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## SOCIO-ECONOMIC BENEFITS OF OIL PALM PRODUCTION ON RURAL LIVELIHOOD: A CASE STUDY OF RURAL FARMERS IN KARONGA DISTRICT, MALAWI

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### ABSTRACT

Oil palm (*Elaeis guineensis*) production has been essential in addressing socio-economic challenges, particularly in countries such as Indonesia, Malaysia, Honduras, Ghana, and Nigeria. For instance, oil palm production has provided food among the rural populations, creating job opportunities, generating income, hence offering potential pathway for reducing rural poverty. In Malawi, oil palm production is an old tradition practiced by the Nyakyusa people, residing in Karonga District. These people have been involved in producing crude palm oil and soap using indigenous technologies that have been handed down over decades from generation to generation. Despite these indigenes being involved in this agricultural activity, the exploration of how this activity impact their lives remain under researched. Using mixed method and sequential explanatory design, with data collected through questionnaire, in-depth interviews, and focus group discussion, the study examined the socio-economic benefits of oil palm production on rural livelihood, citing Karonga district as area of case study. The findings of the study revealed that through oil palm production, rural farmers perceive this agricultural activity as crucial in sustaining their livelihood as it provides cooking oil, creates once-off job opportunities and generate income, hence meeting basic needs. Also, though oil palm production sustains their livelihood, the study revealed problems such as availability of markets, hindering the progress of this agricultural activity. The study therefore

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*recommends that to unlock the full potential of oil palm production, the government through the Malawi Ministry of Agriculture should help farmers to market their produce.*

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## INTRODUCTION

The importance of oil palm (*Elaeis guineensis*) production to the rural livelihood cannot be overemphasised. Oil palm has been key in sustaining the livelihood of rural farmers through income generation, food sustainability, and creation of job, hence, offering potential pathways out of poverty (McCarthy, Gillespie & Zen, 2012). Oil palm production is distinguished by its remarkable efficiency in terms of oil palm produced per unit of cultivated land, resulting in two distinct products derived from the palm fruit itself including fresh fruit oil and palm kernel oil (extracted from the fruit's seeds) (Chiriaco, Bellotta, Jusić & Perugini, 2022).

Oil palm and its associated products account for approximately 25 percent of the world's total vegetable oil consumption (World Bank, 2010). Further, at the industrial level, oil palm is used to produce many kinds of products which have prospects, including cooking oil, red oil, sweetened condensed milk, margarine, emulsifier, and also can be processed to be a cattle fodder, pulp and paper, alcohol, compos, activated charcoal, organic solvent, lubricants, soap, candle, pharmacy product and cosmetics (Sarku, 2017). Also, oil palm production contributes directly on employment, dividend, government tax, and other retribution in countries such as Indonesia and Malaysia (Dahlani & Maharani, 2018).

Central to the question of livelihood is how people earn a living? At the individual level, livelihood refers to the specific activities and resources a person engages in to earn a living (Scoones, 2013). This include wage labour, self-employment, subsistence farming, or informal work. At the household level, livelihood is the combination of resources and activities that support the well-being of the household as a whole (Scoones, 2013). Further, peoples' livelihoods are shaped by a complex interplay of social, economic, and environmental factors as well as the combination of activities, such as agriculture, wage labour, and self-employment for people to meet their needs. This intricate web of elements contribute to the diverse strategies and livelihood patterns observed among individuals and households in different contexts.

Among rural farmers, livelihood generally refers to the capabilities, assets and activities required for sustaining or improving their means of living (Tang et al., 2013). That is, livelihood encompasses the capabilities people have to earn a living, including assets and activities they are engaged in to sustain or improve their lives. In essence, livelihood extends beyond the mere act of

securing income; it encompasses the range of capacities, resources, and undertakings that rural farmers are involved in to support their daily existence. These facets include their skills, knowledge, social networks, access to assets, and participation in various activities related to agriculture, trade, and other income-generating pursuits. Leveraging these capabilities and assets to ensure the sustainability and improvement of their quality of life, may involve securing basic necessities, such as food and shelter, as well as pursuing opportunities for economic growth and social well-being.

In relation to oil palm, numerous scholarly investigations have documented the positive outcomes of oil palm production to lives of rural farmers. The benefits include elevated farmers' income, employment opportunities, enhanced livelihoods, and valuable contributions to overall economic growth. For instance, McCarthy (2010) and Edwards (2019), revealed that oil palm production has allowed for a continuing diversification of occupations and livelihoods including the supplementation of household income from labour opportunities as well as providing nutrition for vulnerable populations in terms of edible oil.

In terms of its profitability, Feintrenie et al. (2010), revealed that globally, oil palm has become a highly profitable source of income in all ecologically suitable areas. Further, a study by Sunarminto et al. (2019), revealed that the development of oil palm plantations in Indonesia for instance, has created economic growth for the rural population, in turn stimulating the creation of new income sources in the structure of the livelihood system of farming households.

Further, Dharmawan et al. (2020), revealed that the establishment of oil palm plantations in Indonesia has been perceived as an effective approach for enhancing the economic and livelihood systems of rural agricultural communities. Also, Chiriaco et al. (2022), observed that oil palm plays significant role in stimulating the economy and improving the well-being of local populations in Indonesia. Additionally, oil palm makes a larger contribution to poverty alleviation and enhancing food security. Moreover, in response to the pressing issue of limited employment prospects and widespread poverty in Indonesia, the integration of oil palm expansion led by small-scale farmers has been incorporated into the national economic development agenda. According to Alwarritzi et al. (2016), the available research indicates that the development of oil palm cultivation by small-scale farmers has a significant positive impact on the well-being of rural populations.

Scholarly works in West African countries such as Ghana and Nigeria revealed that oil palm has served as a significant means of generating employment opportunities and alleviating poverty in rural regions. Oil palm has served as a consistent revenue stream, a crop adaptable to drought conditions, and a provider of cooking oil for domestic purposes (Ngadi, 2017).

Moreover, a crop predominantly grown by rural farmers, holds significant significance in the context of regional economies and the sustenance of rural communities. For example, Khatun et al. (2020), observed that in Ghana, oil palm yields two distinct types of oil, oil extracted from fresh fruit bunches (FFB) and oil extracted from the nut's kernel, referred to as palm kernel oil (PKO). The oil derived from fresh fruit bunches (FFB) exhibits a diverse range of applications encompassing the fields of culinary goods, cosmetics, and detergents. Palm kernel oil is commonly employed in culinary practises for the preparation of regional stews, customary soups, and as a versatile cooking oil.

Moreover, within the context of Nigeria, oil palm has assumed a pivotal role in sustaining the livelihoods of numerous rural farmers. For example, Adesiji et al. (2016), revealed that oil palm is a prevalent cash crop grown by farmers residing in rural regions of Kogi state, Nigeria. This crop holds significant importance as it has been empirically demonstrated to act as a crucial source of sustenance for several rural families. Again, in Nigeria, the production of oil palm, which is carried out by rural farmers, serves as a mitigating factor for the socio-economic difficulties faced by these farmers in sustaining their livelihoods. In addition to serving as a means of generating revenue, palm oil extraction also provides employment opportunities and serves as a source of sustenance for inhabitants of rural communities.

In Malawi, oil palm production has been practiced by the Nyakyusa people who reside in Karonga district, since time immemorial. These farmers have been involved in producing cooking oil and soap using indigenous technologies. Also, these farmers cultivate land approximately two to three acres, and farm ownership is largely based at family level. Oil palm production is not just an economic activity, it is also a cultural tradition that has been handed down through generations. The communities take pride in preserving and continuing this practice, which is an integral part of their identity. Again, the cultivation of oil palm is characterised by distinct gender roles. Men primarily engage in the physical labour of plucking palm fruit bunches while women are involved in processing to extract the valuable oil. Unlike modern, industrialised agriculture, farming among these farmers is characterised by lack of mechanisation as there is minimal or no use of machines in the production of oil palm. Instead, manual labour, traditional tools, and locally sourced materials are employed. Nevertheless, though oil palm production has been practiced since time immemorial by rural farmers, the importance of this lucrative crop to the livelihood among rural farmers remain under explored. This study therefore, examined the socio-economic benefits of oil palm production to the livelihood of rural farmers in Karonga district, Malawi.

## RESEARCH METHODS

### Method of Collecting Data

In conducting the study, researchers adhered to a prescribed methodology encompassing the collection, analysis, interpretation, and reporting of data (Creswell & Clark, 2018). Upon identifying research problem, mixed method approach and sequential explanatory research design were used. The choice of the approach and design was motivated by the understanding that the initial analysis of quantitative data would provide broader understanding of research problem, enabling a more in-depth exploration (Ansah, 2020; Subedi, 2016). Subsequently, the collection and analysis of qualitative data aimed to refine and offer explanations for the quantitative findings, particularly in exploring participants' and discussant's viewpoints.

The study was conducted from four selected communities under the Traditional Authority (T/A) Mwakaboko of Karonga District, Malawi. Lottery method within the simple random technique was used to select households engaged in oil palm production as respondents to the study. With a total population of 680, and using Slovin's formula, the sample size of 477 was used to which the questionnaires were administered. Slovin's formula is calculated as:

$$n = \frac{N}{1 + Ne^2}$$

where: n = sample size, N = population size, and e = acceptable margin of error (accepted error margin of 0.05)

To meet the qualitative demands of the study, purposive sampling was used to select participants, targeting key informants particularly opinion leaders from selected communities. A total number of eight (8) in-depth interviews, guided by interview guide, involving eight (8) key informants were conducted. The composition of key informants included five men and three women from selected communities. Further, convenient sampling was used to select discussants. Four (4) focus group discussions were formed involving 39 discussants. The focus group discussions were guided by a discussant guide. Focus group discussions were composed of both men and women involved in oil palm production from selected communities. Each focus group had five men and five women, except on group which had five men and four women.

### Data Analysis Method

In analysing data, measures of frequency and correlation analysis were used to examine the quantitative data. Statistical Package for the Social Sciences (SPSS version 27) software was used to manage, organise, test hypothesis and draw inferences from the dataset. The outcomes of these

analyses were presented in tabular format, providing an overview of the numerical insights derived from the study.

Further, interpretive phenomenological analysis (IPA) was used to analyse qualitative data. This approach allowed researchers to have in-depth exploration of participants' and discussants' experiences, perceptions, and the underlying importance of oil palm production to their livelihood. Through a rigorous and iterative process, themes from both quantitative and qualitative data were developed. These thematic outcomes were then thoughtfully presented, offering a qualitative narrative that complements and enriches the quantitative findings, contributing to a holistic understanding of the challenges confronting oil palm production by rural farmers.

## RESULTS AND DISCUSSION

### Gender

The analysis of gender of respondents was conducted in order to get valuable insights into rural farmers' life circumstances, social dynamics, and potential implications for this study. Again, the analysis of gender within the surveyed population in the dataset was not only for understanding the distribution of male and female respondents but also for uncovering valuable insights the role of gender in social, cultural and economic dynamics of farmer involved in oil palm production (Doss, 2014).

Table 1. Gender dimension of oil palm farmers

	Frequency	Percent
Male	310	65.0
Female	167	35.0
Total	477	100.0

From table 1, a total of 65 percent of farmers involved in oil palm production were males, while 35 percent were female. The male dominance in this agricultural activity suggests patriarchal and land acquisition system among farmers. This finding may reflect existing social and cultural norms practiced by these rural farmers.

Further, in the course of interviews, Nyauzedi one of the female key informants reported that *land belongs to the husband's side. This is the case when a woman gets married, she has to move to the husband's side. In the event that the husband dies, the husband's side may repossess the land leaving the woman with no place to cultivate.* This was further corroborated by Dambuyo, one of male key informants who said that, *land inheritance favour boys as compared to girls. When a young man marries, parents take a portion of land and give it to him to cultivate such that the proceeds from farming can help him to take care of his family. When a young*

woman marries, she has to move to her husband's side. It can therefore be deduced that among rural farmers, patriarchal system leads men to have upper hand in land acquisition. Consequently, this kind of system disadvantages women. For example, in terms of accruing benefits from oil palm, men will be advantaged compared to women (Kilic, Winters & Carletto, 2015).

Arguably, the practice of parents allocating a portion of land to their sons upon marriage signifies a traditional approach to providing for families and fostering economic stability within their families. This custom reflects the recognition of marriage as a significant life event that marks the transition to adulthood and the assumption of family responsibilities. By allocating land to newly married young men, parents not only support their son's ability to provide for his family but also contribute to the economic well-being of the household. Again, the allocation of land for cultivation enables young men to generate income through oil palm production, thereby enhancing their capacity to meet the financial needs of their families. Income generated from farming activities can be used to cover essential expenses such as food, shelter, healthcare, education, and other household needs. Additionally, the proceeds from oil palm production contribute to the economic stability of the household by providing a reliable source of income. Also, this practice reinforces intergenerational ties and family support networks among indigenous rural farmers. By providing land to their sons, parents demonstrate a commitment to ensuring the continued welfare and prosperity of future generations. This intergenerational transfer of land serves as a form of wealth distribution and social cohesion, strengthening bonds between family members and reinforcing solidarity.

### Land Cultivation Capacity

Land among rural farmers remain a property cherished as it is inherited from family members. Most of the land in Malawi is customary based, and rural farmers hold small pieces of land. Through the questionnaire, the researcher requested respondents to estimate the acres of land they cultivate.

Table 2. Land size cultivated

Number of Acres	Frequency	Percent	Mean
1 – 2	413	86.5	1.85
3 – 4	38	8.0	
5 – 6	16	3.4	
7 – 8	10	2.1	
Total	477	100.0	

From table 2, data revealed that most of rural farmers involved in oil palm production cultivate land between one and two acres. A cumulative 86.5

percent of rural farmers revealed to have utmost two acres of land. Further, the statistics portrayed on table 2, suggests that on the average, each household cultivate land equating to 1.85 acres.

Inquiring further why there is minimal cultivation of land for oil palm, Gogo one of the discussants from Mwakaboko village said that *there is enough land in this area where farmers can cultivate more oil palm. However, due to market problems, farmers cultivate small pieces of land.* This account clearly illustrates the prevailing and ailing factors necessitating to low cultivation of acres of land among rural farmers. The dimension upon which farmers operate, thus, market challenges as pointed out, contribute to less cultivation of pieces of land. As argued by Jayne et al. (2010), in Sub-Saharan Africa, rural farmers are engaged low acres of land cultivating for crops as strategies to avoid losses, due to some challenges including market and loss of labour.

It can therefore be concluded that the cultivation of one to two acres of land suggests that oil palm production is primarily characterised by small-scale farming operations. Also, the small land size cultivated for oil palm reflects constraints in resource endowment among rural farmers, including limited access to markets. Arguably, limited resource availability may restrict the scale and intensity of farming activities, leading to lower productivity and income levels.

## Income

Through the questionnaire respondents were asked to indicate the income level generated through oil palm production at the household level. This was driven upon noting that farmers are involved in cooking oil production commonly known as *mawese* in their communities.

Table 3. Income levels

Weekly Income	Frequency	Percent
MK5,000 - MK10,000	387	81.1
MK11,000 - MK20,000	90	18.9
Total	477	100.0

Based on table 3, it was observed that majority of farmers, 81.1 percent of individuals within the surveyed population, affirmed that their weekly earnings met or not exceeded the threshold of 10,000 Malawi kwacha. This amount equates to approximately 10 United States Dollars (US\$10). This revelation underscores a dominant economic reality within the surveyed demographic, signifying a prevalent income level that holds implications for a spectrum of socio-economic facets.

Inquiring further what farmers are engaged in to generate income Chinoko one of the discussants from Mwakaboko village narrated that *from oil*



*palm fruits, we produce cooking oil. What happens is that we boil oil palm fresh fruits, then we sieve water to produce oil. At times we add sodium bicarbonate to produced oil so that we can make soap which we use in our houses. Further, Mbamba, one of the discussants from Kasewe village said that when we sell cooking oil, we get money that help in buying basic needs for our families. Even though markets are difficult, as we trade with people from Tanzania, still we get money that sustain our families.*

The income significance of oil palm production among rural farmers underscore profound importance of oil palm within the fabric of rural economies. That is, oil palm production among rural farmers is key in contributing to income gains (Khatun et al., 2020; Qaim et al., 2020; Adesiji et al., 2016). This multifaceted impact, in turn, positions oil palm as a pivotal agent in the pursuit of sustainable development and the amelioration of poverty in rural landscapes.

The production of cooking oil and soap among these rural farmers align itself with global perspectives whereby oil palm is used for different products both at domestic and industrial level. At industrial level, oil palm is used to produce vegetable oil, organic solvent, lubricants, soap, candle, pharmacy product and cosmetics (Sarku, 2017), and at domestic level it is used in local culinary as edible oil (Khatun et al., 2020). With the presence of oil palm in Malawi, the country stands at a better position to benefit from this resource for the production of different industrial products such as cooking oil, soap and other detergents, including pharmaceutical products.

Further, the Chinoko's account of locally boiling oil palm fresh fruits to produce cooking oil, underscores the relevance of indigenous knowledge in supporting the lives of these rural farmers. As revealed by Goduka (2012), indigenous knowledge has served as an enduring and indispensable component in the preservation and sustaining livelihood among local communities. Furthermore, locally boiling of oil palm fruits also underscores the dynamic and adaptable nature of indigenous knowledge, which exhibits a remarkable capacity to evolve and innovate in response to changing circumstances and requirements, as astutely noted by Langill (2010).

## **Oil Palm Production and Rural Livelihood**

The empirical analysis of who does (and who does not) get to use what, in what ways, and when revolves around the resource (Szaboova et al., 2020). Interrogating the importance of oil palm production for sustaining the livelihood of rural farmers was important, taking into account that these farmers have been involved in this agricultural practice since time immemorial. As such, respondents were asked through the questionnaire to score the benefits of oil palm production to their lives.

Table 4. Oil palm production and rural farmers' livelihood

Benefits	Lightly		Moderately		Highly	
	Total	Percent	Total	Percent	Total	Percent
Oil palm has been a source of food to my family.	26	5.5	169	35.4	282	59.1
Farmers are able to purchase basic needs for their households.	44	9.2	296	62.1	137	28.7
Farmers are able to pay for health care charges for their family.	61	12.8	296	62.1	120	25.1
Oil palm creates job opportunities for my family.	91	19.1	291	61.0	95	19.9
Palm oil proceeds help in paying educational charges.	111	23.3	264	55.3	102	21.4

In examining the importance of oil palm production to the livelihood, rural farmers shared a consensus and singled out the income gains, food in terms of cooking oil, employment, and meeting other basic needs.

### Oil Palm as Source Of Food

Among indigenous rural farmers in Karonga district, oil palm production is perceived as providing food to their households. That is, oil palm production has been associated with addressing malnutrition among farmers as farmers are able to produce cooking oil which is used in their local culinary. From table 4, a substantial cohort of 59.1 percent of respondents, revealed that the locally production of cooking oil from oil palm fruits serve as source of food to their families, while 5.5 percent and 35.4 percent indicating lightly and moderately, respectively. Reporting on the importance of oil palm as source food among indigenous rural farmers, Khuku, one of the discussants from Mwangulukulu village said that *from oil palm we get oil which we use when cooking our food. The oil is nutritious and makes our bodies to be healthy.*

Arguably, the extraction oil from fresh fruits bunches (FFB) serves as means of food among farmers, as the extracted oil is used to cook different kinds of food within their households. Such being the case, the locally extraction of oil from oil palm fruits can be poised to be essential as at the industrial level, oil palm fruits are used for the production of cooking oil, red oil, sweetened condensed milk, margarine, emulsifier, chocolate coatings, toffee, coffee whiteners, whipped toppings as cream, chocolate (Sarku, 2017). Again, production of cooking oil among indigenous rural farmers align with Angelucci (2019), who noted that in developing countries such as Malaysia and

Indonesia where oil palm production is intensified, oil extracted from fresh fruit bunches (FFB) and palm kernel (PKO) is used for wide variety of purposes, including food-related applications.

Further, from the local perspective, extraction of oil from FFB and serving as food, align with the principles outlined by the World Summit on Food Security (2009), which looked at food security as the consistent availability of adequate, safe, and nutritious food for all individuals to support a healthy and active life. This practice of extracting oil from FFB at the household level, extends to the community where food security involves the ability of community (as amalgamation of households) to withstand future disruptions or shortages in essential food supplies resulting from challenges like droughts, irregular food provision, and economic instability (Grainger, 2010).

Moreover, oil palm production serving as source of food among indigenous rural farmers can be poised to unravel the potential synergies with the broader sustainable development goals. That is, SDG-2, which aims for zero hunger by 2030 as outlined by the United Nations (UN, 2015). Specifically, subsection 2.3 emphasised the objective of doubling agricultural productivity and incomes of small-scale food producers, particularly women, indigenous peoples and family farmers. Further, within SDG-2, subsection 2.4 outlines the objective of ensuring sustainable food production systems and the adoption of resilient agricultural practices. These practices aim to increase productivity, preserve ecosystems, build resilience to climate change and extreme weather events, such as droughts and floods, and progressively enhance land and soil quality (UN, 2015).

Again, Malawi seeks to be highly industrialised with resources coming from agriculture sector (NPC, 2020). Looking at the multifaceted aspects of oil palm due to its industrial use, Malawi stands a better chance to benefit from the resource due to its availability. This will not only contribute to the economic viability of the agricultural sector but also wider-reaching implications for other industries that depend on oil palm as a raw material. The oil palm products include, among other, food items, cosmetics, and even other industrial applications (Sarku, 2017).

### **Oil Palm Production And Employment Opportunities**

Indigenous rural farmers have been involved in oil palm production as an occupation, through which they generate income. Whether oil palm production has contributed to job opportunities, from table 4, a cohort of 19.1 percent indicated lightly; 61 percent indicated moderate; while 19.9 percent indicated highly that oil palm production creates employment opportunities within their households. The implication of having 61 percent of respondents indicating that oil palm production moderately creates job opportunities among indigenous rural farmers suggests a perceived positive impact of the oil

palm production on employment generation. However, this perception may not fully capture the nuances of the employment dynamics associated with oil palm production, as elaborated by Khali one of the discussants from Kasewe village who said that *Aah... I cannot fully say that oil palm production offer solutions to job. But what happens is that, most families headed by women, hire youths to pluck fresh fruits bunches and they are paid for that. This is one time-off jobs which is done when the need arises.*

While there may be a perception that oil palm production creates employment opportunities, the nature of these opportunities may be temporary or sporadic. For instance, the hiring of youths by families, particularly those headed by women, to pluck fresh fruit bunches from oil palm trees may provide once-off or short-term employment rather than permanent, hence women playing a significant role in facilitating access to job opportunities for youths, potentially contributing to their economic empowerment (Fan & Rue, 2020).

Creation of jobs among indigenous rural farmers, though once-off, aligns with perspectives revealed by Balde et al. (2019). That is, Balde et al. (2019), observed that the establishment of oil palm plantations in rural areas of Guinea has created employment opportunities for local inhabitants, encompassing both permanent and seasonal positions. This has played a pivotal role in alleviating unemployment and poverty in rural regions.

Moreover, within the framework of sustainable development goals, oil palm production among these indigenous rural farmers can be aligned with SDG-8, which looks at promotion of decent work and economic growth. SDG-8 sub-section 8.5 emphasises the goal of achieving full and productive employment and decent work for all, including young people and individuals with disabilities, along with ensuring equal pay for work of equal value by 2030 (UN, 2015). Also, looking at Malawi 2063 Vision which seeks to create job opportunities through agriculture (Malawi National Planning Commission (NPC), 2020), oil palm production among these indigenous rural farmers can be poised to meet this vision. For example, in countries such as Indonesia and Ghana, the development of oil palm production which has been aligned with the nations' development agenda, offered potential pathways for job creation (Khatun et al., 2020; Purnomo et al., 2020).

Therefore, it can be argued that among indigenous rural farmers, oil palm production offers once-off job opportunity, particularly opportunity related to plucking of palm fruits from trees. Oil palm production has not only established a distinct agricultural culture but has also relatively become a livelihood cornerstone for these indigenous rural farmers' families, offering potential employment prospects, leading to income generation for and contributing significantly to the sustenance of their livelihoods.

## Oil Palm Production and Basic Needs

Oil palm production plays a vital role in meeting basic needs such as paying of school fees for wards and medical charges among indigenous rural farmers. From table 4, a significant cohort of 62.1 expounded upon a perception of oil palm's role as a moderate, albeit notable, contributor to the fulfilment of basic needs, a perspective that reflects complex interplay of oil palm within the socio-economic framework of their households. Further a cohort of 9.2 percent and 28.7 percent demonstrated that oil palm production has lightly and highly contributed in meeting basic needs, respectively. The implication of 62.1 percent of respondents indicating that oil palm production helping them in meeting basic needs, is that this agricultural activity plays significant role in addressing the economic needs of the households. In the course of the FGDs, Mbamba one of the male discussants from Kasewe village said that *when we sell cooking oil and nuts, we get money that help in buying basic needs for our families, such as clothes. The money we get helps to sustain our families*. Further, Nanthondo, one of the female discussants from Mwakaboko village said that *we produce mawese (cooking oil) which we sell in Mbeya and Kyera. Through selling we get little money to support ourselves*.

Further, taking independently as to whether farmers are able to pay medical bills and school fees for their wards from the proceeds of oil palm, a segment of 62.1 percent of respondents, disclosed that the proceeds generated from their involvement in oil palm serve as a means to defray their medical expenses. Also, 55.3 percent of the total respondents, elucidated that the financial gains derived from oil palm production facilitate the fulfilment of school fees obligations for their children. The implications of 61 percent and 55.3 percent of respondents indicating that oil palm production helps them to pay medical and educational charges, respectively, suggest that this agricultural activity serves as source of income to meet essential expenses related to healthcare and education. Moreover, in the course of interviews, Budula one of the male key informants said that *after selling cooking oil, the realised money help us to pay school fees for our wards. At times, we use the proceeds to pay for our medical expenses, when we go to private hospitals*.

Oil palm production as a means of meeting educational needs of indigenous rural farmers' wards align with the perspective of Rafi (2018), who noted that the progression of oil palm within rural settings of Malaysia and Indonesia has created a conducive environment for farmers and their offspring to access educational opportunities. Additionally, UNICEF (2016), underscored the influence of oil palm production growth on children's educational pursuits. In countries such as Malaysia and Indonesia, private enterprises frequently extend transportation provisions for the offspring of oil palm labourers, facilitating their access to educational institutions. Consequently, this support has correlated with heightened levels of secondary education attendance

among children compared to their rural counterparts in Indonesia (UNICEF, 2016).

Again, Benoit (2022), noted that in Burundi oil palm production among rural farmers is critical in alleviating poverty. For example, among rural farmers in Rumonge, Burundi, “oil palm production has contributed to poverty alleviation, with an estimated 5.3 percent of poverty reduction” (Benoit, 2022, p.170). Also, in Nigeria, among rural farmers of Ekiti state, Nigeria, oil palm production has been a major vocation, playing significant roles in poverty alleviation (Adebo et al., 2015).

Therefore, the ability of indigenous rural farmers to rely on income from oil palm production to cover medical and educational expenses demonstrates community resilience and self-reliance. By harnessing the economic opportunities provided by oil palm, households address their own needs, thereby strengthening community cohesion and sustainability.

### **Correlation Analysis of Acres of Land Cultivated and Benefits from Oil Palm Production**

Land among rural farmers remain a property cherished as it is through which people gain benefits from their agricultural activities. The researcher hypothesised that there is an interplay between acres of land cultivated and benefits farmers accrue from oil palm production. The anticipation was that the more acres of land cultivated, the more likelihood that farmers will gain benefits such food and increase job opportunities.

Table 5. Acres of land cultivated and benefits of oil palm production

		Benefits of oil palm production
Number of Acres	Pearson Correlation	-.195**
	Sig. (2-tailed)	.000
	N	477

From table 5, Pearson correlation coefficient value of -0.195 in the analysis of acres of land and benefits from oil palm production among indigenous rural farmers, was observed, indicating a moderate negative correlation. This suggests that as number of acres of land cultivated by farmers increase, there is a tendency for benefits from oil palm production to decrease. Also, the significance value (sig) of 0.000 was observed, revealing that this correlation is statistically significant. This observation contradicts the normal situation in as far as oil palm production is concerned. For instance, Syahza et al. (2015), argued that the increase of land cultivated for oil palm has the effect that can be seen from the increase in farmers’ incomes, hence increasing the purchasing power of the indigenous rural farmers, for both primary and secondary needs.

Nevertheless, while there is a statistically significant correlation between acres of land and benefits from oil palm production, the relatively weak strength of correlation suggests that other factors influence the realisation of benefits from this agricultural activity. In pursuit of such factors which contribute to moderate negative correlation, whilst in the course of focus group discussion, Gomba one of the discussants from Mwangulukulu villages said that *there is enough land in this area where farmers can cultivate more oil palm. However, due to market problems and lack of equipment that can promote our farming, benefits from this activity are relatively low.* Also, Nyauzedi one of the female key informants said that *one of the factors that derail our oil palm production is access to market. Markets are not within our reach as we sell our cooking oil in Tanzania.* Similarly, Nagama one of the discussants from Kasewe village highlighted the heightened effects of lack of markets by saying that *due to market problems, we rely on traders from Tanzania who come to buy oil. Traders determine the price, which makes us not realising much benefits from oil palm production. At times, because we don't have the capacity to break palm kernels, traders from Tanzania come with their machines, charge us to break the kernels, and in the end they also buy the crushed palm kernel nuts.*

Whether farmers have access to credit such that they can invest in oil palm production that will lead to increased benefits from this agricultural activity, Chiguwo one of the male key informants complained that *lack of credit and loans for us farmers is bringing back the cultivation of oil palm among farmers. If there can be intervention from the government or any other organisation that can help us with small loans, we can benefit a lot from oil palm.*

Arguably the testimonies given by discussants and key informants, highlight key challenges. For instance, accounts given by Gomba and Nyauzedi highlight two key challenges faced by indigenous rural farmers engaged in oil palm production, including lack of modern equipment and limited access to markets. The limited access to market cripples the realisation of benefits from this agricultural activity. The reference to selling cooking oil in Tanzania indicates a significant barrier to market access for these farmers, as they have to travel to another country to sell their produce. Again, the mention of using traditional methods for producing cooking oil and soap suggests a reliance on outdated techniques, which hinders efficiency and productivity in oil palm production. As argued by Ayompe et al. (2021), lack of investment oil palm production, including technology and market accessibility, has continuously rendered most of rural farmers not to realise benefits from their agricultural endeavour. These challenges, among others, not only impede the farmers' capacity to optimise their production, but also to commercialise their products effectively.

## CONCLUSIONS AND POLICY IMPLICATIONS

### Conclusion

The paper has presented and discussed the findings on the socio-economic benefits of oil palm production on the livelihood of rural farmers in Karonga District, Malawi. Oil palm is perceived to provide food in terms of cooking oil which is used in culinarians of rural farmers; offer once-off employment opportunities; and is poised to meet some of the social needs such as paying of school for the wards and health charges. Despite the perceived benefits of oil palm production among these rural farmers, limited access to market, investment in terms of credit, and use of traditional technologies as farmers lack modern equipment act as barriers to optimal realisation of benefits from this agricultural activity.

Looking at the significance of oil palm across the globe, the presence of oil palm in Malawi serves as a step upon which the country can tap from the resource for industrial and domestic use. As alluded to, extracts from oil palm is used in various aspects including cosmetics, coatings for different food items, including pharmaceutical products. Therefore, considerations such as investing, promoting, and rendering assistance to these farmers by relevant stakeholders within the agriculture sector of Malawi can help unlock full potential benefits from this lucrative crop.

### Recommendations

The Malawi National Agricultural Policy should expand its scope, by integrating oil palm as one of the important crop in the country, taking into account the multifaceted benefits of oil palm and its associated products including cooking oil and other industrial use. Again, given the significant role of oil palm production in enhancing food security and providing nutritional benefits among indigenous rural farmers in Karonga district, policymakers should prioritise support for small-scale oil palm farming through targeted interventions. These interventions could include providing access to modern agricultural equipment, improving local processing facilities, and establishing reliable market channels. Such support would not only amplify the nutritional benefits that oil palm production brings to local diets, as evidenced by the 59.1% of respondents reporting it as a primary food source, but also align with sustainable development goals aimed at reducing hunger and improving livelihoods. By strengthening the local oil palm production, policymakers can help ensure a more resilient and self-sufficient food system, fostering economic stability and better health outcomes for rural communities.



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