reduction and income distribution in eastern Uganda's Teso sub-region. Regression analysis reveals significant negative coefficients for access to healthcare ($\beta = -0.414, p = 0.029$) and road infrastructure ($\beta = -0.363, p = 0.014$), indicating lower poverty levels in communities with better access. Employment ($\beta = -2.8, p = 0.000$) and income ($\beta = 3.3, p = 0.000$) also show substantial negative coefficients, underscoring their role in reducing poverty and improving income distribution. While location and education lack statistical significance, the overall regression model exhibits strong explanatory power (R -squared = 0.635), with the F -test confirming significance ($F(11, 404) = 53.844, p = 0.000$), indicating predictive capability for poverty levels and income distribution. These findings inform actionable strategies for policymakers and practitioners aiming to bolster social protection and gendered equality in the Teso sub-region and similar areas. Prioritizing investments in healthcare, infrastructure, employment, and income-generating initiatives can address poverty and inequality challenges, fostering inclusive development. Employing the Difference-in-Differences (DID) model alongside qualitative insights provides a comprehensive understanding of social protection cash transfers (SPCTs) and socioeconomic influences on poverty vulnerability. While gender emerges as a significant predictor, other factors like dwelling type, access to water, education, health facilities, and income do not notably affect poverty outcomes. Triangulating quantitative and qualitative data enriched the discussions on poverty reduction at the household and community level as well as guided tailored interventions, navigating the complex interplay of socio-economic factors and gendered dynamics.

Keywords: Social Protection, Cash Transfers, Households, Community, Poverty, Vulnerability, Teso, Welfare, Uganda

Introduction

Poverty measurement often relies on monetary poverty lines, but households face various deprivations beyond just consumption or expenditure (Uganda Bureau of Statistics, 2022a; WB, 2022). A multidimensional approach to poverty, which includes factors such as education, health, welfare, and empowerment, reveals that 42.1% of Ugandans are considered poor (ILO, 2023; WB, 2022). This issue is particularly acute in the eastern and northern regions, where multidimensional poverty is concentrated (Alkire, 2013). Sub-regions like Karamoja, Acholi, Busoga,

West Nile, and Lango have multidimensional poverty headcount ratios exceeding the national average. For instance, in the Karamoja Sub-region, 84.9% of the population experiences multidimensional poverty (Uganda Bureau of Statistics, 2022a). Key drivers of this poverty include limited access to clean sanitation facilities, substandard housing, inadequate access to clean energy, and lack of financial services (GoU, 2020a). Aligning with the 2030 Agenda's principle of inclusivity, efforts must address poverty in all its dimensions, ensuring no one is left behind and empowering the impoverished through comprehensive development policies.

The Northern region remains the focal point of poverty in Uganda, with significant variations at the sub-regional level (Uganda Bureau of Statistics, 2022a). Poverty in the northern region increased from 32.6% in 2016/17 to 35.92% in 2019/20, primarily due to adverse weather conditions and reliance on subsistence agriculture (Uganda Bureau of Statistics, 2019a). Data from the Uganda National Household Survey (UNHS) 2019/20 show that 52.2% of households in the northern region engage in subsistence activities, with 30.2% reliant on subsistence farming, making the area vulnerable to weather fluctuations and poor harvests (Uganda Bureau of Statistics, 2019a). The Acholi Sub-region has the highest poverty rate at 67.68%, up from 33.4% in 2016/17. Similarly, the Karamoja Sub-region saw its poverty rate increase from 60.18% to 65.65% (Uganda Bureau of Statistics, 2022a). The Lango sub-region's poverty rate rose from 15.64 % to 27.64% in 2019/20. In contrast, West Nile experienced a notable decrease in poverty from 34.9% to 16.9%. Meanwhile, the Eastern Region's poverty rate declined from 35.67% in 2016/17 to 29.2% in 2019/20 (Uganda Bureau of Statistics, 2022a; 2019b).

This six-percentage-point decrease is encouraging, especially considering the poverty rate was 24.5% in 2012/13. All sub-regions in the eastern region saw declines in poverty rates (Uganda Bureau of Statistics, 2022a), with the Elgon Sub-region showing the most significant improvement, decreasing from 34.9% to 13.2% (Campenhout et al., 2016). To address these disparities, the Ugandan government is actively implementing various social protection programs, including cash transfers and public works initiatives (GoU, 2020a). These programs are vital in combating poverty, inequality, and social exclusion in Uganda. Social protection cash transfers are particularly noteworthy for their targeted financial assistance to vulnerable households, enhancing well-being and fostering inclusive gendered growth (WB, 2022). Despite numerous studies highlighting the positive impact of cash transfers on poverty alleviation, there remains a significant gap in understanding their unequal effects on gender disparities among household heads (WB, 2022).

Background

Uganda's long-term development goal is to transform society from a predominantly peasant economy to a modern and prosperous country (GoU, 2020b). Post-independence, the government identified poverty, ignorance, and disease as key challenges and prioritized social services to address these issues through a mixed-economy development approach (GoU, 2020a). Between 1962 and 1970, Uganda achieved a modest average real GDP growth rate of about 5%, along with improvements in literacy and healthcare access (WB, 2022). However, political instability and suboptimal policies in the 1970s

reversed this progress, leading to a negative GDP growth rate and increased poverty (Kasozi, 1994). High inflation, commodity scarcity, and political instability continued to exacerbate poverty through 1986 (Campenhout, Sekabira, and Aduayom, 2016). From 1986 to 1997, the Ugandan government implemented several reforms, such as the Economic Recovery Programme (ERP) and Structural Adjustment Programme (SAP), aimed at economic modernization and poverty reduction (Uganda Bureau of Statistics, 2022a; Okello, 2016). These reforms reversed the negative GDP growth trend, with per capita GDP growth averaging 5.6% per annum during the ERP period (1987-1992) (Uganda Bureau of Statistics, 2022a). However, poverty remained high, with most of the population engaged in subsistence farming. The 1992/93 Uganda National Household Survey (UNHS) reported that 56.2% of the population lived below the poverty line (Uganda Bureau of Statistics, 2019b). By 1997, this figure had decreased to 44%, although regional variations and rising income inequality persisted (Uganda Bureau of Statistics, 2022a).

Recognizing the need for sustained structural change, the government developed the Poverty Eradication Action Plan (PEAP) in 1997, Uganda's first Poverty Reduction Strategy Paper (PRSP) (GoU, 2020a). PEAP focused on economic growth, good governance, poverty alleviation, and improving the quality of life for the poor (Holzmann, 2000). One significant measure during this period was the introduction of Universal Primary Education in 1997, which significantly increased primary school enrolment from 2.9 million to 5.3 million children (Uganda Bureau of Statistics, 2019a). During the second PEAP (2000-2003) and third PEAP (2004-2007), the government aligned its efforts with the Millennium Development Goals (MDGs), emphasizing poverty reduction and economic growth (UN, 2018). Priorities included enhancing incomes, improving quality of life, increasing competitiveness, and promoting good governance (Uganda Bureau of Statistics, 2010). Between 2000 and 2010, GDP growth averaged 7.3% annually, with the share of agriculture in GDP decreasing from 32% to 26% (OECD/ILO, 2019). Life expectancy rose from 47 to 57 years, and the poverty headcount ratio declined from 33.8% in 2002 to 24.5% in 2009 (GoU, 2020b). However, income inequality persisted, with the Gini coefficient increasing from 0.43 in 1999 to 0.44 in 2009. Additionally, the primary school completion rate dropped from 60% in 2000 to 55% in 2010 (GoU, 2020a). Despite improvements in some indicators, challenges like high maternal mortality rates and persistent income inequality remained (GoU, 2020a).

In 2010, Uganda transitioned from the PRSP framework to National Development Plans (NDPs) under the Comprehensive National Development Planning Framework, leading to the National Vision 2040 (GoU,

2007). The first NDP focused on enhancing transport infrastructure and energy (Uganda Bureau of Statistics, 2022a). Goals included reducing poverty, achieving a primary school completion rate of 89.2%, increasing the employed labour force to 78.2%, and extending electricity access to 20% of households (GoU, 2007). During this period (2010-2015), GDP growth averaged 5.5%, below the 7.2% target, but employment and poverty rates improved, and electricity access from the national grid reached 14% of the population (MEMD, 2019; GoU, 2020a). Despite falling short of some targets, significant progress in poverty alleviation was made, though challenges in implementation capacities, such as contract mismanagement, were evident (GoU, 2020a).

The second National Development Plan (NDP II), spanning from 2016 to 2020, aimed to enhance sustainable production, productivity, and value addition, improve infrastructure quality and quantity, develop human capital, and enhance service delivery (GoU, 2020a). The NDP II set ambitious targets, including reducing the proportion of the population below the poverty line from 19.7% to 14%, raising income per capita to US\$1,039, achieving a GDP growth rate of 6.3%, and lowering the maternal mortality rate to 320 per 100,000 live births, among others. However, the assessment of NDP II revealed mixed outcomes. For example, between the fiscal year (FY) 2015/16 and FY 2019/20, the real GDP growth rate averaged 4.7%, falling short of the 6.3% target. Additionally, the proportion of the population below the poverty line increased from 19.7% in 2012/13 to 21.4% in 2016/17 (Uganda Bureau of Statistics, 2022a). By 2019/20, the poverty rate had decreased to 20.3%, still above the NDP II target of 14%. Income inequality, as measured by the Gini coefficient, also worsened from 0.38 in 2012/13 to 0.42 in 2016/17, with a slight improvement to 0.41 by 2019/20, highlighting that economic growth was not sufficiently inclusive, benefiting only a small segment of the population (Uganda Bureau of Statistics, 2022b).

Despite these challenges, Uganda is experiencing slow growth in its middle class. The middle class comprises households less prone to poverty, with average consumption per adult equivalent surpassing twice the poverty threshold (WB, 2022). The expansion of the middle class is crucial for sustained poverty alleviation, increased production and consumption, and the transition toward a middle-income economy (Uganda Bureau of Statistics, 2022a). As Uganda pursues its Vision 2040, building a resilient middle class less susceptible to both monetary and multidimensional poverty is imperative (GoU, 2007). Over the past three decades, deliberate efforts have been undertaken to foster regional integration and attract foreign direct investment (FDI) to stimulate economic growth and diminish poverty (AfDB, 2022). According to the Africa Integration Index (2019), Uganda

is ranked favourably for its integration endeavours within the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), and the Intergovernmental Authority on Development (IGAD). This aligns with the objectives of the 2030 Agenda, the African Union Agenda 2063, and the East African Community Vision 2050.

The overarching theme of these international development agendas and visions is to advance collective prosperity and foster inclusive and sustainable development, ultimately enhancing the well-being of populations (Uganda Bureau of Statistics, 2022b). Uganda has actively engaged in numerous international development initiatives aimed at catalyzing the transformation of African economies (Uganda Bureau of Statistics, 2010). Uganda's participation in the African Continental Free Trade Area is expected to broaden export markets, stimulate manufacturing, and elevate household incomes (GoU, 2020a). In terms of performance metrics, Uganda demonstrates strength in trade integration, production integration, and facilitating the free movement of individuals, yet exhibits weaknesses in infrastructure integration and financial and macroeconomic convergence (Campenhout, Sekabira, and Aduayom, 2016). The positive performance in trade and production integration is anticipated to expand market opportunities for goods and bolster household incomes (Campenhout, Sekabira, and Aduayom, 2016). Research by Gohou et al. (2018) highlights a positive correlation between economic integration, net inflows, and poverty alleviation in Central and East Africa (Ma, 2018). Significant formal and informal cross-border trade occurs with Southern Sudan, the Democratic Republic of Congo, Kenya, and Rwanda, underscoring the pivotal role of the private sector (Ma, 2018). Emphasizing private-sector-led growth involves fostering a conducive policy environment for enterprise development, cultivating value chain linkages, and fostering public-private partnerships (WB, 2008). These efforts align with the 2015 Addis Ababa Action Agenda, which acknowledges the critical role of domestic public resources in driving the attainment of the Sustainable Development Goals (SDGs) (UN, 2023).

The National Development Plan III (NDP III) and its twenty associated programs prioritize industrialization through agro-processing, manufacturing, mineral beneficiation, and oil production (GoU, 2020a). This strategic focus aims to further enhance economic growth prospects and facilitate the transition of labour from subsistence agriculture to more productive sectors (AfDB, 2016). Additionally, the advancement of information and communication technology (ICT) and the digitalization of the economy are anticipated to stimulate innovation, foster job creation among young people, and drive structural transformation leading to poverty reduction.

Digitalization holds promise in connecting the informal sector with formal sector opportunities through avenues such as electronic registration, e-markets, e-commerce, and improved access to market information and advisory services. Nonetheless, the rapid population growth rate exceeding three per cent per annum is likely to strain natural resources and exacerbate climate change, resulting in adverse welfare implications (Okello, 2016). Addressing this challenge is crucial within the framework of poverty prevention and development policies.

Measurement of Poverty in Uganda

Beginning in the 1992/1993 period, Uganda has relied on the Consumption Expenditure per Adult Equivalent (CPAE) methodology to assess welfare and poverty rates (Uganda Bureau of Statistics, 2022a). This approach involves calculating household expenditures on a broad array of goods, encompassing both food and non-food items, over 12 months. This period accounts for seasonal variations in household consumption patterns (Uganda Bureau of Statistics, 2019a). To determine the cost of a basic food basket providing 3,000 calories, the 1985 World Health Organization (WHO) methodology is employed, converting household food expenditures into adult equivalents (UNDP, 2016). The caloric requirement is set higher than the typical recommendation of 2,000-2,500 calories due to the high physical energy demands of agricultural work, which is prevalent in Uganda (WB, 2022).

Adjustments for inflation and price level changes are critical in maintaining the accuracy of poverty assessments over time. Consequently, household consumption expenditures reported in the 2016/17 and 2019/20 Uganda National Household Survey (UNHS) datasets were adjusted to 2009/10 prices to ensure consistency and comparability (UNDP, 2017). In the 2016/17 survey, the monthly mean CPAE was UGX 96,918, which experienced a marginal decline to UGX 96,772 in the 2019/20 survey. A household is classified as poor if its CPAE falls below the designated poverty line (Uganda Bureau of Statistics, 2022a). The official poverty line, based on CPAE, is set at USD 1.00 per day, equivalent to UGX 49,153. The CPAE methodology not only provides a measure of poverty but also offers insights into the broader economic well-being of households. By adjusting for calorie requirements and price changes, this method ensures a robust and dynamic assessment of poverty, which is essential for effective policy formulation and targeted intervention strategies aimed at poverty alleviation and economic development.

Poverty Trends Based on the National and International Poverty Line

Since the 1992/1993 Uganda National Household Survey (UNHS), the national poverty line has been

consistently set at one United States Dollar (US\$1) per day (GoU, 2020a). Despite significant socio-economic changes over the decades, this benchmark has remained unchanged. Historically, Uganda has seen a downward trend in poverty, in alignment with Vision 2040, which aspires to elevate the country to lower middle-income status (Uganda Bureau of Statistics, 2022a). To gain a comprehensive understanding of poverty trends, it is also insightful to consider the international poverty line, which is set at Consumption Expenditure per Adult Equivalent (CPAE) equivalent to US\$1.99 per day. Between 2016/17 and 2019/20, poverty reduction was more pronounced when using the national poverty line, showing a decrease of 1.1 percentage points, compared to a 0.5 percentage point decrease when using the international poverty line. However, the disparity in the composition of goods and services between the global and national poverty lines complicates the assessment of Ugandans' relative welfare using the international benchmark (GoU, 2020b). Preferences and the relative importance of various commodities differ across countries and periods, necessitating an update to the poverty line to reflect these changes accurately.

In response to these challenges, the Uganda Bureau of Statistics (UBOS) initiated a consultative process to revise the poverty line to better represent current preferences and consumption patterns (GoU, 2020b). The updated basket of goods includes new products and services that were not available in 1992/1993, affecting the weights assigned to different commodities in calculating CPAE. Consequently, in the 2019/20 UNHS, the revised poverty line was set at US\$1.77 per day to better align with contemporary consumption patterns and the national development goals of Vision 2040. Using this revised poverty line, the overall poverty rate was measured at 30.1%, with rural and urban poverty rates at 33.8% and 19.8%, respectively. The overall poverty pattern has remained consistent, although notable changes have been observed in the eastern and northern regions (Okello, 2020). The UBOS revision provides a more accurate reflection of the current socio-economic realities in Uganda, thereby facilitating more effective poverty alleviation strategies and policy interventions.

Sub-Regional Poverty Trend

Regional disparities in resource endowments and economic activities within Uganda contribute significantly to variations in sub-regional poverty rates. This diversity is starkly illustrated by examining the spatial distribution of poverty across sub-regions in 2012/13, 2016/17, and 2019/20. By 2019/20, the Acholi Sub-region emerged as the poorest, with a poverty rate of 66.7%, indicating a reversal of progress made between 2012/13 and 2016/17, during which the poverty rate declined from 45.45% to 34.4%. Additionally, in 2019/20,

Karamoja stood out as the second-poorest sub-region. It's noteworthy to highlight that Karamoja held the unenviable title of the poorest sub-region in 2016/17, with a poverty rate of 60.18%, reflecting an improvement from 74.5% in 2012/13. However, this progress was regrettably reversed by 2019/20, with the poverty rate increasing to 65.7%. These fluctuations in poverty rates underscore the dynamic nature of socio-economic conditions across Uganda's sub-regions and highlight the necessity for targeted interventions to address the specific challenges faced by each region. These nuanced analyses are essential for designing effective poverty reduction strategies that consider the unique circumstances and needs of different communities within the country

District-Level Poverty and Welfare Patterns Implications

Districts and sub-counties play pivotal roles in planning and service delivery within Uganda, exerting significant influence on household livelihoods and welfare outcomes (Campenhout, Sekabira, & Aduayom, 2016). Leveraging data from the 2014 Population and Housing Census and Uganda National Household Surveys (UNHS) conducted in 2016/17 and 2019/20, the Uganda Bureau of Statistics (UBOS) employed the Small Area Estimation technique to compute poverty rates at the district and sub-county levels. Despite substantial investments by both the government and the private sector to enhance economic performance, social services, and overall population welfare (GoU, 2020b), persistent challenges remain, particularly in rural and marginalized areas. Various programs, such as Operation Wealth Creation (OWC), the Youth Livelihood Programme (YLP), and the Uganda Women Entrepreneurship Programme (UWEP), have been implemented to enhance productivity and improve the livelihoods of farmers, youth, and women.

Additionally, the Senior Citizens' Grant (SCG) aims to support elderly individuals and their families, while the third phase of the Northern Uganda Social Action Fund (NUSAF III) focuses on providing income support and enhancing the resilience of poor and vulnerable households in northern Uganda (Uganda Bureau of Statistics, 2019b). NUSAF III components include labour-intensive public works, disaster risk financing, improved household income support programs, sustainable livelihoods promotion, community sensitization to prevent the misuse of project resources, and enhanced citizen and stakeholder engagement. Analyzing the relationship between poverty status and the receipt of benefits from OWC, SCG, YLP, UWEP, and NUSAF III highlights the impact of these interventions on poverty alleviation and household welfare outcomes (Uganda Bureau of Statistics, 2019b). However, despite these efforts, disparities persist, underscoring the need for

targeted and sustained interventions to address the multifaceted challenges faced by different regions and demographic groups across Uganda.

Public Goods and Poverty Reduction

The preceding section delved into the impact of interventions targeting households and individuals, but it's equally crucial to consider the contributions of public goods and social services provided by government entities, the private sector, and non-governmental organizations (NGOs), as they generate positive externalities at the household and community levels (UNDP, 2016). Data from the Uganda National Household Survey (UNHS) 2019/20, including inquiries to community leaders, shed light on the presence of new schools, roads, healthcare facilities, electricity access, and other amenities introduced within the three years preceding the survey (Uganda Bureau of Statistics, 2019b). Employing the propensity score matching method, the causal effects of these initiatives were evaluated.

Investments in road infrastructure have consistently received substantial budgetary allocations under the National Development Plans (GoU, 2020b). Reports from the Uganda National Roads Authority (UNRA) indicate an increase in the stock of paved roads from 4,257 kilometres in 2017/18 to 5,370 kilometres in 2019/20. Studies by Deusdedit et al. (2023) underscore the significant impact of government investments in road infrastructure on poverty reduction in countries like Ethiopia and Papua New Guinea. Specifically, the construction of new roads within an area in the five years leading up to the UNHS 2019/20 survey resulted in a 4.48% decrease in the poverty rate, highlighting the importance of enhancing rural transport networks. Strategic growth corridors, such as the southern (Malaba-Kampala-Katuna), eastern-northern (Malaba-Lira-Gulu-Arua), and Albertine-Northern corridors, are expected to contribute significantly to poverty alleviation in Uganda, aligning with the objectives outlined in the Uganda National Physical Development Plan 2019-2020.

Access to affordable and high-quality healthcare is crucial for shaping household welfare and productivity. Communities that received a new health facility within the past three years exhibited, on average, a 6.97% lower poverty rate (GoU, 2020a). However, caution is advised due to the diagnostic Rubin's B statistic slightly exceeding the 25% threshold (Uganda Bureau of Statistics, 2019a). Similarly, access to relevant and quality education is fundamental for human capital development, with households benefiting from new schools experiencing an 8.0% reduction in the poverty rate compared to those without such facilities.

The government's commitment to expanding educational opportunities represents a crucial pillar in poverty reduction strategies. Additionally, interventions

by government and NGOs in area development projects play a vital role in addressing localized development challenges, potentially impacting household welfare (ILO, 2023). Within the framework of the National Development Plan III (NDP III), the Area Development Programme seeks to promote equitable regional economic growth and reduce poverty in regions with persistently high poverty rates compared to the national average. Communities benefiting from area development initiatives exhibit lower poverty rates by 4.81% compared to areas without such programs, indicating the effectiveness of these interventions in aligning sub-regional outcomes with the broader national poverty reduction trajectory (WB, 2022). Implementing methodologies such as Participatory Development Management (PDM) and the Area-Based Commodity Development (ABCD) strategy holds promise for stimulating local economic development and fostering sustainable poverty reduction.

Social Protection

Social protection cash transfer programs encompass a wide range of initiatives, from unconditional to conditional transfers, aimed at addressing poverty and vulnerability by providing financial assistance to individuals or households (Okello, 2016; UNDP, 2017). However, there's a notable gap in understanding the gendered dimensions of these programs (UN, 2023). This paper addresses this gap by investigating the impact of social protection cash transfers on household vulnerability to poverty and gender-based inequality.

The study aims to statistically analyze the effectiveness of cash transfer programs in improving outcomes for both male and female beneficiaries, employing econometric methods such as the Difference-in-Differences (DID) model (Torres-Reyna, 2023). By focusing on the Teso sub-region and utilizing data collected from diverse contexts, the research provides valuable insights into the complex dynamics of social protection cash transfers and their impact on poverty and gender inequality.

Moreover, this paper offers practical recommendations for policymakers involved in designing and implementing social protection policies, both within the public and private sectors, to promote inclusive development and gender equality (Uganda Bureau of Statistics, 2019a). By aligning with the United Nations Sustainable Development Goal 1 (SDG1) on eradicating poverty and promoting equitable growth, the study contributes to the broader agenda of sustainable poverty reduction efforts (UN, 2023).

Problem Statement

The persistence of household and community poverty, along with gendered inequalities, remains a significant

challenge globally, regionally, and nationally, despite substantial investments in social protection programs (WB, 2022; OECD/ILO, 2019). While there has been a slight decline in the national poverty rate from 21.4% in 2016/17 to 20.3% in 2019/20, disparities persist, particularly with rural areas experiencing higher poverty rates than urban areas. The Uganda National Panel Survey (UNPS) of 2018/19 indicates a reduction in chronic poverty over time, yet a substantial proportion of individuals who were non-poor in 2015/16 fell into poverty by 2018/19. Despite efforts to alleviate poverty through social protection cash transfer programs, the reality on the ground, particularly in the Teso sub-region of Uganda, suggests a persistent challenge in reducing poverty levels.

The United Nations Development Programme (UNDP) Poverty Status Report of February 9, 2023, reveals a fluctuating trend in poverty rates, with approximately 20.83% of the population living in poverty during the financial year (FY) 2012/13, about 25.07% in 2016/17, and approximately 21.92% in 2019/20 (GoU, 2007). Similarly, at the sub-regional level, the income inequality measured using the Gini Coefficient in the Teso sub-region showcases variations over time (Uganda Bureau of Statistics, 2019b). Despite these fluctuations, poverty and income disparities persist, necessitating a deeper understanding of the factors contributing to these challenges and the effectiveness of social protection measures in addressing them (WB, 2022).

Thus, this study seeks to investigate the impact of social protection cash transfers on household and community poverty reduction and gendered inequalities, with a particular focus on the Teso sub-region, in alignment with the overarching goal of informing evidence-based policy interventions to foster inclusive development and poverty alleviation (Uganda Bureau of Statistics, 2019b).

Objectives

These research objectives seek to gain an in-depth understanding of the intricate connection between social protection cash transfers, gender-specific interaction in reducing household heads' vulnerability to poverty at the household and community level, and how income distribution through cash transfers has enhanced moving out of poverty, with the ultimate goal of generating evidence-based policy recommendations and interventions for policy and decision-making efforts. Specifically, the paper seeks to:

1. To measure the effects of social protection cash transfers on reducing household vulnerability to household and community poverty
2. To compare the multiple effects of cash transfers on male and female recipients moving out of household and community poverty

3. To propose a structure on how cash transfers can be effective and efficiently used to address gendered differences in access to social protection services

Research Questions

- How effective are social protection cash transfers in reducing poverty and vulnerability
- How do cash transfers affect male and female beneficiaries at the household level
- What variables influence the impact of cash transfers on gender disparities

This research developed three hypotheses to assist with the analysis and investigation of whether social protection cash transfers have a differential effect on reducing poverty and income inequality among genders at the household level (Creswell, 2014). The hypotheses were explored using econometric models, which generated statistical frequencies, figures, and tables of results following the study objectives and research questions (Creswell, 2014). Specific study limitations and research gaps were recognized, and alternate solutions and future research directions were proposed (Creswell, 2014).

The Primary Study Hypothesis

Null Hypothesis (H0): Social protection cash transfers do not have a statistically significant effect on reducing income disparity and poverty between genders.

Alternative Hypothesis (H1): Cash transfers for social protection can greatly reduce the consequences of poverty and gender-based income disparities at the household level.

Gender-Specific Hypotheses

Null Hypothesis (H0): Cash transfers from social protection do not significantly reduce poverty and income inequality among male and female recipients.

Alternative Hypothesis (H1): Female beneficiaries of social protection cash transfers see greater reductions in poverty and income inequality compared to male recipients.

Interaction Hypothesis

The null hypothesis (H0) suggests that social protection cash transfers have no gender-specific influence on poverty and income inequality.

The alternative hypothesis (H1) proposes a gender-specific interaction effect among social protection cash transfers and poverty, indicating that their effect on income inequality and poverty differs by gender.

Significance of the Study

This study seeks to add to the expanding body of literature on social protection and gender equality by

providing empirical information on the effectiveness of cash transfer programs in decreasing poverty and gender inequities. This research can help to inform policy and practice aimed at fostering inclusive development and gender equality by understanding the processes by which cash transfers influence gender inequality.

Theoretical Framework

Feminist Economics

The theory focuses on resolving gender discrepancies in economic results and recognizes the unequal allocation of resources and opportunities between men and women (Dolfsma, 1996). According to this idea, social protection cash transfers may be used to challenge and correct gender disparities by giving women more access to financial resources and decision-making authority within households (Dolfsma, 1996). According to the hypothesis, economic empowerment for women through cash transfers not only enhances individual well-being but also has a beneficial spillover impact on broader social and economic growth (WB, 2022). Findings demonstrate that increased poverty reduction and empowerment among female recipients of social protection cash transfers align with feminist economics theory, which promotes gender equality and women's empowerment as crucial for sustainable development (WB, 2008).

Human Capital Theory

According to human capital theory, investing in education, health, and skill development increases individuals' productivity and earning capacity, which leads to better economic results and lower poverty over time (Fleischhauer, 2011). Social protection payment transfers may be considered an investment in human capital, particularly among disadvantaged and vulnerable groups, such as women and girls (CIPD, 2017). Cash transfers enable users to access important services such as education and healthcare, therefore contributing to human capital accumulation and poverty alleviation (Devereux, 2012).

Furthermore, Fleischhauer (2011) found that by reducing financial limitations and increasing living standards, cash transfers may encourage individuals, particularly women, to engage in their own education and skill development, resulting in long-term increases in economic prospects and income levels (Fleischhauer, 2011). On the other hand, CIPD (2017) expands on this finding. For instance, he finds that lower poverty rates and improved income distribution among genders following the implementation of social protection cash transfers are consistent with human capital theory predictions, which emphasize the importance of investing in individuals' capabilities to promote economic development and reduce inequalities (ILO, 2021).

Materials and Methods

The Econometric Difference-in-Differences (DID) Model

In this paper, an econometric model was used to estimate the effect of social protection cash transfers on gendered differences in poverty reduction and income distribution, controlling for other factors that may influence the outcomes constantly (Creswell, 2014). The Difference-in-Differences (DID) model estimates the causal effect of a treatment on an outcome by comparing the change in the outcome over time between a treatment group and a control group. The general econometric model for a simple DID analysis is represented as follows:

$$Y = \beta_0 + \beta_1 \times \text{Sex} + \beta_2 \times \text{Marital status} + \beta_3 \times \text{Age} + \beta_4 \times \text{SPCTs} + \beta_5 \times \text{Dwelling} + \beta_6 \times \text{Water} + \beta_7 \times \text{Education} + \beta_8 \times \text{Health} + \beta_9 \times \text{Road} + \beta_{10} \times \text{Employment} + \beta_{11} \times \text{Income} + \beta_{12} \times \text{SY} + \epsilon$$

Where Y is the dependent variable (household vulnerability to poverty), gender represents the gender of the household head, Marital status denotes the marital status of the household head, Age is the age of the household head, SPCTs indicate the presence of social protection cash transfers, Dwelling signifies the type of dwelling, Water denotes access to water, Education represents the education level of the household head, Health indicates access to health facilities, Road signifies the condition of road infrastructure, Employment represents employment status, Income denotes household income, SY represents household sources of income and any other socio-economic variables not explicitly listed, $\beta_0, \beta_1, \dots, \beta_{12}$ are the coefficients to be estimated and ϵ is the error term:

$$Y_{it} = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treatment}_i \times \text{Post}_t) + \epsilon_{it}$$

Where: Y_{it} represents the outcome variable for individual ii at time t . Treatment is a binary variable indicating whether individual ii is in the treatment group (1) or the control group (0). Post is a binary variable indicating whether the observation is before (0) or after (1) the treatment or intervention. β_1 captures the Average Treatment Effect (ATE), representing the difference in outcomes between treatment and control groups before the treatment. β_3 captures the treatment effect, representing the difference in the change in outcomes between treatment and control groups after the treatment. And ϵ_{it} is the error term in the model. The analysis of social protection cash transfers and gendered equality in the Teso sub-region of eastern Uganda was done using the Difference of Difference (DID) model to assess the impact of cash transfers on poverty reduction at household

and community levels, as well as income distribution among male and female recipients. The following model is used:

$$Y_{it} = \beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Female}_i \times \text{Post}_t) + \epsilon_{it}$$

Where Y_{it} represents the outcome variable (for example, poverty level or income distribution) for individual i at time t . Female $_i$ is a binary variable indicating whether individual i is female (1) or male (0). Post $_t$ remains as a binary variable indicating whether the observation is before (0) or after (1) the implementation of social protection cash transfers. β_1 captures the average difference in outcomes between female and male recipients before the implementation of cash transfers. β_3 captures the differential impact of cash transfers on the change in outcomes between female and male recipients after the implementation of cash transfers.

Linear Regression Output

This linear regression output appears to analyze the factors influencing poverty levels or income distribution within the context of the study's focus on social protection cash transfers and gender equality in the Teso sub-region of eastern Uganda. The linear regression analysis conducted on data from the Teso sub-region of eastern Uganda offers valuable insights into the factors influencing poverty levels and income distribution within the context of social protection cash transfers and gender equality. Contrary to expectations, the coefficient for SPCTs is negative (-0.059) but not statistically significant ($p = 0.776$). This suggests that, within the study sample, SPCTs did not have a statistically significant impact on reducing poverty. This finding may reflect complexities in the implementation and targeting of SPCTs, warranting further investigation into program design and delivery mechanisms. The lack of significant impact may also indicate that cash transfers alone are insufficient without complementary interventions. Among the examined variables, access to health facilities and road infrastructure emerge as significant determinants, with statistically significant negative coefficients:

$$(\beta = -0.414, p = 0.029 \text{ for Health}; \beta = -0.363, p = 0.014 \text{ for Road}; \text{and Income coefficient } \beta = 3.3)$$

This suggests that communities with better access to healthcare and well-developed motorable and passable roads tend to exhibit lower poverty levels or more equitable income distribution, underscoring the importance of infrastructure development in poverty alleviation efforts. Furthermore, the analysis highlights the pivotal role of employment and income, with both variables demonstrating highly significant negative coefficients. The coefficient (β) for health services $\beta = -0.414$, significant at the 5% level ($p = 0.029$). This

implies that access to health facilities reduces poverty, underscoring the importance of healthcare in improving household welfare. The coefficient for roads, $\beta = -0.363$, is significant at the 5% level ($p = 0.014$). Improved road infrastructure significantly reduces poverty, highlighting the role of transportation in facilitating market access and economic opportunities. The coefficient for employment $\beta = -2.8$, highly significant at the 1% level ($p < 0.01$). Employment opportunities are crucial in poverty alleviation, reflecting the importance of job creation in economic development. The coefficient for income $\beta = 3.3$, is also highly significant at the 1% level ($p < 0.01$). Higher household income significantly reduces poverty, emphasizing the role of economic stability in poverty reduction and the importance of economic empowerment in fostering social well-being and gender equality.

Additionally, while variables such as location and education do not exhibit statistically significant effects on poverty levels or income distribution ($p > 0.05$), the overall regression model demonstrates a strong explanatory power, with an R-squared value of 0.635 indicating that approximately 63.5% of the variance in the dependent variable is accounted for by the independent variables. The F-test further confirms the model's significance ($F(11, 404) = 53.844$, $p = 0.000$), signifying that at least one independent variable significantly predicts poverty levels or income distribution. These findings provide policymakers and practitioners with actionable insights for designing targeted interventions to enhance social protection and promote gender equality in the Teso sub-region and similar contexts (Norton et al., 2001). By prioritizing investments in healthcare, infrastructure, employment generation, and income enhancement initiatives, stakeholders can effectively address the multidimensional challenges of poverty and

inequality, fostering inclusive development and sustainable progress for all members of the community.

The location coefficient is not statistically significant ($p = 0.911$), suggesting that location does not significantly influence poverty levels or income distribution. The Health and Road variables have negative coefficients with statistically significant p-values ($p = 0.029$ and $p = 0.014$, respectively), indicating that access to health facilities and good roads is associated with lower poverty levels or better income distribution. The employment and income variables have negative coefficients with highly significant p-values ($p = 0.000$), indicating that higher employment rates and income levels are strongly associated with lower poverty levels or better income distribution.

The Overall Model Fit

R-squared value (0.635) indicates the proportion of variance in the dependent variable (poverty levels or income distribution) explained by the independent variables. An R-squared of 0.635 suggests that the model explains approximately 63.5% of the variance. F-test statistics assess the overall significance of the regression model. With a p-value of 0.000, the model is statistically significant, indicating that at least one independent variable significantly predicts the dependent variable. The statistical figure of the analysis in Table 1, as indicated by the regression output, demonstrates the significance and magnitude of the coefficients associated with each variable. Among the variables examined, certain factors stand out as statistically significant determinants of poverty levels and income distribution within the Teso sub-region of eastern Uganda. These statistical findings provide valuable insights into the complex dynamics of poverty and inequality in the region and offer actionable information for policymakers and practitioners.

Table 1: Shows the linear regression model

Districts	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Location	-.011	.096	-0.11	.911	-.198	.177	
Gender	.244	.214	1.14	.255	-.177	.665	
Maritalstatus	.112	.104	1.08	.283	-.093	.316	
Age	.002	.007	0.29	.77	-.011	.015	
SPCTs	-.059	.206	-0.29	.776	-.463	.346	
Dwelling	4.544	.191	23.80	0	4.169	4.919	***
Water	-.248	.184	-1.35	.178	-.608	.113	
Education	-.466	.543	-0.86	.391	-1.533	.601	
Health	-.414	.189	-2.19	.029	-.786	-.042	**
Road	-.363	.146	-2.48	.014	-.65	-.075	**
Employment	-2.8	.586	-4.78	0	-3.951	-1.648	***
Income	3.3	.588	5.61	0	2.143	4.457	***
S_Y	-.144	.078	-1.85	.065	-.298	.009	*
Constant	.935	.9	1.04	.3	-.834	2.704	
Mean dependent var	5.526		SD dependent var	2.873			
R-squared	0.635		Number of obs	416			
F-test	53.844		Prob > F	0.000			
Akaike crit. (AIC)	1666.148		Bayesian crit. (BIC)	1722.578			

*** $p < .01$, ** $p < .05$, * $p < .1$

Notably, variables such as access to health facilities, road infrastructure, employment status, and income level emerge as significant predictors of poverty levels and income distribution. The coefficients associated with these variables indicate the direction and strength of their impact on the dependent variable, while the corresponding p-values assess their statistical significance. For instance, variables like employment status and income level exhibit highly significant negative coefficients, suggesting a strong association with reduced poverty and improved income distribution. In contrast, variables such as location and education show non-significant coefficients, indicating a lack of significant impact on poverty levels or income distribution.

This regression analysis further provides insights into the factors influencing poverty levels or income distribution in the Teso sub-region of eastern Uganda. Variables such as access to health facilities, road infrastructure, employment, and income significantly impact poverty levels or income distribution, highlighting potential areas for policy intervention to enhance social protection and gender equality. Overall, the statistical figure in Table 1 underscores the importance of considering various socio-economic factors in poverty reduction efforts and highlights specific areas for targeted interventions. With these statistical insights, policymakers and practitioners can develop evidence-based strategies to address poverty and promote inclusive development in the Teso sub-region and similar contexts, ultimately fostering sustainable progress and improving the well-being of communities.

Results and Discussion

Measuring the Effects of Social Protection Cash Transfers

The highly significant coefficient for gender suggests a strong gender-specific effect, implying that social protection cash transfers are more effective for female recipients in reducing poverty and income inequality. This aligns with the alternative hypotheses (H1) for gender-specific effects and interaction effects, indicating that

SPCTs have a differential impact based on gender. However, other factors such as dwelling, water access, education, health, and income did not show significant effects in this model. This lack of significance could be due to various reasons, such as measurement issues, insufficient data variation, or the need for more refined variables that better capture the nuances of these factors. The estimated coefficient indicates the treatment effect of social protection cash transfers on household vulnerability to household and community poverty. The coefficient for "Gender" is 0.551, with a standard error of 0.043, a t-value of 12.92, and a p-value of 0.000. This indicates a statistically significant effect of gender on household vulnerability to household and community poverty. Being female is associated with higher vulnerability to poverty at the household and community level. The coefficient for "Dwelling" is 0.004, with a standard error of 0.046, a t-value of 0.09, and a p-value of 0.925. This suggests that dwelling type does not have a statistically significant effect on household vulnerability to poverty at the household and community level. The coefficient for "Water" is 0.006, with a standard error of 0.044, a t-value of 0.14, and a p-value of 0.89. This indicates that access to water does not have a statistically significant effect on household vulnerability to household and community poverty.

The coefficient for "Education" is -0.131, with a standard error of 0.129, a t-value of -1.01, and a p-value of 0.312. This suggests that education level does not have a statistically significant effect on household vulnerability to poverty, mainly at the household level. The coefficient for "Health" is -0.007, with a standard error of 0.045, a t-value of -0.16, and a p-value of 0.876. This indicates that households have access to health facilities; however, it does not have a statistically significant effect on household vulnerability to poverty at the household and community level. The coefficient for "Income" is -0.024, with a standard error of 0.043, a t-value of -0.57, and a p-value of 0.571. This suggests that income level does not have a statistically significant effect on household vulnerability to poverty, mainly at the household level. See Table 2 for more details.

Table 2: Shows the linear regression effects of social protection cash transfers

SPCTs	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.551	.043	12.92	0	.467	.635	***
Dwelling	.004	.046	0.09	.925	-.085	.094	
Water	.006	.044	0.14	.89	-.081	.093	
Education	-.131	.129	-1.01	.312	-.385	.123	
Health	-.007	.045	-0.16	.876	-.096	.082	
Income	-.024	.043	-0.57	.571	-.109	.06	
Constant	.836	.173	4.82	0	.495	1.177	***
Mean dependent var	1.498		SD dependent var	0.505			
R-squared	0.297		Number of obs	416			
F-test	28.838		Prob > F	0.000			
Akaike crit. (AIC)	479.007		Bayesian crit. (BIC)	507.222			

These statistical findings in Table 2 provide insights into the estimated effects of various factors on household vulnerability to poverty within the context of the DID model. While gender (Sex) emerges as a significant predictor, other socio-economic variables do not show statistically significant effects on poverty levels, implying that within the studied context, factors such as dwelling type, access to water, education level, health facilities, and income may not play a substantial role in influencing household vulnerability to both household and community poverty. Despite their inclusion in the analysis, these variables do not demonstrate significant associations with poverty outcomes, as indicated by their non-significant coefficients and high p-values (see Table 2). This suggests that within the framework of the Difference-in-Differences (DID) model, variations in dwelling conditions, access to basic services, educational attainment, health infrastructure, and income levels may not be statistically significant in contributing to changes in poverty at household and community levels within the Teso sub-region of eastern Uganda.

The findings from Table 2 emphasize the importance of considering gender when designing and implementing social protection cash transfer programs. The significant gender-specific effect highlights the potential of SPCTs to address poverty and income inequality more effectively among female recipients. Policymakers should incorporate gender-sensitive approaches to maximize the impact of these programs. Further research should explore the non-significant factors to better understand their roles and interactions in poverty reduction efforts. This study contributes to the literature by providing evidence of the gender-specific effects of social protection cash transfers, thereby offering a unique understanding of their impact on poverty and income inequality.

The Impact of SPCTs on Gender, Sources of Income, and Income Distribution

In the linear regression model presented in Table 3, the coefficient for SPCTs (Social Protection Cash Transfers) indicates the impact of these transfers on various factors related to gender, household income sources, and income

distribution. The coefficient for Gender (0.551) is statistically significant ($p < 0.01$), suggesting that gender has a substantial effect on the outcome variable. Specifically, being female is associated with a higher predicted value for the dependent variable compared to being male. This finding underscores the importance of considering gender dynamics in social protection interventions and poverty reduction strategies. The coefficients for sources of income (S_Y), (Household sources of income), and Income are not statistically significant ($p > 0.05$), indicating that these variables do not have a significant impact on the dependent variable in this model. This suggests that variations in household income sources and overall income levels do not explain a significant portion of the variance in the outcome variable, holding other factors constant.

The constant term (0.66) represents the predicted value of the dependent variable when all independent variables are zero. In this case, it indicates the baseline level of the outcome variable in the absence of social protection cash transfers, gender effects, and other factors included in the model. Overall, the regression model has a moderate explanatory power, as indicated by the R-squared value of 0.296. This means that approximately 29.6% of the variance in the dependent variable is explained by the independent variables included in the model. The F-test further confirms the overall significance of the model ($F(3, 412) = 57.778, p < 0.01$), suggesting that at least one of the independent variables significantly predicts the outcome variable. These findings provide insights into the relationship between social protection cash transfers, gender dynamics, and household income sources, informing future research and policy interventions aimed at reducing poverty and promoting gender equality in the Teso sub-region. See Table 3.

In analyzing the linear regression model presented in Table 3, the study assesses the impact of Social Protection Cash Transfers (SPCTs) on gendered dynamics, household income sources, and income distribution, in line with the study's objectives and hypothesis. The study's hypothesis posited that social protection cash transfers have a significant effect on reducing income disparity and poverty between genders.

Table 3: Shows the Linear regression impact of SPCTs on Gender, household sources of income, and Income distribution

SPCTs	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.551	.042	13.16	0	.469	.634	***
S_Y	.013	.019	0.68	.5	-.024	.049	
Income	-.026	.042	-0.62	.533	-.11	.057	
Constant	.66	.11	6.00	0	.444	.877	***
Mean dependent var		1.498	SD dependent var			0.505	
R-squared		0.296	Number of obs			416	
F-test		57.778	Prob > F			0.000	
Akaike crit. (AIC)		473.692	Bayesian crit. (BIC)			489.814	

*** $p < .01$, ** $p < .05$, * $p < .1$

The coefficient for gender (0.551) is statistically significant ($p < 0.01$), supporting the alternative hypothesis (H1) that cash transfers for social protection can reduce the consequences of poverty and gender-based income disparities. This finding aligns with the study's objectives of examining the effects of SPCTs on gender-specific poverty reduction and income distribution at the household and community levels. While the coefficients for S_Y (Household sources of income) and income are not statistically significant ($p > 0.05$), indicating that these variables do not significantly impact the dependent variable, this outcome does not fully align with the study's objectives. However, the analysis provides valuable insights into the factors influencing income distribution within households, contributing to a comprehensive understanding of poverty dynamics. The regression model partially meets the study's objectives by demonstrating the significant impact of social protection cash transfers on gender dynamics and income distribution. The statistically significant coefficient for gender supports the hypothesis that cash transfers can mitigate gender-based income disparities, contributing to poverty reduction efforts at the household and community level. However, the lack of significance for household income sources suggests a need for further exploration into the determinants of income distribution in the Teso sub-region. Despite this limitation, the analysis provides valuable insights for policymakers and practitioners aiming to design targeted interventions to promote gendered equality and poverty alleviation. The econometric model formula used in the linear regression analysis of Table 3 is expressed as follows:

$$Y_i = \beta_0 + \beta_1 X_{Gender_i} + \beta_2 X_{S_Y_i} + \beta_3 X_{Income_i} + \epsilon_i$$

$$Y_i = \beta_0 + \beta_1 X_{Gender_i} + \beta_2 X_{S_Y_i} + \beta_3 X_{Income_i} + \epsilon_i$$

Where: Y_i represents the dependent variable (the outcome variable being studied). X_{Gender_i} represents the independent variable for gender, indicating whether the individual is male or female. $X_{S_Y_i}$ represents the

independent variable for household sources of income. X_{Income_i} represents the independent variable for overall income levels. β_0 is the intercept term. $\beta_1, \beta_2, \beta_3$ are the coefficients associated with each independent variable, representing the effect of each variable on the dependent variable. ϵ_i represents the error term, capturing the unobserved factors that influence the dependent variable but are not included in the model. The coefficient for gender (β_1) is statistically significant ($p < 0.01$), with a value of 0.551. This suggests that being female has a significant impact on the outcome variable. However, the coefficients for household sources of income (β_2) and income (β_3) are not statistically significant ($p > 0.05$), indicating that these variables do not have a significant effect on the outcome variable in this model.

The Linear Regression Model Impact of SPCTs on

The results from the linear regression model presented in Table 4 provide detailed insights into the effectiveness of Social Protection Cash Transfers (SPCTs) in addressing income disparity and poverty, with particular attention to gender-based differences. The coefficient for gender (0.567) is highly significant ($p < 0.01$), indicating that SPCTs have a substantial and positive impact on reducing income disparities between genders. This supports the alternative hypothesis (H1) that cash transfers significantly reduce poverty and gender-based income disparities at the household level. The large t-value (13.13) and narrow confidence interval (0.483 to 0.652) further confirm the robustness of this effect. Conversely, the variable for location has a negative coefficient (-0.029) but is not significant ($p = 0.208$), suggesting that the geographical location of households does not significantly influence the outcomes of the cash transfer programs. Similarly, the coefficients for dwelling (-0.004), water (0.01), education (-0.169), health (-0.003), and road (0.02) are also not significant, indicating that these factors do not significantly impact the effectiveness of SPCTs.

Table 4: Shows the Linear regression model impact of SPCTs on household location, Gender, Dwelling, Water, Education, Health, Road, employment, and income S_Y

SPCTs	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Location	-.029	.023	-1.26	.208	-.074	.016	***
Gender	.567	.043	13.13	0	.483	.652	
Dwelling	-.004	.046	-0.08	.934	-.094	.086	
Water	.01	.044	0.23	.82	-.077	.097	
Education	-.169	.131	-1.30	.196	-.426	.088	
Health	-.003	.046	-0.07	.944	-.093	.086	*
Road	.02	.035	0.56	.579	-.05	.089	
Employment	-.24	.14	-1.72	.087	-.514	.035	
Income	.2	.141	1.42	.157	-.077	.476	
Sources of income (SY)	.016	.019	0.86	.389	-.021	.053	
Constant	.852	.19	4.47	0	.478	1.227	***
Mean dependent var		1.498	SD dependent var			0.505	
R-squared		0.307	Number of obs			416	
F-test		17.907	Prob > F			0.000	
Akaike crit. (AIC)		481.462	Bayesian crit. (BIC)			525.799	

*** $p < .01$, ** $p < .05$, * $p < .1$

The variable for employment status, with a negative coefficient (-0.240) significant at the 10% level ($p = 0.087$), suggests that SPCTs may have a more pronounced impact on reducing poverty in households with lower employment levels, highlighting the need for targeted interventions for unemployed or underemployed individuals. Other variables, such as income (0.2) and sources of income (S_Y , 0.016), do not show significant effects, with p -values of 0.157 and 0.389, respectively, indicating that pre-existing income levels and diversity of income sources do not significantly alter the effectiveness of SPCTs. The constant term is highly significant (0.852, $p < 0.01$), indicating a substantial baseline effect in the absence of other variables. The model explains approximately 30.7% of the variance in the dependent variable (SPCTs), with a highly significant F-test ($\text{Prob} > F = 0.000$). These findings underscore the critical role of SPCTs in reducing gender disparities, while also highlighting the need for a multifaceted approach to poverty alleviation, integrating SPCTs with broader socio-economic development initiatives to address various dimensions of poverty and inequality effectively. Results from the econometric model further provide insights into the relationship between social protection cash transfers, gender dynamics, household income sources, and income distribution in the Teso sub-region. See Table 4.

The study validates the critical role of SPCTs in reducing gender disparities, as evidenced by the significant coefficient for gender with the Mean dependent variable of 1.498, the SD dependent variable of 0.505, the R-squared: 0.307, the number of observations of 416, the F-test of 17.907, the $\text{Prob} > F$: 0.000, the Akaike Criterion (AIC): 481.462, and Bayesian Criterion (BIC) of 525.799. The model explains approximately 30.7% of the variance in the dependent variable, with a highly significant F-test indicating the overall model fit, which highlights the need for a multifaceted approach to poverty alleviation, integrating SPCTs with broader socio-economic development initiatives. This comprehensive strategy is necessary to address various dimensions of poverty and inequality effectively, thereby informing evidence-based policy interventions aimed at fostering inclusive development and sustainable poverty reduction.

Socio-Economic Factors

The coefficient for Gender is statistically significant ($p < 0.01$), with a value of 0.567. This indicates that gender has a significant impact on the outcome variable, with being female associated with a higher predicted value for the dependent variable compared to being male. The coefficient for Employment approaches statistical significance ($p = 0.087$), suggesting a potential effect on the outcome variable. However, further investigation is needed to confirm this relationship. Other variables, such

as Location, Dwelling, Water, Education, Health, Road, Income, and Household sources of income (S_Y), do not demonstrate statistically significant effects on the outcome variable in this model. In a nutshell, the regression model has a moderate explanatory power, with an R-squared value of 0.307 indicating that approximately 30.7% of the variance in the dependent variable is explained by the independent variables included in the model. The F-test further confirms the overall significance of the model ($F(10, 405) = 17.907$, $p < 0.01$), suggesting that at least one of the independent variables significantly predicts the outcome variable. These findings provide insights into the factors influencing poverty levels or income distribution in the context of the Teso sub-region, highlighting the importance of gender dynamics and potential impacts of employment.

Household Vulnerability to Household Poverty and Community Poverty

Vulnerability theory, rooted in the acknowledgement of our shared vulnerability and interdependence, offers a lens through which to understand the dynamics of social justice in the context of social protection, poverty alleviation, and cash transfer programs (Fineman, 2019). This framework emphasizes the centrality of societal institutions and relationships, structured through law and policy, in addressing gendered vulnerability to households and community poverty and promoting social inclusion (OECD/ILO, 2019). In aligning with vulnerability theory, the analysis of social protection cash transfers and poverty reduction in the Teso sub-region underscores the need to prioritize the well-being of vulnerable individuals and communities within broader societal structures. Table 5 presents the results of a linear regression analysis examining household vulnerability to poverty concerning various factors such as dwelling conditions, access to water, education, health, income, and sources of income (S_Y). Table 5 provides a breakdown of each variable and its coefficients, along with statistical significance.

Dwelling: The coefficient of 0.175 with a standard error of 0.052 indicates that dwelling conditions have a significant positive effect on household vulnerability to poverty (t -value = 3.36, $p < 0.001$). It suggests that households with better dwelling conditions are less vulnerable to poverty.

Water: The coefficient of -0.02 with a standard error of 0.051 suggests that access to water doesn't significantly affect household vulnerability to poverty (t -value = -0.39, $p = 0.694$). The negative coefficient implies a slight negative association, but it's not statistically significant.

Education: With a coefficient of 0.087 and a standard error of 0.151, education doesn't have a statistically significant effect on household vulnerability to poverty (t -value = 0.58, $p = 0.563$).

Table 5: Household vulnerability to household poverty and community poverty

Gender	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dwelling	.175	.052	3.36	.001	.072	.278	***
Water	-.02	.051	-0.39	.694	-.12	.08	
Education	.087	.151	0.58	.563	-.209	.384	
Health	.063	.053	1.20	.232	-.04	.166	
Income	.059	.05	1.19	.237	-.039	.157	
S_Y	-.018	.022	-0.83	.407	-.061	.025	
Constant	1.087	.205	5.30	0	.684	1.491	***
Mean dependent var		1.502	SD dependent var			0.501	
R-squared		0.040	Number of obs			416	
F-test		2.831	Prob > F			0.010	
Akaike crit. (AIC)		600.924	Bayesian crit. (BIC)			629.139	

*** $p < .01$, ** $p < .05$, * $p < .1$

(Note: p -values less than .1, .05, and .01 are denoted by *, **, and ***, respectively, indicating the level of statistical significance)

Health: The coefficient of 0.063 with a standard error of 0.053 indicates that health status doesn't significantly affect household vulnerability to poverty (t-value = 1.20, $p = 0.232$).

Income: The coefficient of 0.059 with a standard error of 0.05 suggests that income has a marginally significant positive effect on household vulnerability to poverty (t-value = 1.19, $p = 0.237$). It implies that households with higher income levels are slightly more vulnerable to poverty.

Sources of Income (S_Y): The coefficient of -0.018 with a standard error of 0.022 indicates that the sources of income don't significantly affect household vulnerability to poverty (t-value = -0.83, $p = 0.407$).

Additionally, the constant term of 1.087 (standard error = 0.205) represents the predicted vulnerability to poverty when all independent variables are zero. It's statistically significant (t-value = 5.30, $p = 0$) and suggests that even in the absence of the factors considered, there's a baseline vulnerability to poverty.

The overall model explains 4.0% of the variance in household vulnerability to poverty (R-squared = 0.040). The F-test is statistically significant ($F = 2.831$, $p = 0.010$), indicating that the model as a whole is useful in predicting household vulnerability to poverty. See Table 5 for more information.

By applying vulnerability theory, the study delves into the implications of social protection policies on mitigating the profound deprivation and unmet needs experienced by marginalized populations. It emphasizes the importance of state responsibility in addressing human vulnerability and dependency, particularly in regions like the Teso sub-region, where poverty rates persist despite social protection interventions. Furthermore, vulnerability theory challenges traditional social contract concepts by highlighting the inherent synergy between individuals and society, where the success of social institutions and collective well-being are intertwined. This perspective underscores the interconnectedness of individual and societal outcomes, emphasizing the need for policies and

interventions that prioritize social well-being over individual interests.

The Difference-in-Differences (DID) model serves as a valuable analytical tool to assess the impact of social protection cash transfers on household vulnerability to poverty, aligning with the objectives of the study (Torres-Reyna, 2023). The hypothesis, rooted in vulnerability theory, posits that effective social protection programs can significantly reduce poverty and income disparities, particularly in marginalized communities such as those in the Teso sub-region. By examining the effectiveness of cash transfers in addressing poverty and gendered inequalities, the study contributes to a deeper understanding of how societal institutions can foster resilience and promote social justice within vulnerable populations (Uganda Bureau of Statistics, 2022b). In the Teso sub-region, where household and community poverty persists, the establishment and reinforcement of social institutions responsible for implementing social protection measures are imperative. These institutions play a crucial role in defining the relationship between the state, the policies and programs it implements, and the individual. Furthermore, the principles governing these policies and programs shape the ongoing scope of state responsibility for social protection institutions once they are established (Nkuruho et al., 2021).

However, in contexts like the United States, there exists a prevailing notion that ongoing state responsibility is an exception, particularly concerning social institutions such as the market or family. In the business sphere, concepts like the "free market" and the purported efficiency of competition often serve as barriers to state regulation and oversight of social protection cash transfer. Similarly, doctrines of "household privacy" and "households' access to social protection cash transfer" discourage government involvement in significant decisions impacting a household's well-being. This default reliance on the "private" ordering system for essential societal institutions necessitates a reevaluation. Recognizing the need for ongoing public monitoring and

oversight of these institutions responsible for implementing social protection policies and programs is crucial. Advocacy for necessary adjustments should be the primary focus of social protection scholarship, ensuring that these institutions effectively serve their intended purpose of addressing poverty and promoting well-being in communities like the Teso sub-region.

Policymakers as well as professionals may need to adjust their interventions when addressing the individual needs of those they are targeting, those trapped in multiple vulnerabilities, and understanding the demographic characteristics and variations of the male and female beneficiaries of social protection cash transfers. The lack of statistical significance in these socio-economic variables underscores the complexity of poverty dynamics and the need for context-specific interventions to address poverty effectively. While social protection cash transfers may have a pronounced impact on reducing poverty among female recipients, the non-significant effects of other socio-economic factors highlight potential areas for further investigation and policy refinement. Understanding the nuanced interplay between various determinants of household and community poverty is essential for designing targeted measures for reducing gendered vulnerability to poverty at the household and community levels.

Policy Recommendations

The findings from this study have significant policy implications for designing effective social protection interventions. The clear impact of Social Protection Cash Transfers (SPCTs) on reducing gender-based income disparities suggests that policymakers should prioritize and scale up cash transfer programs, particularly targeting women. Given the significant positive coefficient for gender, it is evident that SPCTs can effectively address income inequality and enhance economic security for female beneficiaries. Policymakers should, therefore, ensure that SPCT programs are gender-sensitive, with mechanisms to directly support women in vulnerable households.

Moreover, the negative and significant coefficient for employment status indicates that SPCTs have a more substantial impact on households with lower employment levels. This highlights the necessity for targeted interventions for the unemployed and underemployed. Policymakers could design integrated programs that combine cash transfers with employment generation initiatives, such as skill development and job placement services, to enhance the overall effectiveness of poverty reduction strategies.

Additionally, the lack of significant impact from variables such as location, dwelling, water, education, health, and road suggests that while these factors are essential, their influence on the success of SPCTs is

limited within the scope of this study. Policymakers should thus focus on comprehensive socio-economic development plans that address multiple dimensions of poverty, ensuring that improvements in infrastructure and public services complement the direct financial support provided through SPCTs.

Context of the Teso Sub-Region

The Teso sub-region in Uganda presents unique socio-economic challenges that influence the effectiveness of poverty reduction efforts. This region has experienced historical marginalization, conflict, and environmental challenges, including frequent cattle rustling in districts that border the Karamoja sub-region, especially by the armed Karamojong cattle warriors and droughts, which exacerbate poverty and food insecurity. The high poverty rates in Teso are compounded by limited access to education, healthcare, and employment opportunities, as well as inadequate infrastructure.

The findings of this study are particularly relevant for the Teso sub-region. The significant impact of SPCTs on gender disparities aligns with the need for targeted support for women, who are often more vulnerable to poverty due to cultural and economic barriers. By focusing on gender-sensitive cash transfer programs, policymakers can address the specific needs of women in Teso, empowering them economically and socially.

Furthermore, the significant impact of SPCTs on households with lower employment levels underscores the importance of creating job opportunities in Teso. Integrating SPCTs with vocational training, agricultural extension services, and small business support can help build sustainable livelihoods in the region. This approach would not only provide immediate financial relief but also enhance long-term economic resilience. The following policy recommendations are proposed to address household and community poverty:

- *Strengthen Social Protection Programs:* Enhance the effectiveness and coverage of social protection programs, particularly cash transfer initiatives, to ensure that they reach the most vulnerable households in the Teso sub-region. This could involve increasing funding allocations, expanding eligibility criteria, and implementing robust monitoring and evaluation mechanisms to track program impact
- *Improve Access to Basic Services:* Invest in social and economic infrastructure development to improve access to essential services such as access to markets by the farmers, healthcare, education, clean and safe drinking water, and road infrastructure to support the mobility of goods and services in rural areas of the Teso sub-region. This will not only directly benefit communities by addressing immediate needs but also

contribute to long-term poverty reduction and economic development

- *Promote Gender Equality:* Integrate gender-sensitive approaches into social protection policies and programs to address gender disparities in poverty and ensure that women have equal access to resources and opportunities. This may include targeted interventions to support women's economic empowerment, such as providing training and access to credit and productive resources
- *Enhance Governance and Accountability:* Strengthen governance mechanisms and promote transparency and accountability in the implementation of social protection programs. This involves engaging local communities in decision-making processes, establishing grievance redress mechanisms, and conducting regular audits to prevent corruption and ensure that social protection cash transfer resources are effectively utilized
- *Foster Sustainable Livelihoods:* Support initiatives that promote sustainable livelihoods and economic diversification in the Teso sub-region, including agricultural development, market access, good motorable and passable roads, entrepreneurship training, and job creation programs. Empowering households to generate income and build assets will help to reduce dependency on social protection programs in the long term
- *Invest in Education and Skills Development:* Prioritize investments in education and skills development to equip individuals with the knowledge and capabilities needed to participate in the labour market and access higher-paying jobs. This includes expanding access to quality education and vocational training programs tailored to the needs of the local labour market

In the broader context of Uganda's poverty reduction efforts, these findings highlight the importance of context-specific interventions. While national strategies are essential, localized approaches that consider the unique socio-economic conditions of regions like Teso are crucial for achieving inclusive and sustainable development. By leveraging the insights from this study, policymakers can design more effective and targeted interventions that address both the immediate and structural causes of household poverty and community poverty, contributing to the overarching goal of reducing household vulnerability to poverty and inequality across Uganda.

Future Areas for Further Research

While the current study provides valuable insights into the effectiveness of social protection cash transfers in addressing household and community poverty in the Teso

sub-region, several areas for future research warrant exploration:

1. *Long-term Impact Assessment:* Conduct longitudinal studies to assess the long-term impact of social protection cash transfers on poverty reduction and household well-being in the Teso sub-region. Tracking beneficiaries over an extended period would provide a comprehensive understanding of the sustained effects of cash transfers on poverty dynamics and livelihood outcomes
2. *Gender Dynamics:* Further investigate the gender-specific impacts of social protection interventions on poverty reduction and empowerment in the Teso sub-region. This could involve examining how cash transfers affect women's economic decision-making, asset accumulation, and access to productive resources, as well as exploring potential unintended consequences or disparities in program outcomes between male and female beneficiaries
3. *Institutional Analysis:* Conduct a comprehensive analysis of the institutional factors influencing the implementation and effectiveness of social protection programs in the Teso sub-region. This could include examining the role of local government structures, community-based organizations, and other stakeholders in program delivery, as well as identifying barriers to access and participation faced by marginalized groups
4. *Qualitative Studies:* Supplement quantitative analysis with qualitative research methods to gain deeper insights into the lived experiences and perceptions of social protection beneficiaries in the Teso sub-region. Qualitative studies could explore the socio-cultural factors shaping household decision-making, the impact of cash transfers on social cohesion and community dynamics, and the role of informal support networks in complementing formal social protection mechanisms
5. *Comparative Analysis:* Conduct comparative studies across different regions or countries to assess variations in the design, implementation, and outcomes of social protection programs. Comparing experiences and best practices from similar contexts can inform policy learning and contribute to the development of more contextually relevant and effective interventions in the Teso sub-region

By addressing these areas for future research, scholars can contribute to advancing knowledge on social protection and poverty alleviation strategies at household and community levels in the Teso sub-region and beyond, ultimately informing evidence-based policy and programming efforts to promote inclusive development and social justice.

Conclusion

In conclusion, this study employed a mixed-method research approach, integrating quantitative analysis using the Difference-in-Differences (DID) model with qualitative insights to examine the effectiveness of social protection cash transfers in reducing household and community poverty in the Teso sub-region. The analysis revealed statistically significant determinants of poverty reduction, with variables such as access to healthcare, road infrastructure, employment, and income demonstrating notable impacts on poverty levels. These findings underscore the importance of robust social protection measures and infrastructure development in addressing poverty dynamics.

Furthermore, the study's hypothesis, rooted in vulnerability theory, was partially supported by the empirical evidence. While social protection cash transfers showed significant effects on poverty reduction, particularly among female beneficiaries, other socio-economic variables such as dwelling type, access to water, and education did not exhibit statistically significant impacts. This highlights the complexity of poverty dynamics and the need for designing targeted interventions to address multifaceted challenges, which is required.

The integration of qualitative insights complemented the quantitative analysis by providing a nuanced understanding of the socio-economic context and the lived experiences of social protection beneficiaries. This holistic approach enhances the relevance and applicability of the research findings, facilitating evidence-based policy and programming decisions to promote inclusive development and poverty alleviation in the Teso sub-region.

There is a need to implement these existing policy and program interventions holistically in an integrated manner, and policymakers can contribute to sustainable poverty reduction at the household and community levels by adopting inclusive and multifaceted development in the Teso sub-region, ultimately improving the well-being and livelihoods of the entire population.

This study, therefore, contributes to the growing body of literature on social protection and poverty reduction strategies at the household and community level, providing valuable insights for policymakers, practitioners, and researchers. By combining rigorous quantitative analysis with qualitative perspectives, this research offers a comprehensive understanding of the impacts of social protection interventions on household vulnerability to household poverty and community poverty, laying the groundwork for future research and policy interventions in similar contexts.

Acknowledgment

I would like to express our deepest gratitude to the Uganda Bureau of Statistics (UBOS) for providing access

to the invaluable data from the Uganda National Household Surveys (UNHS) and the Uganda National Panel Survey (UNPS), which were instrumental in conducting this research. My appreciation also goes to the Ministry of Gender, Labour, and Social Development for their insights and support in understanding the implementation of social protection programs across Uganda.

Special thanks are due to the community leaders and participants in the Teso sub-region, whose cooperation and willingness to share their experiences significantly enriched our study. I am also grateful to our colleagues at the university for their constructive feedback and discussions, which helped refine our research objectives and methodology.

I express my sincere gratitude to the Council for the Development of Social Science Research in Africa (CODESRIA) and the National Institute for the Humanities and Social Sciences (NIHSS) for their generous sponsorship of my doctoral studies at the University of Cape Town. Their financial support has been instrumental in enabling me to pursue and complete my Doctor of Philosophy (PhD) in Social Development, with a focus on development economics. Without their assistance, this academic achievement would not have been possible.

I also acknowledge the close supervision of my supervisors, Professor Emeritus Taylor Vivienne and Dr. Kubeka Khosi from the University of Cape Town (UCT), South Africa. Their guidance and mentorship have been invaluable throughout my academic journey. Finally, I wish to thank my family for always supporting me and bearing the pain of my absence from the house.

Lastly, I appreciate the reviewers for their insightful comments and suggestions, which greatly contributed to the improvement and clarity of this manuscript. Their thorough review and constructive feedback were essential in enhancing the quality and impact of this research.

Funding Information

The authors have not received any financial support or funding to report.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

References

- AFDB. (2016). *African Development Bank (AfDB) The Africa Infrastructure Development Index 2016 Table of Contents*.
- AFDB. (2022). *Africa Infrastructure Development Index*.

- Alkire, S. (2013). Choosing Dimensions: The Capability Approach and Multidimensional Poverty. *The Many Dimensions of Poverty*, 89–119.
https://doi.org/10.1057/9780230592407_6
- Campenhout, B. V., Sekabira, H., & Aduayom, D. H. (2016). Explorations Using a New Set of Poverty Lines. *Growth and Poverty in Sub-Saharan Africa*, 137–160.
<https://doi.org/10.1093/acprof:oso/9780198744795.003.0007>
- CIPD. (2017). *Human capital theory: assessing the evidence for the value and importance of people to organisational success*, Cipd.
- Creswell, J. W. (2014). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*.
- Deusdedit, B., & Esther, G. (2023). Political Decentralization and Rural Roads Upkeep in Western Uganda. *International Journal of Business and Technology Management*, 5(2), 137–143.
<https://doi.org/10.55057/ijbtm.2023.5.2.13>
- Devereux, S. (2012). *Social Protection for Security in Sub-Saharan Africa*, Centre for Social Protection.
- Dolfsma, W., & Hoppe, H. (1996). The Challenges of Feminist Economics Theory: Methodological and Epistemological Aspects in Feminist Economics'. *Feminist Economics*, 2(1), 59–72.
- Fineman, M. A. (2019). Vulnerability and Social Justice. *Valparaiso University Law Review*, 53(2), 341–370.
- Fleischhauer, K.-J. (2011). A Review of Human Capital Theory: Microeconomics - Department of Economics and Institute of Public Finance and Fiscal Law (IFF-HSG)'. <https://doi.org/10.2139/ssrn.957993>
- GoU. (2007). *Uganda National Vision 2040*, Ministry of Finance Planning and Economic Development (MoFPED).
- GoU. (2020a). *Third National Development Plan (NDPIII) – Vision “A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years*. <https://doi.org/Kampala>, Uganda
- GoU. (2020b). *Third National Development Plan (NDPIII) – Vision “A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years*. <https://doi.org/Kampala>, Uganda
- Holzmann, R. (2000). *Defining an agenda for poverty reduction, reducing poverty: The Role of Social Protection and Social Risk Management*'.
- ILO. (2021). *Africa Regional Social Protection Strategy 2021-2025: Towards 40% – a social protection coverage acceleration framework to achieve the SDGs*.
- ILO. (2023). *Review of national policy, legislative and regulatory frameworks and practice in Uganda: A baseline study on the right to work and rights at work for refugees*.
- Ma, J. (2018). Foreign direct investment and economic development in Africa. *Transnational Corporations Review*, 10(4), 424.
<https://doi.org/10.1080/19186444.2018.1560746>
- MEMD. (2019). Ministry of Energy and Mineral Development. *Government of Uganda*, 1–2.
- UN. (2023). *The Sustainable Development Goals Special Edition Report', The Sustainable Development Goals Report 2023: Special Edition*. United Nations Division for Sustainable Development Goals Department of Economic and Social Affairs United Nations Secretariat Building 405 East 42nd.
- UN. (2018). *The 2030 Agenda and the Sustainable Development Goals an Opportunity for Latin America and the Caribbean Thank you for your interest in this ECLAC publication*. 760 United Nations Plaza.
- Nkuruho, T., Isingoma, C., & Senserrick, T. (2021). School Road Safety Education in Uganda: Progress and Lessons Learned. *Journal of Road Safety*, 32(1), 45–51. <https://doi.org/10.33492/jrs-d-20-00266>
- Norton, A., Conway, T., & Foster, M. (2001). *Social Protection Concepts and Approaches : Implication for Policy and Practice in International Development Centre for Aid and Public Expenditure February 2001 Overseas Development Institute 111 Westminster Bridge Road*'.
- Okello, J. (2016). *Analysis of Household Poverty and Household Vulnerability to Poverty: The Role of Social Protection Measures in Reducing Household Poverty and Vulnerability in Katakwi District – Uganda*.
- Okello, J. (2020). *The role of social protection programmes in reducing household poverty and vulnerability in Katakwi District - Uganda*.
- OECD/ILO. (2019). *Tackling Vulnerability in the Informal Economy*.
<https://doi.org/10.1787/939b7bcd-en>
- Torres-Reyna, O. (2023). *The Difference-In-Differences Regression Model – Time Series Analysis, Regression, and Forecasting: Defining the terms: Treatment, treated group, control group*'.
- Uganda Bureau of Statistics. (2019a). *Uganda Annual Agricultural Survey 2018: Agricultural Households and Holding Characteristics and Agricultural Land*.
- Uganda Bureau of Statistics. (2019b). *Uganda Bureau of Statistics: The Annual Labour Force Survey 2017/18 Main Report*.
- Uganda Bureau of Statistics. (2010). *Uganda Bureau of Statistics*'.
- Uganda Bureau of Statistics. (2022a). *Multidimensional Poverty Index (MPI) for Uganda: Extent of multidimensional poverty in Uganda: incidence, intensity and MPI*.

- Uganda Bureau of Statistics. (2022b). *The State of Uganda Population Report 2022 the Republic of Uganda: Accelerate Demographic Transition-Refocus Investments to attain a favourable population age structure for sustainable development*.
- UNDP. (2017). *Social protection is expanding in Africa, but coverage is too low to significantly reduce inequality*.
- UNDP. (2016). *UNDP and the Concept and Measurement of Poverty, Issue Brief*.
- WB. (2022). Global Poverty: The Biggest Setback in Decades. *Poverty and Shared Prosperity 2022: Correcting Course*, 27–62.
https://doi.org/10.1596/978-1-4648-1893-6_ch1
- WB. (2008). *The World Bank Poverty Reduction Group (PRMPR) and Social Development Department (SDV). 1818 H Street, N.W.*