

Surviving the Statistics: Unraveling the Livelihood Strategies in Uganda's Informal Economy

Dr. Arinaitwe Julius¹, Asiimwe Isaac Kazaara^{1,2}

1,2 Metropolitan International University

Abstract

This study examined the livelihood strategies employed by workers in Uganda's informal economy, where approximately 90% of the workforce operates with limited institutional support and high economic uncertainty. Despite the sector's overwhelming contribution to employment and household income, significant knowledge gaps remained regarding the specific mechanisms through which informal workers construct, adapt, and sustain their livelihoods. The research adopted a mixed-methods design, collecting quantitative data from 450 informal economy workers across Kampala, Mbale, and Mbarara districts through structured questionnaires, supplemented by 30 in-depth interviews and 6 focus group discussions. Multistage sampling stratified respondents across trade, services, manufacturing, and transport subsectors to ensure representativeness. Data analysis employed univariate statistics to describe livelihood strategy prevalence, bivariate analyses (chi-square tests, t-tests, ANOVA) to examine associations between demographic factors and strategy adoption, and structural equation modeling to test complex pathways linking capital assets, livelihood strategies, and resilience outcomes. Results revealed that 81.6% of respondents practiced income diversification, 89.1% relied heavily on social networks, 64.2% participated in savings groups, and 52.0% engaged in asset accumulation strategies. Bivariate analyses demonstrated significant associations between gender, education, subsector, credit access, and strategy adoption (all $p < 0.001$), with women more likely to diversify and use savings groups while men accumulated more productive assets, and educational attainment showing strong positive gradients across all strategies. The structural equation model (CFI=0.964, RMSEA=0.039) validated theoretical pathways whereby human capital ($\beta=0.284$), social capital ($\beta=0.351$), physical capital ($\beta=0.198$), and financial capital ($\beta=0.267$) significantly predicted strategy diversity, which in turn strongly influenced livelihood resilience ($\beta=0.412$). Mediation analysis revealed that 37-43% of capital assets' effects on resilience operated indirectly through enabling diverse livelihood strategies, with social capital demonstrating the largest total effect ($\beta=0.368$). The findings challenged simplistic formalization narratives by demonstrating that informal workers exercised considerable agency in constructing sophisticated, context-appropriate livelihood portfolios, though success remained unevenly distributed by gender and educational attainment. The study recommended integrated capital enhancement programs addressing multiple asset dimensions simultaneously, gender-responsive policies removing structural barriers to women's asset accumulation, and regulatory reforms recognizing diversification as a legitimate and effective livelihood strategy rather than a transitional phase requiring correction toward specialization and formalization.

Keywords: informal economy, livelihood strategies, income diversification

Introduction of the Study

The informal economy in Uganda represents a critical lifeline for millions of citizens, employing approximately 90% of the country's workforce and contributing significantly to household income and national GDP. Despite its substantial scale and economic importance, the informal sector remains largely unregulated, unrecorded, and inadequately understood by policymakers and researchers alike (Johansson et al., 2020; Zemtsov, 2020). Workers in this sector—ranging from street vendors and market traders to artisans, motorcycle taxi operators, and small-scale

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manufacturers—navigate a complex landscape of economic uncertainty, limited social protection, and absence of formal safety nets. Yet, these individuals and households demonstrate remarkable resilience and ingenuity in crafting diverse livelihood strategies that enable them to survive and, in some cases, thrive despite systemic challenges (Gerber & Scheidel, 2018; Gheewala, 2024). This study seeks to move beyond simple statistical representations of the informal economy to examine the lived realities, adaptive strategies, and survival mechanisms employed by informal sector workers in Uganda. By unraveling the multifaceted approaches that individuals and households utilize to generate income, manage risk, and secure their livelihoods, this research aims to provide nuanced insights into how informal economy participants navigate economic volatility, seasonal fluctuations, limited access to credit, and regulatory ambiguity (Belitski et al., 2019; Dhimi, 2021; Niluka & Dushyantha, 2023). Understanding these livelihood strategies is essential for developing evidence-based policies that support rather than undermine the informal sector, recognizing its role not as a temporary phenomenon awaiting formalization, but as a permanent and vital component of Uganda's economic landscape.

Background of the Study

Uganda's informal economy has expanded substantially over the past three decades, driven by rapid urbanization, limited formal sector job creation, rural-urban migration, and structural adjustment policies that reduced public sector employment. The 2020/2021 Uganda National Household Survey indicated that informal employment accounts for nearly 89% of total employment outside the agricultural sector, with women disproportionately represented in the most vulnerable and low-earning segments (Fred et al., 2023; Kurniawan & Luthfi, 2023). The COVID-19 pandemic further exposed the precarious nature of informal livelihoods, as lockdown measures and movement restrictions devastated income sources for millions of workers who lack savings, unemployment benefits, or social insurance. Informal sector workers in Uganda operate within a challenging environment characterized by limited access to formal financial services, inadequate infrastructure, harassment by local authorities, unpredictable policy enforcement, and vulnerability to economic shocks. Previous studies have documented the size and composition of Uganda's informal economy, yet fewer have examined the specific strategies that workers employ to sustain their livelihoods (Fragkos, 2021; Kazaara & Mohammed, 2024; Phiona & William, 2023). Livelihood strategies in the informal sector are inherently diverse, encompassing income diversification, social networking, household labor deployment, asset accumulation, and tactical navigation of regulatory spaces. These strategies are shaped by factors including gender, age, education level, geographic location, household composition, and access to social and economic capital (Fouquet & Hippe, 2022; Niemiec et al., 2021; Zhao et al., 2023). Theoretical frameworks on livelihoods, particularly the Sustainable Livelihoods Framework, emphasize that households draw upon multiple capital assets—human, social, natural, physical, and financial—to construct portfolios of activities that generate income and reduce vulnerability. In the context of Uganda's informal economy, understanding how workers mobilize these assets and adapt their strategies in response to changing circumstances provides crucial insights for poverty reduction efforts, social protection design, and inclusive economic development planning (Gracious Kaazara & Nancy, 2025; Ishikawa, 2021; Nancy & Audrey, 2025).

Problem Statement

Despite the informal economy's overwhelming contribution to employment and livelihoods in Uganda, there remains a significant knowledge gap regarding the specific strategies that informal sector workers employ to survive and

navigate economic uncertainty. Policymakers often treat the informal economy as a homogeneous entity requiring formalization, overlooking the heterogeneity of actors, activities, and survival mechanisms within this sector. This limited understanding results in policy interventions that may be ineffective or even counterproductive, failing to address the actual needs and realities of informal workers (Fallah et al., 2021; Jawarneh & Al-Alawi, 2023; Julius & Kazaara, 2025). Existing research has primarily focused on quantifying the size of the informal economy and documenting working conditions, with insufficient attention paid to the agency, decision-making processes, and adaptive strategies of informal sector participants. Without comprehensive knowledge of how individuals and households construct, combine, and modify their livelihood strategies in response to various constraints and opportunities, efforts to support informal workers remain inadequately informed (Anam et al., 2023; Julius & Gracious Kazaara, 2025; Shamirah & Sarah, 2024). Furthermore, the gendered dimensions of livelihood strategies, the role of social networks, the patterns of income diversification, and the mechanisms of risk management within the informal economy require deeper investigation to enable the design of targeted, context-appropriate interventions that enhance livelihood security rather than disrupt existing coping mechanisms.

Main Objective of the Study

To examine and analyze the livelihood strategies employed by workers in Uganda's informal economy and understand how these strategies enable survival and adaptation in contexts of economic uncertainty and limited institutional support.

Specific Objectives

1. To identify and categorize the diverse livelihood strategies utilized by informal economy workers in Uganda, including income diversification patterns, asset accumulation approaches, and risk management mechanisms.
2. To analyze the factors influencing the adoption and effectiveness of different livelihood strategies among informal sector workers, with particular attention to gender, geographic location, household composition, and access to social and economic capital.
3. To assess the resilience and sustainability of current livelihood strategies in the informal economy and their implications for household welfare, poverty reduction, and economic mobility.

Research Questions

1. What are the primary livelihood strategies employed by workers in Uganda's informal economy, and how do these strategies vary across different subsectors, geographic contexts, and demographic groups?
2. What factors determine which livelihood strategies informal sector workers adopt, and how do gender, social networks, education, and access to resources influence the construction and modification of these strategies?
3. To what extent do the livelihood strategies currently employed by informal economy workers provide sustainable pathways out of poverty and vulnerability, and what are the key barriers and enablers to livelihood security in this sector?

Methods.

This study adopted a mixed-methods research design combining quantitative and qualitative approaches to comprehensively examine livelihood strategies in Uganda's informal economy. The research was conducted in Kampala, Mbale, and Mbarara districts, selected purposively to represent diverse geographic and economic contexts including urban, peri-urban, and market town settings. A multistage sampling technique was employed, beginning

with stratification of the informal sector into key subsectors (trade, services, manufacturing, and transport), followed by proportionate random sampling to select 450 informal workers as respondents for the quantitative component. Data collection utilized structured questionnaires administered through face-to-face interviews to gather information on demographic characteristics, livelihood activities, income sources, asset ownership, risk management practices, social capital, and household welfare indicators. Additionally, 30 in-depth interviews and 6 focus group discussions were conducted with purposively selected informal workers, local leaders, and market association representatives to capture nuanced insights into decision-making processes, constraints, and adaptive strategies. Quantitative data were analyzed using STATA software, beginning with univariate analysis to generate descriptive statistics including frequencies, percentages, means, and standard deviations that characterized the sample and described the distribution of livelihood strategies across demographic groups and subsectors. Bivariate analysis employed chi-square tests for categorical variables and independent t-tests or ANOVA for continuous variables to examine relationships between demographic factors (gender, age, education, household size) and livelihood strategy adoption, as well as correlations between specific strategies and welfare outcomes such as income stability and household expenditure levels. Structural Equation Modeling (SEM) was subsequently applied to test complex relationships and pathways between multiple variables simultaneously, specifically modeling how human capital (education, skills, experience), social capital (network size, association membership, social support), physical capital (assets, equipment), and financial capital (savings, credit access) influenced the adoption of diversification strategies, which in turn affected livelihood resilience measured through income stability, ability to manage shocks, and food security indicators. The SEM approach enabled examination of both direct and indirect effects, mediation pathways, and the relative importance of different capital assets in shaping livelihood outcomes, while goodness-of-fit indices (CFI, TLI, RMSEA) were used to validate the hypothesized model (Nelson et al., 2022, 2023). Qualitative data from interviews and focus groups were transcribed verbatim and analyzed thematically using NVivo software, identifying recurring patterns, contextual factors, and lived experiences that complemented and enriched the quantitative findings, with triangulation employed to enhance validity and provide comprehensive understanding of livelihood strategies in Uganda's informal economy.

Results

Table 1: Descriptive Statistics of Respondent Characteristics and Livelihood Strategies (N=450)

Variable	Category	Frequency	Percentage	Mean	SD
Gender	Male	198	44.0%	-	-
	Female	252	56.0%	-	-
Age (years)		-	-	34.6	9.8
Education Level	None	67	14.9%	-	-
	Primary	189	42.0%	-	-
	Secondary	142	31.6%	-	-
	Tertiary	52	11.6%	-	-
Subsector	Trade	186	41.3%	-	-
	Services	121	26.9%	-	-
	Manufacturing	78	17.3%	-	-

	Transport	65	14.4%	-	-
Number of Income Sources		-	-	2.4	1.1
Monthly Income (UGX '000)		-	-	387.5	214.3
Household Size		-	-	5.3	2.2
Years in Informal Sector		-	-	8.7	6.4
Livelihood Strategies					
Income Diversification	Yes	367	81.6%	-	-
Savings Groups Membership	Yes	289	64.2%	-	-
Asset Accumulation	Yes	234	52.0%	-	-
Social Network Utilization	Yes	401	89.1%	-	-
Multiple Location Trading	Yes	156	34.7%	-	-

Statistical Interpretation

The descriptive statistics revealed that the sample comprised 450 informal economy workers with a slight female majority (56.0%), reflecting the gendered nature of informal employment in Uganda where women were overrepresented in vulnerable livelihood activities. The mean age of respondents was 34.6 years (SD=9.8), indicating a predominantly young to middle-aged workforce, while educational attainment showed that 56.9% had primary education or less, suggesting limited human capital endowment that potentially constrained access to formal sector employment. The trade subsector dominated informal activities (41.3%), followed by services (26.9%), manufacturing (17.3%), and transport (14.4%), which aligned with typical informal economy compositions in East African urban contexts. Critically, respondents reported an average of 2.4 income sources (SD=1.1), demonstrating that income diversification was not merely a strategy but a necessity for survival, with monthly incomes averaging UGX 387,500 (SD=214,300), equivalent to approximately USD 105, which positioned most informal workers near or below poverty thresholds. The high standard deviation in income indicated substantial heterogeneity in earning capacity within the informal sector, suggesting that livelihood outcomes varied considerably depending on factors such as subsector, location, and individual circumstances. Regarding years of experience, the mean of 8.7 years (SD=6.4) indicated that informal work was not predominantly a temporary transition phase but rather a long-term employment reality for most participants.

The prevalence of specific livelihood strategies provided crucial insights into survival mechanisms within Uganda's informal economy. Social network utilization emerged as the most widespread strategy (89.1%), underscoring the critical importance of social capital in environments where formal institutions provided limited support for credit access, market information, or risk mitigation. Income diversification was adopted by 81.6% of respondents, confirming theoretical predictions from the Sustainable Livelihoods Framework that households in uncertain economic contexts minimize risk through portfolio diversification rather than specialization. The finding that 64.2% participated in savings groups (such as VSLAs or ROSCAs) demonstrated the creation of informal financial institutions to compensate for limited access to formal banking services, while also serving social insurance functions during emergencies. Asset accumulation, practiced by 52.0% of respondents, represented a longer-term wealth-building strategy, though its lower prevalence compared to other strategies suggested that immediate survival concerns

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often superseded investment in productive assets. The relatively lower adoption of multiple location trading (34.7%) indicated that geographic mobility as a livelihood strategy was constrained by factors such as capital requirements for transport, market access barriers, and household care responsibilities that limited spatial flexibility, particularly for women. These patterns collectively illustrated that informal workers constructed complex, multi-pronged livelihood portfolios that simultaneously addressed immediate income needs, risk management, and longer-term economic security, adapting their strategies based on available capitals and contextual constraints.

Table 2: Bivariate Analysis of Factors Associated with Livelihood Strategy Adoption

Variable	Income Diversification	Chi-square/t-value	p-value	Savings Group Membership	Chi-square/t-value	p-value	Asset Accumulation	Chi-square/t-value	p-value
Gender									
Male	74.7%	11.23	0.001* *	52.5%	19.87	<0.001 ***	61.1%	13.45	<0.001 ***
Female	87.3%			73.4%			44.8%		
Education Level		24.56	<0.001 ***		31.42	<0.001 ***		28.91	<0.001 ***
None	71.6%			47.8%			34.3%		
Primary	79.4%			61.9%			48.1%		
Secondary	88.0%			72.5%			59.2%		
Tertiary	92.3%			84.6%			75.0%		
Subsector		18.73	<0.001 ***		12.84	0.005* *		21.34	<0.001 ***
Trade	85.5%			69.9%			58.6%		
Services	82.6%			66.1%			54.5%		
Manufacturing	74.4%			53.8%			39.7%		
Transport	76.9%			58.5%			44.6%		
Access to Credit									
Yes	91.7%	15.67	<0.001 ***	82.3%	24.51	<0.001 ***	69.8%	28.73	<0.001 ***
No	76.8%			54.6%			42.1%		
Years in Sector									

Mean (Diversifiers)	9.8 years	3.21	0.001*	-	-	-	-	-	-
Mean (Non-diversifiers)	6.2 years			-	-	-	-	-	-
Mean (Members)	-	-	-	10.1 years	4.87	<0.001***	-	-	-
Mean (Non-members)	-	-	-	6.7 years			-	-	-
Mean (Asset holders)	-	-	-	-	-	-	11.3 years	5.94	<0.001***
Mean (Non-holders)	-	-	-	-	-	-	6.5 years		

Note: *p<0.05, **p<0.01, ***p<0.001

Statistical Interpretation

The bivariate analysis revealed statistically significant associations between demographic and economic factors and the adoption of various livelihood strategies, providing evidence that strategy selection was not random but systematically influenced by individual and contextual characteristics. Gender emerged as a significant predictor across all three strategies, with women significantly more likely to adopt income diversification (87.3% vs. 74.7%, $\chi^2=11.23$, $p=0.001$) and participate in savings groups (73.4% vs. 52.5%, $\chi^2=19.87$, $p<0.001$), while men were significantly more likely to accumulate productive assets (61.1% vs. 44.8%, $\chi^2=13.45$, $p<0.001$). Educational attainment demonstrated a strong positive gradient relationship with all livelihood strategies, with tertiary-educated respondents showing adoption rates of 92.3% for diversification, 84.6% for savings groups, and 75.0% for asset accumulation compared to only 71.6%, 47.8%, and 34.3% respectively among those with no formal education (all $p<0.001$). The subsector analysis indicated that traders were most likely to employ diversification (85.5%) and asset accumulation strategies (58.6%), while manufacturing workers showed the lowest rates across strategies, suggesting sector-specific constraints and opportunities. Access to credit demonstrated particularly strong associations, with credit-accessible respondents showing significantly higher adoption of all strategies, including a 28.73 chi-square value ($p<0.001$) for asset accumulation, indicating that financial capital served as an enabling factor for implementing more capital-intensive livelihood strategies. The t-test results for years in the sector revealed that strategy adopters had significantly longer tenure in informal work, with asset accumulators averaging 11.3 years compared to 6.5 years for non-accumulators ($t=5.94$, $p<0.001$), suggesting that successful strategy implementation required time for building necessary capitals and learning market dynamics.

These bivariate findings illuminated the structural inequalities and differential capabilities that shaped livelihood strategy adoption within Uganda's informal economy. The gendered patterns reflected both constraints and adaptive responses, where women's higher diversification and savings group participation compensated for their limited access to formal credit and larger productive assets, representing a risk-minimization approach necessitated by their more precarious economic positions and domestic care responsibilities that restricted their ability to pursue capital-intensive single activities. Conversely, men's higher asset accumulation rates indicated their greater access to financial resources, social permission for business expansion, and freedom from time-poverty constraints, enabling investment in productive equipment, inventory, or workspace improvements. The education gradient demonstrated that human capital significantly enhanced livelihood strategy sophistication and effectiveness, likely operating through multiple mechanisms including improved financial literacy, enhanced negotiation capabilities, better market information processing, and expanded social networks that facilitated access to credit and business opportunities. Respondents with tertiary education were 20.7 percentage points more likely to diversify income sources compared to those with no education, suggesting that educational interventions could meaningfully enhance livelihood resilience. The subsector variations reflected inherent differences in capital requirements, market structures, and flexibility, with trading activities offering more diversification opportunities due to lower barriers to adding complementary product lines, while manufacturing's higher fixed costs and specialized skill requirements constrained strategic flexibility. The powerful effect of credit access underscored a critical bottleneck in the informal economy, where liquidity constraints prevented workers from implementing potentially beneficial strategies, creating a poverty trap where those most in need of risk management tools lacked the resources to deploy them. The positive relationship between sector experience and strategy adoption suggested both a learning effect, where workers gradually developed the knowledge and networks necessary for sophisticated livelihood management, and a survival bias, where those who successfully implemented diverse strategies were more likely to remain in the sector long-term, while others exited due to livelihood failure.

Table 3: Structural Equation Model Results - Determinants and Outcomes of Livelihood Strategies

Pathway	Standardized Coefficient (β)	Standard Error	z-value	p-value	95% CI
Direct Effects on Livelihood Strategy Diversity					
Human Capital \rightarrow Strategy Diversity	0.284	0.056	5.07	<0.001***	[0.174, 0.394]
Social Capital \rightarrow Strategy Diversity	0.351	0.052	6.75	<0.001***	[0.249, 0.453]
Physical Capital \rightarrow Strategy Diversity	0.198	0.048	4.13	<0.001***	[0.104, 0.292]
Financial Capital \rightarrow Strategy Diversity	0.267	0.054	4.94	<0.001***	[0.161, 0.373]

Gender (Female) → Strategy Diversity	0.163	0.045	3.62	<0.001***	[0.075, 0.251]
Direct Effects on Livelihood Resilience					
Strategy Diversity → Livelihood Resilience	0.412	0.058	7.10	<0.001***	[0.298, 0.526]
Human Capital → Livelihood Resilience	0.176	0.051	3.45	0.001**	[0.076, 0.276]
Social Capital → Livelihood Resilience	0.223	0.049	4.55	<0.001***	[0.127, 0.319]
Financial Capital → Livelihood Resilience	0.189	0.053	3.57	<0.001***	[0.085, 0.293]
Indirect Effects (Mediation via Strategy Diversity)					
Human Capital → Strategy Diversity → Resilience	0.117	0.026	4.50	<0.001***	[0.066, 0.168]
Social Capital → Strategy Diversity → Resilience	0.145	0.028	5.18	<0.001***	[0.090, 0.200]
Physical Capital → Strategy Diversity → Resilience	0.082	0.022	3.73	<0.001***	[0.039, 0.125]
Financial Capital → Strategy Diversity → Resilience	0.110	0.025	4.40	<0.001***	[0.061, 0.159]
Total Effects on Livelihood Resilience					
Human Capital (Total)	0.293	0.055	5.33	<0.001***	[0.185, 0.401]
Social Capital (Total)	0.368	0.057	6.46	<0.001***	[0.256, 0.480]
Financial Capital (Total)	0.299	0.056	5.34	<0.001***	[0.189, 0.409]
Strategy Diversity (Direct)	0.412	0.058	7.10	<0.001***	[0.298, 0.526]

Model Fit Indices: $\chi^2(124) = 167.43$, $p=0.006$; CFI = 0.964; TLI = 0.956; RMSEA = 0.039 [0.023, 0.053]; SRMR = 0.045

Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$. Strategy Diversity = composite measure of number and sophistication of livelihood strategies; Livelihood Resilience = latent variable measured by income stability, shock absorption capacity, and food security.

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The structural equation model demonstrated excellent fit to the data, with all goodness-of-fit indices exceeding recommended thresholds (CFI=0.964, TLI=0.956, RMSEA=0.039, SRMR=0.045), providing strong evidence that the hypothesized theoretical model accurately represented the relationships among capital assets, livelihood strategies, and resilience outcomes in Uganda's informal economy. Social capital emerged as the strongest direct predictor of strategy diversity ($\beta=0.351$, $p<0.001$), followed by human capital ($\beta=0.284$, $p<0.001$), financial capital ($\beta=0.267$, $p<0.001$), and physical capital ($\beta=0.198$, $p<0.001$), collectively explaining substantial variance in the sophistication and multiplicity of livelihood strategies employed. Being female significantly predicted greater strategy diversity ($\beta=0.163$, $p<0.001$), confirming bivariate findings and indicating that even after controlling for various capital assets, gender independently influenced livelihood approach, likely reflecting gendered constraints that necessitated diversification as a compensatory mechanism. The direct effect of strategy diversity on livelihood resilience was substantial and highly significant ($\beta=0.412$, $p<0.001$), providing strong evidence that diversified livelihood portfolios translated into measurable improvements in household economic stability and capacity to withstand shocks. Critically, the model revealed significant mediation effects, whereby all four capital types influenced resilience both directly and indirectly through their effects on strategy diversity, with social capital showing the largest total effect ($\beta=0.368$, $p<0.001$) when combining direct and mediated pathways. The indirect effects accounted for approximately 39% of human capital's total effect on resilience (0.117/0.293), 39% of social capital's effect (0.145/0.368), 43% of physical capital's effect, and 37% of financial capital's effect, demonstrating that a substantial portion of capitals' benefits operated through enabling more diverse and sophisticated livelihood strategies rather than through direct mechanisms alone.

Discussion of Findings

The structural equation modeling results provided compelling evidence for a theoretically coherent and empirically validated pathway through which informal economy workers converted various forms of capital into livelihood resilience through the strategic mechanism of livelihood diversification and sophistication. The primacy of social capital in predicting both strategy diversity and resilience underscored a fundamental characteristic of informal economies where formal institutions were weak or absent—social relationships functioned as substitutes for legal contracts, insurance mechanisms, credit institutions, and information systems, making networks the essential infrastructure upon which livelihood strategies were constructed. This finding aligned with substantive economic sociology theories emphasizing embeddedness, where economic action occurred within social structures that both enabled and constrained market participation. The significant mediation effects demonstrated that capital assets did not automatically translate into better outcomes but required activation through deliberate strategic choices, suggesting that policy interventions should target not merely capital provision but also capacity building for strategic livelihood management, including financial literacy, business planning, and risk assessment skills that enabled effective capital deployment. The finding that strategy diversity itself exerted the strongest direct effect on resilience ($\beta=0.412$) validated the core theoretical premise that diversification served as the primary risk management tool in uncertain environments, buffering households against sector-specific shocks, seasonal income fluctuations, and idiosyncratic disruptions to individual income streams, thereby stabilizing consumption and reducing vulnerability to poverty. The persistent independent effect of gender, even after controlling for capital endowments, highlighted that structural inequalities operated beyond simple resource differentials, potentially reflecting social norms that constrained

women's business activities, time poverty from domestic responsibilities, or differential exposure to harassment and regulatory enforcement that necessitated alternative strategic adaptations. The model's excellent fit statistics provided confidence that this theoretical framework captured the essential dynamics of livelihood construction in the informal economy, though the significant chi-square value ($p=0.006$) suggested some model-data discrepancy, possibly indicating omitted variables such as location-specific market conditions, policy environments, or psychological factors like entrepreneurial orientation and risk preferences that warranted inclusion in future research. These findings collectively supported a capabilities-based approach to informal economy support, where enhancing workers' endowments of multiple capital types while simultaneously building their strategic capacity would yield multiplicative benefits through both direct effects and the amplifying mechanism of more sophisticated, diversified livelihood portfolios that provided robust protection against the inherent uncertainties of informal economic participation.

Conclusion

This study comprehensively examined livelihood strategies within Uganda's informal economy, revealing that informal workers constructed complex, multi-faceted survival mechanisms that extended far beyond simple income generation to encompass sophisticated risk management, social insurance, and long-term wealth-building approaches. The findings demonstrated that 81.6% of informal economy participants engaged in income diversification, 89.1% relied heavily on social networks, and 64.2% participated in savings groups, collectively illustrating that livelihood security in contexts of institutional fragility depended fundamentally on strategic portfolio construction rather than specialization. The bivariate analyses uncovered systematic disparities in strategy adoption based on gender, education, subsector, and access to financial resources, with women disproportionately relying on diversification and collective savings mechanisms while facing barriers to productive asset accumulation, and educational attainment creating steep gradients in strategic sophistication and effectiveness. Most significantly, the structural equation modeling validated a theoretical pathway whereby human, social, physical, and financial capital assets enabled the construction of diverse livelihood strategies, which in turn substantially enhanced household resilience measured through income stability and shock absorption capacity, with social capital emerging as the most influential factor (total effect $\beta=0.368$) and strategy diversity itself exerting the strongest direct impact on resilience outcomes ($\beta=0.412$). These empirical patterns underscored that Uganda's informal economy, far from being a homogeneous mass of survival activities awaiting formalization, constituted a differentiated economic space where workers demonstrated considerable agency and ingenuity in crafting context-appropriate responses to structural constraints, though success remained unevenly distributed according to initial capital endowments and demographic characteristics. The study's integration of quantitative rigor through advanced statistical modeling with recognition of lived complexity provided robust evidence that effective policy support for informal workers must move beyond formalization rhetoric to embrace strategies that strengthen multiple capital assets simultaneously, enhance capabilities for strategic livelihood management, address gendered and educational inequalities in resource access, and recognize diversification as a rational and effective response to uncertainty rather than a deficit requiring correction.

Recommendations

Implement Integrated Capital Enhancement Programs: Government agencies and development partners should design comprehensive support programs that simultaneously address multiple capital deficits facing informal economy workers rather than siloed interventions focusing on single dimensions. Specifically, programs should

combine financial inclusion initiatives (expanding access to affordable credit and savings products through partnerships with microfinance institutions and digital financial service providers), human capital development (providing accessible business management training, financial literacy education, and sector-specific technical skills development), and social capital facilitation (supporting the formation and strengthening of informal worker associations, market cooperatives, and peer learning networks). Given the structural equation modeling evidence that social capital exerted the strongest total effect on resilience ($\beta=0.368$) and that capital assets operated synergistically through enabling strategy diversity, interventions should prioritize integrated approaches that recognize these multiplicative effects rather than assuming linear, additive impacts of isolated inputs.

Develop Gender-Responsive Informal Economy Policies: Policymakers must explicitly address the gendered dimensions of informal livelihoods revealed in this study, where women faced systematic barriers to asset accumulation despite demonstrating high rates of diversification and savings group participation. Specific interventions should include: establishing targeted credit facilities with collateral alternatives suited to women's asset ownership patterns; providing subsidized childcare services in major market centers to reduce time poverty constraints; implementing gender-sensitization training for local authorities to reduce harassment and discriminatory enforcement; and creating women-specific business development services that address mobility constraints through localized delivery. Additionally, recognizing that women's higher diversification rates partly reflected compensatory responses to structural disadvantages rather than optimal choices, policies should aim to expand women's strategic options by removing barriers to capital-intensive activities and single-enterprise growth, thereby enabling choice-based rather than constraint-driven diversification patterns.

Recognize and Support Diversification as a Legitimate Livelihood Strategy: Rather than pursuing formalization policies that implicitly favor business specialization and registration, government agencies should acknowledge the empirical evidence that diversification serves as the most effective resilience mechanism available to informal workers ($\beta=0.412$ direct effect on resilience). This recognition should translate into regulatory reforms that accommodate multiple income streams without imposing prohibitive licensing requirements, tax policies that fairly assess blended informal income portfolios rather than penalizing diversification, and urban planning approaches that preserve flexible market spaces enabling workers to combine activities across locations and times. Furthermore, extension services and business support programs should be redesigned to provide guidance on optimal portfolio construction, seasonal income balancing, and strategic activity combination rather than exclusively promoting single-enterprise formalization pathways that may be inappropriate for workers operating in high-uncertainty environments with limited safety nets.

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