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Determinants of Host Communities' Households' Income Diversification Strategies in the EACOP Project. Experience from Communities around Lake Victoria in Tanzania

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Abstract
Income diversification is a key strategy for households to manage economic shocks and adapt to changing socio-economic conditions. This study examined the determinants of income diversification among households affected by the East African Crude Oil Pipeline (EACOP) project, focusing on the role of Local Content Policy (LCP) implementation. A mixed-methods approach was used, combining quantitative and qualitative data analyzed through Kendall's tau b and thematic analysis. The study assessed the influence of gender, education, occupation, and LCP capacity-building initiatives on income diversification. Findings show that while gender and education play a role, the most significant determinant is the level of LCP implementation. Households receiving training, financial support, and resources demonstrated a stronger ability to engage in new income-generating activities such as modernized agriculture, motorcycle (bodaboda) transport, and retail trade. Qualitative insights emphasize that community engagement, regulatory flexibility, and ongoing mentorship are vital for sustaining diverse income sources. The study concludes that effective LCP implementation builds household resilience by providing affected communities with skills and resources for economic transformation. It recommends enhancing policy frameworks, expanding access to financial services, and promoting gender-inclusive strategies. Future research should examine the long-term economic effects of LCP initiatives on income diversification in large-scale project-affected communities.

Keywords: Income Diversification, Local Content Policy, East African Crude Oil Pipeline (EACOP), Household Resilience, Economic Transformation.

1.0 Introduction

Traditional livelihoods typically based on subsistence agriculture, pastoralism, fishing, and small-scale trade have long been the foundation of rural and indigenous communities around the world. However, these systems are increasingly threatened by a combination of environmental degradation, economic pressures, and political disruptions (Scoones, 2021; FAO, 2022). In response to these challenges, livelihood diversification has emerged as a critical coping and adaptation strategy serving not only as a mechanism for survival but also as a pathway to rural transformation and poverty reduction (Ellis & Freeman, 2020; World Bank, 2023). This phenomenon falls within the interdisciplinary knowledge domains of rural development**,** sustainable livelihoods, and socio-economic resilience**,** drawing insights from development studies, environmental science, and human geography (Chambers & Conway, 2021; de Haan, 2022). It is especially relevant within the Sustainable Livelihoods Approach (SLA)**,** which emphasizes the strategic use of assets such as natural, human, social, financial, and physical to enhance community resilience and reduce vulnerability (DFID, 2020; Scoones, 2021). The urgency of diversification has been heightened by a range of factors, including the impacts of climate change (such as erratic rainfall patterns and prolonged droughts**),** land displacement due to large-scale infrastructure projects notably those in the oil and gas sector like the East African Crude Oil Pipeline (EACOP) as well as market volatility and socio-political instability (Sulle, 2022; ActionAid, 2023; UNEP, 2024). These stressors have rendered traditional livelihood strategies increasingly inadequate for ensuring food security and stable income, thus compelling rural households to diversify their income sources.

Contemporarily, diversification for rural household is a critical strategy adopted by individuals and households globally to enhance household income stability and well-being (Biswas et al, 2020). It involves engaging in multiple income-generating activities, both agricultural and non-agricultural, as a means to mitigate economic vulnerabilities and improve living standards (Biswas et al., 2021; Martin & Lorenzen, 2016; Pritchard et al., 2019). The significance of diversification is particularly pronounced among rural impoverished households that seek to navigate economic shocks arising from policy changes and socio-economic dynamics (Helmy & Imane, 2020). The intervention reduce income variability and fostering economic resilience, diversification serves as a crucial mechanism for rural livelihoods, facilitating structural transformation within local economies (Heitzmann, Canagarajah, & Siegel, 2002; Holzmann & Jorgensen, 1999; World Bank, 2001). Therefore, the EACOP project, spanning across Tanzania, has significantly impacted the livelihoods of host communities through land acquisition, displacement, and shifts in economic activities (Ogwang et al, 2021).

In response to these disruptions, affected households in areas such as Kassambya, Kyaka and Mutukula wards have to explore new income-generating opportunities beyond traditional farming to be able to cope with the new livelihoods framework. Income diversification in these communities reflects sectoral transitions from traditional agricultural to modern farming and non-farm activities, reshaping local economic structures (Mertz et al., 2009; Stark & Lucas, 2011; Islam et al., 2014; Tompkins et al., 2020). However, the degree to which households successfully diversify their income sources is influenced by various socio-economic and policy-driven factors particularly the Local Content Policy (LCP) implementation through its capacity-building initiatives. The existing literature highlights the importance of income diversification in rural economies, the gap exists in understanding the specific determinants that determine income diversification among households affected by EACOP. Most studies focus broadly on economic resilience strategies without adequately addressing the unique socio-economic and policy-driven contexts of host communities. This study looked to bridge this gap by examining the socio-economic determinants of EACOP income diversification and assess the role of LCP in facilitating income diversification among affected households.

Globally, income diversification has long been recognized as a critical strategy for rural households to manage risks and enhance economic stability. In various parts of the world, rural households diversify their income sources to cope with economic shocks, environmental changes, and policy reforms (Ellis, 2000; Reardon et al., 2019). Studies in Asia and Latin America indicate that non-farm employment, remittances, and small-scale enterprises play a crucial role in income diversification (Davis et al., 2017; Barrett et al., 2001). Furthermore, access to education, infrastructure, and financial services significantly determines households' ability to diversify (Babatunde & Qaim, 2010). In Sub-Saharan Africa, income diversification is primarily driven by climate variability, declining agricultural productivity, and limited access to credit and markets (Haggblade et al., 2010). Households in rural Africa engage in non-agricultural activities such as petty trade, artisanal mining, and wage employment to supplement farm income (Losch, 2016). The study by Alobo & Bigirwa (2021) highlights that social networks, skills training, and governmental support programs influence the extent of income diversification in many African countries. However, gender disparities and land tenure systems remain key barriers to diversification efforts (Adjognon et al., 2022).

Consequently, in East African households employ income diversification as a survival strategy due to economic and environmental uncertainties (Gatahun et al, 2022). Studies in Kenya, Uganda, and Rwanda reveal that rural households integrate farming with small businesses, casual labor, and livestock rearing to reduce vulnerability (Lay et al., 2008; Kristjanson et al., 2014). Infrastructure development and government initiatives such as vocational training and financial inclusion programs have also played a significant role in promoting diversification (FAO, 2022). Additionally, migration to urban areas in search of employment has become a prominent diversification strategy in East Africa (Nalubwama et al., 2023). In Tanzania, income diversification is influenced by agricultural seasonality, land access, education, and rural-urban linkages. Rural households engage in various economic activities, including crop cultivation, livestock keeping, trading, and tourism-related enterprises (Ndulu et al., 2020). The role of microfinance institutions and government initiatives such as the Tanzania Social Action Fund (TASAF) has been crucial in enabling households to pursue alternative income sources (URT, 2021). However, challenges such as inadequate financial literacy, market instability, and climate change continue to hinder effective diversification (Mwenda et al., 2023). Furthermore, studies on EACOP-affected communities indicate that displacement and compensation payments have led to shifts from traditional agriculture to small businesses and transport services, albeit with varying degrees of success (Msuya & Mwageni, 2024).

These studies do not specifically address the determinants of income diversification among households affected by EACOP projects. Most research such as (Ellis, 2000; Reardon et al., (2019), Babatunde & Qaim, (2010), Haggblade et al., (2010), Alobo & Bigirwa (2021) and FAO, (2022) focused on the challenges and factors influencing income diversification in rural areas, primarily driven by climate change and economic shocks. However, information on the specific determinants of income diversification for households impacted by Oil and Gas projects, particularly EACOP, remained limited. Therefore, this paper aimed to address these issues guided by key questions; what were the socio-economic factors which determined EACOP income diversification among host community-affected households and what were the LCP's capacity-building components that influenced income diversification? Answering these questions, this paper contributes to the broader discourse on livelihood strategies and income diversification in the context of large-scale infrastructure projects, providing valuable insights for policymakers, development practitioners, and local communities.

2.0 Methods

Study Design: This study adopts a mixed-methods approach, integrating both quantitative and qualitative research methods. A cross-sectional survey design was employed to collect data from affected households,

while in-depth interviews and focus group discussions provided qualitative insights into their income diversification strategies.
Study Area and Participants: The research was conducted in communities affected by the EACOP project, particularly in Kassambya, Kyaka and Mutukula wards around the Lake Victoria in Tanzania. The study targeted household heads who have experienced land acquisition or other socio-economic disruptions due to the pipeline project.
Sampling Techniques: A multi-stage sampling technique was employed to ensure both relevance and representativeness in data collection. In the first stage, purposive sampling was used to select villages most affected by the EACOP project, based on criteria such as proximity to the pipeline route and reported disruptions to traditional livelihoods. These villages were chosen to provide insight into the experiences of the most impacted communities. In the second stage, simple random sampling was applied to select individual households within the identified villages. This approach ensured that each household had an equal chance of being included, thereby enhancing the representativeness and generalizability of the findings within the affected areas. Additionally, key informants from government agencies such as Misenyi District, Ward and Village executive officers, local leaders, and NGOs was interviewed to provide expert insights.

2.1 Data Collection Methods

2.1.1 Household Surveys: Structured questionnaires was administered to a sample size of 116 households from a total population of 1,961 households using Yamane's (1967) formula with an adjusted margin of error of 9%. This size was chosen to ensure a balance between statistical reliability and practical constraints such as time, cost, and accessibility. The sample is consistent with prior studies in similar contexts and is sufficient to capture the diversity of experiences among households affected by the project.
2.1.2 Key Informant Interviews (KIIs): Interviews with six policymakers and three community leaders provided contextual insights.
2.1.3 Focus Group Discussions (FGDs): Discussions with community members was captured to collective perspectives on livelihood adaptation and policy impacts.
2.2 Data Analysis; Quantitative data was analyzed using SPSS for descriptive statistics and correlation analysis using Kendall's tau b to test the strong relationship between variables. Thematic analysis was employed for qualitative data to identify key themes related to income diversification and policy influences.

3.0 Findings and Discussion

3.1 Socio-Economic Determinants of EACOP Income Diversification

3.1.1 Gender as a Determinant of EACOP Income Diversification

This study aimed to assess whether gender plays a role in determining income diversification among EACOP beneficiaries. The findings indicate that men dominate income diversification strategies resulting from EACOP interventions. Specifically, refer to Table 1 bellow, men account for 84.6% of participants in motorcycle (Boda Boda) businesses, compared to 15.4% of women. Similarly, men lead in modern farming and the cultivation of banana and coffee, representing 70.2% of participants, while women constitute 29.8%. In the retail sector, men also dominate, making up 81.8% of those establishing and running retail shops, while women account for only 18.2%. Additionally, in income diversification strategies related to animal value addition (locally known as *Kunenepesha mifugo*), men lead with 70%, while women represent 30%. However, when considering the total number of respondents engaged in this study, women surpass men in animal value addition businesses, comprising 11.1% compared to 7.9% of male respondents. These findings underscore the notion that men engage in income diversification strategies more than women, largely due to cultural norms that position them as household heads. A Kendall's tau-b correlation analysis was conducted to examine the strength and direction of the relationship between gender of respondents and income diversification. The results indicated no strong or statistically significant positive correlation ($\tau b = .029$, $p = .736$, $N = 116$). These findings suggest that an individual's gender is not the sole determinant of income diversification. However, the study also reveals a growing number of female-headed households seizing new income diversification opportunities, whereas male-headed households tend to focus on traditional diversification strategies.

Table 1: Gender of respondents as a determinant for EACOP income diversification

Income Diversification Strategies		**Gender Determinant**		**Total**
		Male	**Feale**	
1	Boda boda business	22 (84.6%)	4 (15.4%)	26 (100%)
2	Bought new farm and planted new banana and coffee	33 (70.2%)	14 (29.8%)	47(100%)
3	Established the retail shop	27 (81.8%)	6 (18.2%)	33 (100%)
4	Established the animal value chain business (Kunenepesha mifugo)	7 (70%)	3 (30%)	10 (100%)
Total		**89 (76.7%)**	**27 (23.3%)**	**116 (100%)**

Source: Field Data, (November,2024-April, 2025)

Qualitative data further highlight the role of gender in income diversification among EACOP beneficiaries. One participant from the FGD (K1) noted: "We are actively involved in business to support our families because if we leave it to men, nothing will progress all incentives will be spent on luxury. Since we are responsible for our households, we must take part. Households where women were actively engaged in managing project benefits have shown significant progress, unlike those where men handled everything alone." A key informant from the Misenyi District Council echoed this sentiment, stating: "Women tend to be more serious about project training, business management, and financial discipline. Those who benefited from the project are progressing well, with fewer complaints compared to male-headed households where women were not effectively engaged." This suggest that, if female roles in managing household resources is increased among households the possibility of household income emancipation can be achieved contrary to increased men's role.

3.1.2 Occupation as a Determinant of EACOP Income Diversification

This study aimed to determine whether an individual's occupation influences their income diversification strategy. The findings indicate a significant shift in occupation among respondents affected by the EACOP project. Specifically, as it can be referred in Table 2, the results show that farmers have diversified into new income-generating activities. For instance, 80.8% of those engaged in the motorcycle (*Boda Boda*) business were originally farmers, compared to 19.2% who combined farming with business. Similarly, in modern farming practices, such as banana and coffee cultivation, farmers accounted for 72.3% of participants, while 27.7% practiced a combination of small business and farming. Additionally, farmers dominated the income diversification strategy of establishing retail shops, representing 61.5% of participants, while 38.5% combined farming with other businesses. Likewise, in animal value addition (*Kunenepesha mifugo*), farmers made up 70% of participants, compared to 30% of those engaged in both farming and small business. A Kendall's tau-b correlation analysis was conducted to examine the strength and direction of the relationship between occupation of respondents and income diversification. The results indicated no strong or statistically significant positive correlation ($\tau b = .062$, $p = .477$, $N = 116$). These findings suggest that an individual's occupation is not the sole determinant of income diversification. Instead, the shift in occupation among EACOP-affected respondents prompted further investigation into the factors that encouraged farmers to develop new skills and explore alternative income sources beyond traditional farming.

Table 2: Occupation as a determinant for EACOP income diversification

Income Diversification Strategies		Gender Determinant		Total
		Farmer	**Farming and Small Business**	
1	Boda boda business	21(80.8%)	5(19.2%)	26(100%)
2	Bought new farm and planted new banana and coffee	34(72.3)	13(27.7%)	47(100%)
3	Established the retail shop	24(61.5%)	9(38.5%)	39(100%)
4	Established the animal value chain business (Kunenepesha mifugo)	7(70%)	3(30%)	10(100%)
Total		**86(74.1%)**	**30(25.9%)**	**116 (100%)**

Source: Field Data, (November,2024-April, 2025)

Qualitative data reinforce the quantitative findings, indicating that occupation alone does not dictate income diversification among EACOP beneficiaries. One participant (M1) from the FGD shared: "I decided to start the Boda Boda business to afford my household's daily needs. If I had remained in agriculture, given the unpredictable weather, my family would have suffered from hunger. The training we received, along with the need for a stable income, motivated me to start this business." Another respondent (K2) from the FGD added: "Life today is unpredictable. Thanks to this project, I was able to move beyond traditional farming, which had kept my household in extreme poverty. The small financial incentives, training, and group support I received have enabled me to establish another source of income." This suggest that the project has facilitated respondents in the study area to adopt other income generation opportunities for their household survival. This indicates the important role of O&G projects in communities and especially when community members are effectively involved.

3.1.3 Education Level of Respondents as a Determinant of EACOP Income Diversification

This study aimed to assess the influence of respondents' education levels on their income diversification strategies. As indicated in Table 3, the findings indicate that respondents with primary education dominated income diversification across all strategies examined in the study. Specifically, 69.2% of those engaged in the *Boda Boda* business had a primary education, compared to 26.9% with an O-level education and 3.9% with no formal education. Similarly, in modern banana and coffee farming, 68.1% of participants had a primary education, while 31.9% had an O-level education. In the establishment and management of retail shops, respondents with a primary education accounted for 75.8%, compared to 21.2% with an O-level education and 3.0% with no formal education. Additionally, in the newly emerging animal value addition business (*Kunenepesha mifugo*), 60% of participants had a primary education, while 40% had an O-level education. However, when considering the number of respondents involved in the study, individuals with an O-level education led in income diversification strategies related to modern banana and coffee farming, accounting for 45.5% compared to 39.5% of those with a primary education. Likewise, in animal value addition, 12.1% of respondents with an O-level education diversified into this business compared to 7.4% with a primary education. These results suggest that while primary education is dominant among those engaged in income diversification, higher education levels may provide additional advantages in specific sectors. A Kendall's tau-b correlation analysis was conducted to examine the strength and direction of the relationship between education level and income diversification. The results indicated no strong or statistically significant positive correlation ($\tau b = .000$, $p = .997$, $N = 116$).

Table 3: Education Level of Respondents as a Determinant of EACOP Income Diversification

SN	Income Diversification Strategies	Education Level Determinant			Total
		No formal Education	Primary Education	O-Level Education	
1	Boda boda business	1 (3.9%)	18 (69.2%)	7 (26.9%)	26 (100%)
2	Bought new farm and planted new banana and coffee	0 (0%)	32 (68.1%)	15 (31.9%)	47(100%)
3	Established the retail shop	1(3.0%)	25 (75.8%)	7 (21.2%)	33 (100%)
4	Established the animal value chain business (Kunenepesha mifugo)	0 (0%)	6 (60%)	4 (40%)	10 (100%)
Total		**2(1.7%)**	**81 (69.8%)**	**33 (28.5%)**	**116 (100%)**

Source: Field Data, (November,2024-April, 2025)

Despite limited quantitative evidence, qualitative data reveal a significant link between education level and the effectiveness of income diversification strategies. One participant (M2) from FGD remarked: "I have managed to establish and run this retail shop business because I have a good understanding of mathematics and market analysis skills. These skills have been crucial for my business success. Currently, I don't just wait for customers to visit my shop, I actively seek them out on market days or take my products to locations with high population density." This testimony highlights how educational attainment particularly basic numeracy and analytical skills can enhance entrepreneurial decision-making and adaptive capacity. Education not only equips individuals with the tools to understand and navigate market dynamics but also fosters confidence and proactivity in pursuing diverse income opportunities. Moreover, the ability to apply such knowledge in real-world settings appears to distinguish more successful diversification efforts from less effective ones. This underscores the need to integrate educational and capacity-building initiatives into livelihood support programs, especially in communities undergoing economic and environmental transition. Generally, improving access to education and practical skills training can serve as a catalyst for more sustainable and resilient livelihood strategies in the face of displacement, climate change, or resource-based development projects.

3.1.4 Local Content policy as determinant for EACOP income diversification

This study aimed to assess how the capacity-building components of the Local Content Policy (LCP) were implemented and the extent to which they influenced income diversification strategies among EACOP beneficiaries. The findings indicate that the key LCP capacity-building components implemented by the project included training in life skills and entrepreneurship (71.6%), capacity building on joining self-help groups (25.9%), and effective use of compensation (2.5%) see Table 4 bellow. To determine how these components influenced respondents' ability to diversify their income, the study found that:

- Among those who established and ran Boda Boda businesses, 76.9% credited their success to the life skills and entrepreneurship training, 19.2% to facilitation in joining self-help groups, and 3.9% to compensation received.
- In modern banana and coffee farming, 68.1% attributed their success to life skills and entrepreneurship training, 29.8% to self-help group facilitation, and 2.1% to compensation.
- Among retail shop owners, 75.8% benefited from life skills and entrepreneurship training, 21.2% from self-help group support, and 3.0% from compensation.
- In the newly introduced animal value addition business, 60% of respondents attributed their involvement to life skills and entrepreneurship training, while 40% credited their participation in self-help groups.

Table 4: Local Content policy as determinant for EACOP income diversification

SN	Income Diversification Strategies	Local Content policy (Capacity Building Components) as determinant			Total
		The new life skills gained from EACOP	New self-help groups established by EACOP	The effective use of Compensation received	
1	Boda boda business	20 (76.9%)	5(19.2%)	1 (3.9%)	26 (100%)
2	Bought new farm and planted new banana and coffee	32(68.1%)	14(29.8%)	1(2.1%)	47(100%)
3	Established the retail shop	25 (75.8%)	7(21.2%)	1 (3.0%)	33(100%)
4	Established the animal value chain business (Kunenepesha mifugo)	6 (60%)	4 (40%)	0(0.0%)	10(100%)
	Total	**83 (71.6%)**	**30(25.9%)**	**3(2.5%)**	**116 (100%)**

Source: Field Data, (November,2024-April, 2025)

Qualitative data further revealed that individuals who ventured into modern banana and coffee farming were particularly influenced by the project's provision of free agricultural support services. These included access to agricultural experts, free modern banana and coffee seedlings, organic fertilizers, and farm preparation services. One respondent (K2) remarked: "This project has been a blessing. I have never experienced such generosity before compensation, free land, and full coverage of farm preparation costs until the crops started growing." Similarly, another respondent (M3) shared: "This project truly cared for and motivated affected households. People could start new businesses because they were provided with free food to sustain them for a year. The compensation money didn't have to cover household needs unless someone lacked vision." In addition to direct agricultural support, key informants noted that EACOP beneficiaries greatly benefited from extensive training programs, which empowered them to initiate and manage new income-generating ventures. The project also introduced animal husbandry initiatives to encourage households to diversify beyond traditional crop-based farming. One key informant explained: "Beneficiaries received extensive training, and we continue to support them through their established groups. If anyone faces challenges, we immediately connect them with a relevant project expert for assistance. The project even employs its own field experts who provide full-time support to the beneficiaries." These insights suggest that the project's holistic approach combining resource provision, capacity-building, and ongoing technical support played a vital role in facilitating livelihood diversification. Addressing both the material and knowledge-based needs of affected households, the project helped reduce dependency on traditional farming and enhanced resilience against future economic shocks.

3.2 Synthesizing Results and Implications

This study reinforces existing literature indicating that households diversify their income sources to cope with economic shocks and policy interventions such as the Local Content Policy (LCP). The findings align with studies by Reardon et al. (2019), which emphasize that income diversification serves as a crucial coping strategy against economic instability and policy shifts. Furthermore, the study supports the findings of Babatunde & Qaim (2010), which highlight that access to education, infrastructure, and financial services significantly influences a household's ability to diversify its income.

Additionally, the findings of this study align with those of Ndulu et al. (2020), which reveal that households adopt a mix of economic activities such as crop cultivation, livestock keeping, and petty trading as key strategies for income diversification. In the context of this study, such diversification was largely driven by displacement-related challenges and the need to restore lost livelihoods. Affected households turned to these activities not only to stabilize their income but also to adapt to new environments and reduce dependency on a single livelihood source following land acquisition and resettlement under the EACOP project. Recent studies from East Africa further suggest that climate change impacts, such as erratic rainfall and prolonged droughts, alongside fluctuating commodity prices and increasing land pressures due to population growth and large-scale land acquisitions, are significant drivers of income diversification among rural households. These factors push communities to pursue multiple livelihood strategies as a way to enhance resilience and reduce vulnerability to socio-economic shocks (Kihoro et al., 2022; Mugo et al., 2023; Tumusiime & Mbabazi, 2021).

The study's findings suggest that, in the context of host communities affected by large-scale projects such as the EACOP, income diversification is primarily determined by the extent of LCP implementation, particularly through capacity-building initiatives. While socio-economic factors such as education and gender play key roles in shaping household income diversification strategies, this study underscores that project-specific interventions such as training programs, financial support, and agricultural assistance are the most influential determinants in the study area. The role of project experts and government facilitators in guiding households toward new economic activities demonstrates the significant impact of policy implementation beyond traditional determinants.

Moreover, the study observed notable improvements in the implementation of LCP initiatives aimed at supporting host communities beyond what is formally stipulated in the policy. The provision of additional resources such as agricultural inputs, financial incentives, and ongoing expert support illustrates the flexibility of projects and regulatory bodies in ensuring that host communities derive sustainable benefits from large-scale investments. This adaptability suggests a shift toward more inclusive and community-driven approaches to economic empowerment, which could serve as a model for future infrastructure and resource-extraction projects in the region.

The findings also highlight the methodological importance of integrating qualitative and quantitative research designs when studying income diversification in project-affected areas. While quantitative results in this study showed weak statistical associations between certain variables, qualitative data provided a deeper understanding of the underlying relationships. This mixed-methods approach ensures a more comprehensive analysis, capturing both measurable trends and contextual factors that influence income diversification strategies.

4.0 Conclusion and Recommendations

4.1 Conclusion

This study has examined the determinants of income diversification among households affected by the East African Crude Oil Pipeline (EACOP) project, with a particular focus on the role of Local Content Policy (LCP) implementation. The findings indicate that while socio-economic factors such as gender, education, and occupation influence income diversification, the most significant determinant in the study area is the extent to which LCP-driven capacity-building initiatives are implemented. Households that received training, financial support, and resources from the project exhibited a greater ability to transition into new income-generating activities such as retail trade, modernized agriculture, and the motorcycle (*bodaboda)* business. The study further highlights the effectiveness of combining qualitative and quantitative research methods in understanding income diversification dynamics in O&G projects in Tanzania and Africa in general. While statistical analysis revealed weak associations between certain variables, qualitative insights from respondents illustrated a strong link between LCP interventions and economic transformation in affected communities. Additionally, the study notes that flexibility in project implementation such as providing free agricultural inputs, business training, and expert support plays a crucial role in ensuring sustainable benefits for host communities. Overall, the findings suggest that large-scale infrastructure projects like EACOP should not only focus on compensation for displaced households but also prioritize capacity-building initiatives that empower communities to develop sustainable livelihoods. The success of income diversification efforts depends not only on individual characteristics but also on institutional support, regulatory adaptability, and community engagement.

4.2 Recommendations

Livelihood diversification plays a pivotal role in enabling project-affected households to cope with a range of economic and social shocks. As demonstrated in the findings, diversification has been instrumental in restoring lost income sources, enhancing food security, and adapting to new livelihood conditions following displacement. The study recommends that for such interventions to succeed, an integrated approach to livelihood support must be adopted particularly in development-induced displacement contexts such as those caused by the EACOP project. The success of income diversification efforts largely depends on equipping communities not only with physical inputs (like seeds, livestock, and tools) but also with skills training, information access, and sustained institutional support. These elements have proven essential in transforming compensation packages into productive ventures, as observed among respondents who successfully established retail shops or modern farming practices. Such integrated models should serve as best practices for similar large-scale development projects aiming to ensure inclusive and sustainable outcomes for displaced populations. Without these complementary support systems, many households risk falling into deeper vulnerability once compensation is depleted.

For Policymakers and Regulatory Authorities: The findings revealed that beneficiaries who received structured support such as training and agricultural inputs were more likely to initiate and sustain successful alternative livelihoods. Therefore, Livelihoods Restoration Plan implementation should mandatorily include structured training programs, financial assistance, and business incubation support tailored to household capabilities and local economic contexts. These components are critical for enabling households to make informed and productive use of their compensation.

For Project Implementers (EACOP and Other Large-Scale Projects); The study showed that beneficiaries who received training and mentorship were more confident and proactive in launching income-generating activities. Therefore, project implementers should adopt a holistic capacity-building approach, combining business management training, technical skills development, and long-term mentorship programs. These efforts should go beyond short-term handouts and be part of a sustained development strategy.

For Affected Households and Local Communities; Households that proactively engaged in training and formed social networks (e.g., cooperatives or self-help groups) were more successful in diversifying income. Therefore, affected households should maximize participation in the training, financial support, and business development programs provided by the project. Actively exploring diversified economic opportunities will help reduce dependence on single-income sources.

For Future Studies; The current study highlights short- to medium-term outcomes of income diversification, but there is limited evidence on longer-term sustainability and poverty alleviation. Therefore, future research should focus on evaluating the long-term economic impact of LCP-driven capacity-building initiatives on household resilience, food security, and poverty reduction. Additionally, a comparative analysis of income diversification strategies across different geographic and socio-economic contexts affected by large-scale infrastructure projects would offer deeper insights into best practices and context-specific adaptation strategies.

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