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From Subsistence to Synergy: Rebuilding Post-Conflict Economies through Agricultural Entrepreneurship in Mullaitivu, Sri Lanka

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Abstract

This research investigates the transformative potential of agricultural entrepreneurship as a strategic mechanism for sustainable poverty reduction in post-conflict Mullaitivu District of Sri Lanka. Despite national poverty reduction trends, Mullaitivu remains a high-poverty area characterized by a 44.5% headcount index, mainly due to the post-war obstacles to development, low agricultural productivity, and market fragmentation. Using a mixed-methods explanatory design, the study empirically analyzes how four key enabling factors, technological intervention, human capability (women and youth), financial accessibility, and government policy support, impact the transition from subsistence farming to market-oriented entrepreneurship. Quantitative data from 150 households were integrated with qualitative institutional insights.

The study reveals that while agricultural entrepreneurship enhances income stability and household resilience, isolated interventions often fail. Statistical analysis yielded counter-intuitive results: technology adoption alone did not significantly correlate with poverty reduction, and excessive government aid was found to stifle individual innovation. Findings indicate that structural bottlenecks, such as geographical isolation and weak market integration, render individual factors ineffective unless addressed within a holistic, synergistic ecosystem. The study concludes that agricultural entrepreneurship is a structural necessity for long-term recovery in post-conflict zones. It recommends a shift from welfare-dependent policies toward an integrated framework prioritizing digital inclusion, rural credit reform, and the empowerment of marginalized groups to break persistent poverty traps.

Keywords: Agricultural Entrepreneurship; Enabling Ecosystem; Multidimensional Poverty Reduction; Post-Conflict Economy; Rural Development

1. Introduction

Despite global economic growth and technical advancements, poverty remains a multidimensional challenge, encompassing deficiencies in nutrition, healthcare, education, and social security (World Bank, 2022). In South Asia, poverty is deeply institutionalized due to factors such as high population density, agricultural dependency, and low productivity, whereas Sri Lanka is often considered a regional exception due to its high social indicators and literacy rates (UNDP, 2020). However, national averages frequently conceal extreme intra-regional spatial inequalities. Mullaitivu District, located in the Northern Province of Sri Lanka, presents a critical case study of these disparities. As a post-conflict region, it faces a massive poverty headcount index of 44.5%, significantly higher than the national average of 14.3% reported in 2019 (Department of Census and Statistics [DCS], 2019). The district's socioeconomic profile is defined by the long-term barriers created by the civil war that destroyed irrigation systems, displaced agricultural communities, and undermined institutional support (Korf, 2004 a; World Bank, 2015).

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Agriculture serves as the primary revenue source in Mullaitivu, yet it is characterized by a profound inefficiency where the sector's high labor engagement does not translate into proportionate economic returns. While approximately 31% of the population relies on farming for their livelihoods, it contributes only 21.5% to total household income, highlighting a severe productivity gap (Department of Census and Statistics [DCS], 2019). This disparity is further worsened by the fact that only 19% of the district's land is utilized for cultivation, leaving vast natural resources untapped (District Secretariat Mullaitivu, 2020). Consequently, the majority of farmers are caught in a subsistence cycle, where historical vulnerabilities and a lack of modern mechanization force them into risk-averse, low-yield traditional practices (Raheem, 2016). Without a transition to technology-driven entrepreneurial models, these households remain trapped in a state of chronic poverty despite the region's inherent agricultural potential.

These structural barriers are aggravated by market failures, where geographical isolation and a lack of agro-processing facilities prevent farmers from accessing wholesale consumers or achieving higher farm-gate prices through value addition (World Bank, 2015). Furthermore, financial exclusion remains a major hurdle, as formal institutions often require collateral or land titles that many displaced families cannot provide (Sarvanathan, 2011). Additionally, gendered labor constraints and high youth unemployment lead to labor drain and a lack of agricultural innovation. Traditional welfare-oriented responses have largely failed to address these entrenched structural determinants, highlighting a critical need for transformative livelihood strategies like agricultural entrepreneurship to break the cycle of rural poverty (Gunatilaka *et al.*, 2010).

1.1. Problem Statement

Despite possessing abundant land, coastal resources, and a deep-rooted agricultural tradition, Mullaitivu District continues to face an alarming 44.5% poverty rate, far above Sri Lanka's national average of 14.3% (DCS, 2019). This disparity stems not from a lack of physical assets but from systemic underutilization and structural barriers that hinder resource conversion into sustainable livelihoods. Only 19% of land is cultivated, and agriculture contributes merely 21.5% to household income, highlighting a significant productivity and value-addition gap (Raheem, 2016).

The region's long-term conflict has resulted in the destruction of essential infrastructure, fractured social cohesion, and disrupted generational knowledge transfer. These factors, combined with market fragmentation, limited agro-processing facilities, and financial exclusion, restrict farmers' ability to invest in modern technologies and access higher-value markets. As a result, many households remain trapped in subsistence farming, vulnerable to economic shocks, climate variability, and external shocks, with little opportunity for upward mobility.

Past development initiatives, focused mainly on welfare transfers and infrastructure rebuilding, have failed to foster entrepreneurial capacity or integrate communities into broader value chains. These efforts have often overlooked the importance of building local agency, innovation, and systemic support mechanisms necessary for long-term resilience. Consequently, the cycle of poverty persists, rooted in structural challenges that require comprehensive, integrated solutions.

This study seeks to address these systemic issues by examining how agricultural entrepreneurship, supported by technological, human, financial, and policy enablers, can serve as a catalyst for sustainable poverty reduction in Mullaitivu. Understanding these barriers is critical to designing context-sensitive interventions that move beyond short-term relief towards resilient, entrepreneurial-driven development.

1.2. Objectives

The general aim of this study was to determine how specific enabling factors, technological intervention, human capacity, financial availability, and government policy structures, influenced the emergence, involvement, and success of agricultural enterprises. The primary objective of this research was to investigate and analyze the potential of agricultural entrepreneurship as a viable and sustainable strategy for poverty reduction in the rural areas of the Mullaitivu District, Sri Lanka.

1.2.1. Specific Objectives

To achieve this, the study sought to: Analyze the socio-economic context of poverty within the district; Explore the existing opportunities and structural constraints for entrepreneurship; Evaluate the impact of technological intervention on agricultural productivity; Assess the human capacity of key demographic groups, specifically women and youth; Determine the role of financial accessibility in enterprise growth; Examine the influence of government policy and institutional support systems; and Identify the factors that contribute to collective sustainability among rural farmers.

2. Theoretical framework

The theoretical framework of this study is built on the core concept that multidimensional poverty cannot be solved through traditional income-only welfare models but requires a strategic shift toward agricultural entrepreneurship as a deterministic variable (Alkire & Jahan, 2018; Sen, 1999). This framework emphasizes human agency, positioning rural farmers not as passive aid recipients but as active entrepreneurs capable of market participation and income generation (Kabeer, 1999). Central to this transition are four integrated enabling pillars: technological intervention to modernize low-productivity farming (Rogers, 2003), human capability with a focus on empowering women and youth (Nussbaum, 2011), financial accessibility to break subsistence cycles (Sarvananthan, 2011), and coherent government policy support (World Bank, 2015). The first pillar, Technological Intervention, serves as a modernization engine, focusing on mechanization and digital tools to bridge the productivity gap and enhance the competitiveness of small-scale farmers. The second pillar, Human Capability, emphasizes the empowerment and skill development of marginalized groups, particularly women and youth, as critical agents of innovation and labor force revitalization. The third pillar, Financial Accessibility, addresses the cycle of structural poverty by providing inclusive credit and microfinance mechanisms that allow households to survive against risks and invest in productive assets. Finally, the fourth pillar, Government Policy Support, provides the necessary institutional ecosystem and regulatory frameworks to coordinate these interventions and ensure they are context-sensitive to the unique challenges of a post-conflict region like Mullaitivu. Together, these pillars form a synergistic enabling factors ecosystem where the absence of any single dimension can severely limit the overall effectiveness of poverty reduction efforts. By synthesizing theories such as the Sustainable Livelihoods Framework (Chambers & Conway, 1992), the Resource-Based View (Barney, 1991), and Innovation Diffusion Theory (Rogers, 2003), the article argues that poverty reduction occurs when these enabling conditions coordinate to transform survival strategies into resilient, sustainable livelihood systems. This synergy is particularly vital in post-conflict zones like Mullaitivu, where asset-based development replaces dependency-based aid to foster long-term structural transformation (Korf, 2004a).

The contextual dynamics of the article reveal that poverty in post-conflict regions like Mullaitivu is a structural, historical, and institutional phenomenon that cannot be addressed by simple welfare interventions. The region faces a unique set of challenges rooted in the civil war legacy, which resulted in the widespread destruction of productive infrastructure, such as irrigation systems, and the displacement of agricultural communities (Korf, 2004a; World Bank, 2015). These historical disruptions have led to persistent structural constraints, including fragmented market integration, land mine infestation, and ruptured generational skill transfers (Sarvananthan, 2011). Furthermore, marginalization is evident in the gendered nature of economic exclusion, where widows and female-headed households face specific cultural and structural barriers to formal labor participation (Ruwanpura & Humphries, 2004; Thurnheer, 2009). Psychological trauma and a lack of institutional support further accelerate these issues, leaving households trapped in a cycle of subsistence-based farming characterized by low productivity, high risk-aversion, and an inability to convert available natural resources into stable, long-term income (Raheem, 2016; Somasundaram & Sivayokan, 2013). This poverty trap is not merely an absence of assets but a failure of the institutional environment to facilitate the transition from survivalism to entrepreneurial growth.

3. Methodology

The methodology adopts a mixed-methods explanatory research design, strategically integrating quantitative data with qualitative insights to capture the complexity of rural poverty. The study is geographically centered on the Mullaitivu District in Sri Lanka, a region selected for its unique post-conflict socio-economic profile and high poverty density. To provide a rigorous empirical analysis, quantitative data were gathered from a sample of 150 agricultural households, supplemented by qualitative institutional perspectives to contextualize the findings. The analytical framework centers on four primary independent variables: technological intervention, human capability (with a specific focus on the empowerment of women and youth), financial accessibility, and government policy support. These were analyzed against the dependent variable of poverty reduction, which was multidimensionally operationalized through indicators of income stability, asset accumulation, and overall household resilience. This methodological structure allows the study to move beyond descriptive statistics, establishing a causal understanding of how entrepreneurial enabling factors directly influenced the socio-economic recovery of post-war communities.

4. Results

The results regarding the productivity gap in the Mullaitivu District revealed a stark contrast between agricultural engagement and economic output. While agriculture served as the primary revenue source for approximately 31% of the population, it contributed a disproportionately low 21.5% to total household income. This gap was further

evidenced by land utilization data, which showed that only 19% of the district's land was under cultivation at the time of the study. The analysis revealed that the region's agricultural inefficiency was rooted in a complex interplay of historical trauma and systemic stagnation. A primary driver was the lingering legacy of civil war, which had destroyed critical infrastructure, such as irrigation systems, and fractured the social fabric of farming communities through mass displacement. This disruption was compounded by profound technological stagnation; lacking access to modern mechanization or high-quality seeds, farmers remained bound to low-risk, subsistence-based methods that prioritized survival over the growth.

Furthermore, the data highlighted a significant underutilization of resources, where vast natural assets and available land failed to transform into meaningful commercial output. This gap was widened by institutional deficits, specifically the absence of robust extension services and innovation networks. Without these support structures, the sector remained unable to bridge the gap between traditional practices and modern, commercially viable agricultural enterprises. These findings illustrated a cycle of structural poverty where high agricultural dependency without corresponding productivity improvements left households vulnerable and trapped in subsistence-level economic existence.

The correlation findings of this study provided an understanding of how various enabling factors related to multidimensional poverty in the post-conflict context of Mullaitivu. While the research established that agricultural entrepreneurship was a key driver for income growth and asset accumulation, the statistical relationships between certain enabling factors and poverty reduction yielded several counter-intuitive results. Specifically, the study found that the level of technology adoption at the time of the survey, measured by access to tools such as harvesters and tractors, was not significantly correlated with poverty status. This suggested that existing technological interventions were either qualitatively incompatible with local needs or insufficient in scale to bridge the entrenched productivity gap. Furthermore, a negative correlation was observed between high degrees of government support and entrepreneurial innovation, which indicated that certain aid policies stifled individual agency among the surveyed population. Overall, the findings suggested that structural bottlenecks, such as weak market linkages and historical marginalization, rendered individual factors like financial access or technological uptake statistically irrelevant when not addressed within a holistic framework. These results indicated that in the rural, post-war setting of Mullaitivu, improving these dimensions independently was insufficient to create measurable poverty reduction, as broader structural conditions continued to dictate livelihood outcomes.

The study identified several deep-rooted poverty traps and structural barriers that impeded the transition from subsistence farming to profitable agricultural entrepreneurship in the Mullaitivu District. A primary barrier was weak market integration, characterized by geographical isolation from major commercial hubs and a chronic lack of local agro-processing and storage facilities. This isolation forced farmers to sell raw produce to intermediaries at low farm-gate prices, which prevented them from capturing value-addition profits. Furthermore, high post-conflict vulnerability remained a significant hurdle. The destruction of physical assets, such as irrigation networks, and the persistence of psychological trauma had fostered a culture of risk aversion, where households prioritized immediate survival over long-term entrepreneurial investment. These issues were compounded by inadequate institutional coordination, where fragmented government policies and top-down welfare programs often failed to address the specific needs of vulnerable communities. Together, these barriers created a cycle of stagnation where, despite individual effort, the lack of an enabling ecosystem kept rural households trapped below the poverty line.

5. Discussion

Entrepreneurial agencies serve as a critical driver in transforming rural livelihoods by shifting farmers from passive subsistence to active market engagement. In the context of Mullaitivu, this agency involves the identification of economic opportunities and the mobilization of scarce resources within a restrictive post-conflict environment. Yu (1998) emphasizes that such agency enables individuals to innovate despite constraints, while Acs and Varga (2005) associate entrepreneurial behavior with broader regional economic growth. Furthermore, the study aligns with Oghojafor *et al.* (2011) in arguing that active entrepreneurial participation directly supports poverty reduction by increasing household income and community-wide economic participation. By exercising agency, small-scale producers can move toward value-addition activities, such as processing and packaging, which Kahan (2012) identifies as essential for farm survival in competitive modern economies. This shift effectively reduces dependency on middlemen and mitigates the impact of price instability, empowering households to build long-term economic resilience.

A critical finding of the research was that poverty reduction did not result from isolated interventions but from a systemic synergy of enabling factors. The study's conceptual framework posits that the utilization of technology, human capability, financial accessibility, and policy support is not isolative; rather, their interaction determines the

effectiveness of entrepreneurship and poverty alleviation efforts. For instance, technology utilization is only optimized when coupled with the necessary human skills and financial resources to exploit it, supported by favorable policies that facilitate market entry. Empirical evidence suggests that such hybrid solutions are significantly more powerful than single-target interventions. This interdependency is particularly crucial in post-conflict regions like Mullaitivu, where the combination of financial services with institutional aid and capacity-building yielded the greatest impact on long-term livelihood security and resilience during the study period.

The findings of this study emphasized that the conflict legacy in Mullaitivu serves as a profound structural deterrent to entrepreneurial growth, characterized by the systemic destruction of productive assets and the erosion of social capital. According to Goodhand (2003), post-conflict environments are often defined by "chronic political instability" and damaged infrastructure that prevent rural communities from transitioning back to formal economic participation. In Mullaitivu, this legacy was evidenced by the breakdown of traditional irrigation systems and the loss of generational agricultural knowledge, which forced households into low-risk, subsistence-level survival strategies. Furthermore, Korf (2004b) argues that the "geographies of war" create isolated markets where the cost of trade remains prohibitively high, a reality reflected in the study's findings regarding the district's low land utilization and market fragmentation. This structural marginalization is compounded by what Justino (2012) identifies as the long-term impact of household-level shocks on human capital. In Mullaitivu, the disruption of education and the high prevalence of female-headed households have created a labor force that lacks the specialized skills necessary for modern agri-business, thereby necessitating targeted, context-sensitive institutional support to break the cycle of post-war poverty.

6. Conclusion

This study concludes that agricultural entrepreneurship is a vital and transformative strategy for achieving inclusive and sustainable poverty reduction in rural Sri Lanka, particularly in the post-conflict context of the Mullaitivu District. The research establishes that the district's high poverty levels, 44.5% compared to the 14.3% national average, are a structural and historical product of war-related destruction, low land utilization (only 19%), and an entrenched productivity gap in traditional farming. The research findings indicate that while entrepreneurship has the potential to enhance livelihoods, its effectiveness is currently hampered by significant structural barriers, including weak market integration, fragmented institutional coordination, and financial exclusion. Furthermore, the study identifies a poverty trap where traditional welfare-dependent aid may inadvertently restrict entrepreneurial innovation. Ultimately, the study asserts that the cycle of structural impoverishment can be reversed only when an entrepreneurial orientation is systematically supported by a synergistic ecosystem of enabling technologies, qualified human capital (especially women and youth), inclusive financial access, and consistent government policy frameworks.

Recommendations

The strategic recommendations of the study are structured into short, medium, and long-term actions aimed at transforming the agricultural landscape of Mullaitivu through an integrated entrepreneurial framework. In the short term, the study advises immediate improvements in access to micro-mechanization and digital market platforms to bridge the existing productivity gap. Medium-term strategies focus on reforming rural credit systems and rebuilding farmer cooperatives to enhance collective bargaining power and financial inclusion. For long-term sustainability, the research recommends a complete shift from welfare-dependent models to an inclusive policy environment that specifically prioritizes training and resource allocation for women and youth to prevent regional labor drain. Ultimately, the study advocates for a systemic synergy where technological modernization, human capability development, and financial access are coordinated under a coherent institutional support system rather than being implemented as isolated interventions.

Compliance with ethical standards

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