



Media, Family Farming and Sustainable Development in Mozambique

Moses Nangulu ^{1*}, Orlando Nipassa²

¹PhD student in Mass Communication, Jomo Kenyatta University of Agriculture and Technology, Kenya (*Author correspondent: mnangulu@kisiuniversity.ac.ke)

²Doutor em Sociologia do Desenvolvimento, Universidade Eduardo Mondlane, Moçambique.

Histórico do Artigo: Submetido em: 27/10/2023 – Revisado em: 01/11/2023 – Aceito em: 20/11/2023

ABSTRACT

This article examines how the media representation of family farming hardly inspires people to venture into it, but rather subtly glorifies urban lifestyles, thus reinforcing rural-urban migration. This unsustainable population growth in cities worsens rural and urban poverty levels, inequalities become more pronounced and the proliferation of informal settlements without accessible drinking water and deplorable sanitation invariably destroys the environment, threatening the sustainability of communities and their resources: sustainable development. Although family farming is the panacea for the triple global challenge of food insecurity, poverty and inequality, and for the sustainability of communities and their resources, the media representation expressed in words, concepts, images and advertisements barely portrays family farming in a positive way, even when they constitute the main source of income and employment for the majority of the population. In methodological terms, in addition to reviewing published works on media, family farming and sustainable development, this study carried out content analysis of print media messages to quantify, analyze and determine the presence of words, concepts, images and advertisements in their representation of family farming with regard to sustainable development. Purposive sampling was used for face-to-face interviews with key informants, especially reporters/journalists, to provide insight into why print media messages portraying family farming receive less coverage, while urban lifestyles receive more, which influences the people's perception of family farming versus urban lifestyles. The results showed that the print media not only underrepresents, but also misrepresents family farming to the detriment of sustainable development. Furthermore, media ownership patterns also influence their editorial policy, which has a negative impact on the media representation of family farming for sustainable development in rural and urban areas, as well as nationally and globally.

Keywords: print media; family farming; rural-urban migration; sustainable development

RESUMO

Este artigo examina como a representação mediática da agricultura familiar dificilmente inspira as pessoas a aventurarem-se nela, antes glorifica subtilmente os estilos de vida urbanos, reforçando assim a migração rural-urbana. Este crescimento populacional insustentável nas cidades agrava os níveis de pobreza rural e urbana, as desigualdades tornam-se mais pronunciadas e a proliferação de assentamentos informais sem água potável acessível e saneamento deplorável invariavelmente destrói o ambiente, ameaçando a sustentabilidade das comunidades e dos seus recursos: o desenvolvimento sustentável. Embora a agricultura familiar seja a panaceia para o triplo desafio global da insegurança alimentar, pobreza e desigualdade, e para a sustentabilidade das comunidades e dos seus recursos, a representação mediática expressa em palavras, conceitos, imagens e publicidade mal retrata a agricultura familiar de uma forma positiva, mesmo quando constituem a principal fonte de rendimento e emprego da maioria da população. Em termos metodológicos, além de revisar trabalhos publicados sobre mídia, agricultura familiar e desenvolvimento sustentável, este estudo realizou análise de conteúdo de mensagens da mídia impressa para quantificar, analisar e determinar a presença de palavras, conceitos, imagens e anúncios na sua representação da agricultura familiar, no que diz respeito ao desenvolvimento sustentável. A amostragem proposital foi usada para entrevistas presenciais com informantes-chave, especialmente repórteres/jornalistas, para fornecer informações sobre por que as mensagens da mídia impressa retratando a agricultura familiar recebem menos cobertura, enquanto os estilos de vida urbanos recebem mais, facto que influencia a percepção das pessoas sobre a agricultura familiar versus estilos de vida urbanos. Os resultados mostraram que a mídia impressa não apenas subrepresenta, mas também deturpa a imagem da agricultura familiar em detrimento do desenvolvimento sustentável. Além disso, os padrões de propriedade dos meios de comunicação social também influenciavam a sua política editorial, o que tem um impacto negativo na representação mediática da agricultura familiar para o desenvolvimento sustentável nas zonas rurais e urbanas, bem como a nível nacional e global.

Palavras-chave: mídia impressa; agricultura familiar; migração rural-urbana; desenvolvimento sustentável

1. Introduction

Family farming, which accounts for about two-thirds of the world's food and 90% of the world's farms, alleviates hunger, poverty and inequalities, increases food security, creates jobs and ensures sustainability of communities and their resources for a better environment. With more than 1.5 billion people around the world involved in family farming, it is the fulcrum on which to build a secure environment for sustainable development to confront the threefold present global challenges: food insecurity, the fight against poverty and inequalities, and ensure sustainability of communities and their resources.

However, the media portrayal of family farming expressed in words, concepts, images and advertisements among the youth negates its centrality in securing a safe environment for sustainable development both in rural and urban areas with studies indicating that young people prefer livelihoods other than farming (Bezu & Holden, 2014; Burnet, et. al 2017, Mussa, (2020), Elias et al., 2018; LaRue et al., 2021). Cognizant of the fact that there are different reasons for completely or partially avoiding farming; inability to access land (Bezu & Holden, 2014), pursuit of diverse strategies of livelihood of which family farming could be part of them (LaRue et al., 2021), the youth find agriculture as unattractive even as a fall back option (Burnet, et. al. 2017).

These reasons notwithstanding, the continued media representation of family farming, expressed in words, concepts, images and advertisements in a negative way among the youth, not only subtly glorifies urban lifestyles, but also fuels rural-urban migration. In effect, this subverts the fight against food insecurity, rural and urban poverty, and inequalities, and guaranteeing the sustainability of communities and their resources in safe environments for sustainable development both rural and urban areas as well as national and global levels.

This article examines the media representation of family farming - which accounts for about 95% of Mozambique's agricultural production across around 3.2 million small holder farms - expressed in words, concepts, images and advertisements among the youth in ensuring safe environments for sustainable development, both rural and urban areas. Besides, agriculture remains the mainstay of country's economy accounting for approximately 79% of total employment of which women constitute 61% of the agricultural labour force, (CIAT; World Bank. 2017).

Despite its importance, the media representation of family farming, expressed in words, concepts, images and advertisements, not only dignifies the urban lifestyle to the detriment of rural life, but also aggravates rural-urban migration that threatens safe environments. This frustrates the fight against food insecurity, poverty and inequalities, and guaranteeing the sustainability of communities and their resources in safe environments for sustainable development.

The article is organized into four sections. In the first part, the centrality of family farming in mitigating food insecurity, poverty and inequality and the sustainability of communities and their resources to safeguard safe environments for sustainable development is discussed in detail. Secondly, notwithstanding the media representation of family farming expressed in words, concepts, images and advertisements among youth, the significance of these small holder farms for safe environments towards sustainable development is explored in the context of development media theory. Next, is the methodological approach to data collection, analysis and interpretation. Finally, the core results are presented and discussed.

1.1. Family Farming and Sustainability of Communities and their Resources

Family farming has gained global attention ever since the 66th Session of the United Nations General Assembly designated 2014 as the "International Year of Family Farming - (IYFF)." This move encouraged member states to undertake activities within their respective national development programmes in support of the IFTT which in doing so, family farming became the focal point of agricultural, environmental and social policies in national agendas for sustainable development, (FAO & IFAD. 2019).

In view of the successes of the IYFF+10 campaign, the UN General Assembly proclaimed 2019-2028 as the UN Decade of Family Farming (UNDIFF) in its 72nd Session to fast-track the achievement of UN's

Sustainable Development Goals (SDGs) in an inclusive, collaborative and coherent way. It was envisaged that the ten-year UN period focusing on family farming and all family-based production models would significantly contribute to a world free from hunger, poverty and pronounced inequalities, food insecurity and ensure the sustainability of communities and their resources for safe environments where natural resources are managed sustainably and where no one is left behind - corresponding to the main commitments of the 2030 Agenda.

Family farming is synonymous with peasant agriculture emphasizing rurality, or subsistence agriculture and self-consumption. Similarly, smallholder is mostly used in English-speaking countries to refer to family farming which CIRAD, a French agricultural research and international cooperation organization for the sustainable development of Tropical and Mediterranean regions, describes as a family farm in which only family members work full time, part of the production is consumed by the family itself and capital is inseparable from the family assets.

However, FAO (2015) defines family farming as “a means of organizing agricultural, forestry fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family capital and labour - both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions.” This definition resonates with CIRAD’s one in terms of provision of labour, consumption and the capital provided including the liabilities incurred.

Family farming is as old as the family unit itself, though, its concept differs across regions and food production systems. Nevertheless, their role as the principal source of food production for large parts of the global population makes them an intrinsic part of any conversation about rural and urban development and sustainability (McDonagh et al., 2017). It is a long-lasting cultural and historical phenomenon in the world with comparative global studies demonstrating that, despite deep-seated agricultural change, ‘family farming remains of totemic importance.’ (Lobley et al., 2010). Farming, according to Potter & Lobley (1996), is considered ‘the most hereditary of professions’ (p. 286) and in many parts of the world farmers can trace their family’s occupancy of the farm back three generations or more (Lobley et al., 2010).

Family farming is one of the most widespread forms of agriculture in the world accounting for 90% of the world’s farms and producing about 2/3 of the world’s food (Graeb et al., 2016). The Food and Agriculture Organization of the UN (FAO) recognizes that of the 570 million farms worldwide, 90% are small-scale and thus any changes in the circumstances of these small-scale farmers impacts highly on the rural livelihoods and sustainability of the communities and their resources for safe environments in which they operate. Thus, family farming plays a critical role in overcoming the triple global challenge of food insecurity, the fight against poverty and inequality, and the sustainability of communities and their resources for safe environments for sustainable development.

Belieres et. al (2015) argued that family farming makes an overwhelming contribution to the supply of food and non-food products compared to other forms of family business and entrepreneurial production. Furthermore, it has the capacity to face increasing demand, related to both population growth and trends in food consumption both in rural and urban areas. Although, the majority (2/3) of food insecure people are farmers or agricultural workers, family farmers have the unique potential to alleviate food insecurity based on their communities’ understanding of local ecologies in offering well contextualized, comprehensive and long-term solutions to food security, (CIRAD 2018). Consequently, other than alleviating food insecurity and offering solutions in their local ecologies, small holder farms combat poverty and inequality and guarantee the sustainability of communities and their resources towards safe environments for sustainable development.

FAO (2012b) points out that agricultural growth is extremely effective in reducing hunger, poverty and inequality, especially by “mobilising” smallholder farmers securing the sustainability of communities and their resources and environments. Therefore, despite a high level of agricultural imports, family farms make significant contribution to supplying cities (Bosc & Hanak Freud, 1995) with both in basic food products (cereals and tubers), and in food diversification products, such as vegetables, milk, fruit and oilseeds, (Belieres et. al (2015). Essentially, not only do family farms improve food security but also provide

a promising scope for action, especially in terms of the overall productivity of their systems and improvement in the agrifood models they are part of. Without doubt, family farming remains critical to food security, addressing poverty and inequality, and the sustainability of communities and their resources for safe environments for sustainable development.

FAO and IFAD (2019) point out that family farming is the predominant form of food and agricultural production in both developed and developing countries, producing over 80 percent of the world's food in value terms. These family farms - whose location and intensity of production essentially do not depend on market signals - pay more attention to the environmental implications of their activities than corporate farms (Belieres et. al (2015). Unmistakably, small holder farms guarantee global food security, tackles poverty and inequality, and secures the sustainability of communities and their resources for safe environments for sustainable development. Drawing the connection between agriculture and sustainability, the Cork Declaration (European Commission 1996) stressed that agriculture is and must remain a major interface between people and the environment, an approach which engenders multidisciplinary and multisectoral applications, with a clear territorial dimension which encourages more environmentally friendly farming practices in safe environments for sustainable development.

In Latin America, some 17 million peasant farmer production units occupy almost 60.5 million hectares, i.e. 34.5% of total farmland, with average farm sizes of approximately 1.8 hectares, producing 51% of the corn 77% of beans, and 61% of potatoes for domestic consumption (Altieri, 2008). While in Africa, family farms account for roughly 80% of holdings, with an average of less than 2 ha of farmland and the most rudimentary equipment, generally manual, (FAO. 2010a) & (2012b).

These farming activities of rural households provide the bedrock of the food system in sub-Saharan Africa (FAO et al., 2020), and are key to achieving the Sustainable Development Goals 1 - Zero Poverty and 2 - Zero Hunger, (United Nations, 2015; Giller et al., 2021). In addressing hunger, poverty and inequality, family farming also provides food security and underwrite the sustainability of communities and their resources for safe environments for sustainable development. Most studies suggest that developing countries with mass poverty, of 30% or more of their people below a dollar a day, show that faster growth of agricultural income, output and productivity are extremely helpful, and usually necessary, to start a sustainable process of mass poverty reduction. Family farming organisations, particularly in southern countries (producers' organisations, rural associations, farmers' unions) and their allies (universities, national and international NGOs) frequently argue that family farming guarantees a responsible management of natural resources, since the conservation of the latter ensures the sustainability of the production unit: the environment for sustainable development, (Belieres et. al (2015).

Poulton et al., (2010) and Valdés & Foster, (2010) equally show the correlation between poverty and small-scale farms and argue that these farms address issues of poverty in very real and practical ways in Africa and Latin America. There is a consensus that small-scale agriculture, is, and will in the future be, critical to the well-being of the rural and urban economy and, in many areas, represent the main option for economic activity. In that the role of small-scale farms should be championed and arguments in favor of 'policies to support the economic development of small farmers' as it has been 'proven to be a particularly successful strategy to reduce rural poverty,' (Birner & Resnick, 2010). The importance of the small-scale farm is central to 'addressing most, if not all, of the underlying causes of deteriorating agricultural productivity as well as the conservation of natural soil and water resources while saving the climate,' (Ho 2013). Irrefutably, not only does family farming improve food security, combat poverty and inequality but also safeguard the sustainability of communities and their resources in safe environments for sustainable development.

Small-scale farmers are mostly found in developing countries with consequent high levels of poverty, food insecurity and limited access to markets, services and investment opportunities. Thus, arguments should continually be made for investment in small-scale farming through developments in technology, access to knowledge and education and greater access to markets to contextualize the importance of small-scale farms to overcome the broader challenges of addressing hunger and extreme poverty for sustainable development. This echoes Ciolos (2010), former Commissioner for Agriculture, describing how the EU 'strongly believes

that agriculture that is environmentally, economically and socially sustainable can make a vital contribution in response to the most urgent challenges: reducing poverty and ensuring food security.’

The multifunctionality of family farming allows them to produce most of the world’s food, in particular the food consumed by the rural and urban poor; they preserve biodiversity, they manage natural resources and ecosystems, they preserve and share traditional knowledge, they contribute to the resilience of people and ecosystems, and when empowered, they add economic value and foster inclusive economic growth, (FAO and IFAD. 2019).

Small-scale farms are the catalysts of invigorating the rural economy, in a local way, and more importantly be seen as a key factor in addressing food security in a global sense, (McDonagh et al., 2017). Furthermore, small holder farms equally address issues of climate change in terms of habitats and biodiversity for, ‘these farms are highly productive because they are typically biodiverse systems that integrate multiple crops and livestock,’ which maximise synergetic relationships while minimizing waste, as they turn waste such as farmyard manure into fertilizer, (Ho 2013).

In essence, family farming epitomizes the circular economy of production, consumption and commodification of family produce for food security, the fight against hunger, poverty and inequality, as well as securing the sustainability of the symbiotic coexistence of communities and their resources for safe environments towards sustainable development both in rural and urban areas and at national and global levels.

1.2. Media, Family Farming, and the Youth

The World Commission on Environment and Development defines sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’ This definition embodies the present-day challenge confronting family farming of not only striving to feed the ever growing rural and urban population, alleviating poverty, securing employment and livelihoods of the youth and their well-being but also guaranteeing their future and sustainability of resources. This paper espouses the African Youth Charter’s definition of the youth: ‘people between the ages of 15 and 35 years’ (African Union 2006), cognizant of the fact the definition for ‘the youth’ depends on context and country.

Although the dominant global development approach and the youth included perceive small-scale farms as unproductive and inefficient, these farms are the undisputed producers of quality food and the harbingers of local traditions and rural lifestyles,’ (Mincyte, 2011). Recent figures show that ‘of the developing world’s three billion rural people, over two-thirds reside on small farms of less than two hectares (and) there are nearly 500 million small farms,’ (Hazell et al., 2010).

It is a recognized fact that small-scale farms provide a livelihood for two billion people around the world and are the backbone of many developing countries as they lift people, and especially young people, out of poverty and combat inequalities in the provision of income and the fight against hunger through food production. The wisdom of the youth who enter family farming is the main driver for nurturing the dynamic economy of rural areas and the competitiveness of agriculture. However, those interested in family farming are increasingly confronted by multiple structural and institutional barriers: limited access to land, insufficient access to knowledge, information and education, financial services, green jobs and markets as well as limited involvement in policy dialogue. (FAO and IFAD. 2019).

Rural-urban migration is a double-edged sword that not only depletes rural areas of youth and their labour, but also overstretches urban areas with the same youth, to the detriment of safe environments that subvert sustainable development. Generally, people move from one geographical region to another either on temporary or permanent basis, (Adewale, 2005). Migration is a decision taken in the context of personal needs, livelihood challenges and opportunities, stress, urgency and uncertainty, based on incomplete information about migration prospects and possible outcomes of alternative behavioural options, (Czaika & Reinprecht, 2022).

The reason for youth migration to urban areas based on incomplete information and their prospects and possible outcomes in the same urban areas is of interest to this study. In the sense that the media representation of family farming, expressed negatively in words, concepts, images and advertisements, but which subtly glorifies urban lifestyles, fuels this rural-urban migration. Consequently, this negates the centrality of family farming in ensuring a safe environment for sustainable development, both in rural and urban areas.

As a universal challenge, the migration of the youth to urban areas increases pressure on the government's ability to keep up with the growth of the urban population. This, in effect, overwhelms cities' employment opportunities, leading to urban unemployment, poverty, stark inequalities and crime, the proliferation of informal settlements without accessible drinking water, and deplorable sanitation that invariably destroys the environment, threatening the sustainability of communities and their resources for sustainable development. Furthermore, the increase in urban population frustrates the provision of necessary social services and amenities, e.g. water, education, health, affordable housing, sanitation and waste management that present environmental challenges to achieving sustainable development.

The migration of the youth from rural areas leads to human and environmental poverty, reduced quality of life and the underutilized and untapped wealth of human resources as well as rapid deterioration of the rural economy leading to chronic poverty and food insecurity (Amrevurayire & Ojeh, 2016). When rural areas are depleted of their most valuable human resources: youth, agricultural production, the mainstay of the rural economy, is critically affected because the rural population is left with only the elderly, women and children who can hardly engage in productive family farming at the expense of a stable environment and sustainable development. This weakening of the rural economy not only intensifies food insecurity, hunger, poverty, inequalities, and crime, but also threatens the sustainability of communities and their resources for safe environments and sustainable development.

This notwithstanding, a well-coordinated multisectoral response to these complex challenges facing the youth is more urgent than ever. The youth's access to knowledge, information, and education through the media representation of family farming expressed in words, concepts, images and advertisements are among the main prerequisites for portraying and maintaining family farming attractive, viable and sustainable for generational renewal of family farming. This would attract and retain young people on family farms and in rural communities to improve food security, combat poverty and inequality, and safeguard the sustainability of communities and their resources in safe environments for sustainable development. Thus, the current challenge is the media representation of family farming as positive, expressed in words, concepts, images, and advertisements, to attract, retain and absorb youth in family farming and guarantee food security, combat poverty and inequalities and ensure sustainability of family farming, communities, and their resources in safe environments for sustainable development.

Furthermore, the UN Decade of Family Farming (2019-2028) envisions a world where diverse, healthy, and sustainable food and agricultural systems flourish, where resilient rural and urban communities enjoy a high quality of life in dignity, equity, free from hunger and poverty. Moreover, the Global Action Plan of the UN Decade of Family Farming under Pillar 2, affirms to support the youth and ensure the generational sustainability of family farming through accessing land, other natural resources, information, education, infrastructure and financial services, markets and policymaking processes related to farming for sustainable development.

Although there are some studies that indicate that the youth view agriculture as a sector of 'last resort and low productivity,' youth snubbing family farming and choosing off-farm employment instead in urban areas, (Filmer & Fox, 2014; Irungu et al., 2015; Kadzamira et al., 2015), there are equally studies that demonstrate youth's increased interest/participation/perceptions in agriculture (Bezu & Holden, 2014; Magagula & Tsvakirai, 2020; Proctor & Lucchesi, 2012). Thus, the interest and entry of youth into family farming bequeaths these family farms with vibrant skills, networks, capital, technologies, marketing, and management practices for innovation in the farming, fishing, and forestry to not only guarantee the sustainability of these innovations but also consolidate and match new solutions with the local, natural environment and socio-economic conditions for sustainable development.

The European Commission, in its report on Sustainable Agriculture for the Future We Want (2012), recognizes that the 500 million smallholdings (less than 2 ha) that characterize much of the landscape of Africa and Asia are a key source of income and employment (65% of jobs) and are ultimately part of the solution that can ‘help make poverty history.’ In effect, fitting media representation of family farms expressed in words, concepts, images, and advertisements would not only boost food production but also support the food needs of a large percentage of the world’s population (both rural and urban) and in particular provide employment for the youth for the sustainability of communities and their resources in safe environments for sustainable development.

The media remain useful platforms for disseminating knowledge, information and education to small-scale farms which are not static entities but also vulnerable to multiple global factors that include ‘demographics, economic development and urbanization, dynamic changes taking place in local and global agrifood markets, weather and climate change, land access and scale, technical innovation and access to technology, and changing aspirations,’ (Proctor & Lucchesi, 2012). To this end, some studies, (Ben-Enukora et al., 2023; Van Campenhout et al., 2017; Zondo & Ndoro, 2023), confirm that when small holder farms are exposed to various forms of media platforms, these farmers leverage on these media platforms to increase their knowledge, information and education and in doing so, these farms guarantee food security, increase incomes and livelihoods and alleviate rural and urban poverty for sustainable development. This equally confirms that radio and television act as intermediaries for farmers’ access to knowledge about new farming technologies and their applications (Iman, 2020) and (Das et al., 2022) as part of their public service responsibility, (Acholonu et. al (2015).

The appropriate media portrayal of family farming expressed in words, concepts, images and advertisements would empower and present opportunities to rural and urban youth in terms of communication, awareness-raising campaigns and public engagement. Besides, these media depiction of family farming would provide the youth and countries the prospect of simultaneously galvanizing the populace towards addressing poverty (SDG 1) and hunger and food security (SDG 2), reduce inequality (SDG 10) and strive for sustainable communities and cities (SDG 11) as well as offer better living conditions and opportunities which would reduce internal and international migration, as well as mitigate conflicts (SDG 16) in safe environments for sustainable development.

Therefore, the positive representation of family farming in the media, expressed in words, concepts, images and advertisements, not only captures aspiring and young farmers, but also has the potential to reshape society’s perception of family farming as a dynamic sector with unlimited potential to organize and bring together youth and improve their capacities for collective action for the sustainability of communities and their resources for safe environments and sustainable development.

1.3. Theoretical Framework

Granted that family farming has different contexts and interpretations according to location, culture, development and other social factors (Lamarche 1993), globally, more than two-thirds of the workforce has its main single income source in agriculture with rural poor deriving some percentage of their income from nonfarm work but agriculture is by far the main income source. Besides, studies show that 8-15 per cent of workers classified as urban have agriculture as the main income source (Lipton & Lipton, 2006).

The media representation of family farming, in some contexts, demonstrates recognition, well developed and part of the market economy, on the contrary, quite often it remains archaic and subsistent, incentive-less and the image of “family farmer” is that of the disadvantaged and underestimated. Yet, the global agricultural population standing at about 2.6 billion people, i.e. almost 40% of the world’s population which includes about 1.3 billion active workers, make agriculture the first industry in the world, far ahead of all the other industry and service sectors, which are much more segmented and specific. (FAO and IFAD. 2019).

This study contextualizes how invaluable family farms are in underwriting the incomes and livelihood of the youth population and alleviating the rural and urban poverty and inequality both at national and global

levels. Thus, the media depiction of small holder farms expressed in words, concepts, images and advertisements should reckon with the fact these farms account for the overwhelming majority of farms in the world, with approximately 500 million agricultural holdings creating the most employment and absorbing the bulk of the 350 million new agricultural workers over the years majority of whom are the youth.

Therefore, this study argues that media depiction of small holder farms expressed in words, concepts, images, and advertisements should be anchored on the Development Media theory. This is one of the normative theories of mass communication, initiated by (Siebert et al., 1963) in *Four Theories of the Press* conscious of the pivotal role of family farms in the fight against food insecurity, poverty and inequalities, providing incomes and livelihoods and guaranteeing the sustainability of communities and their resources in safe environments for sustainable development.

McQuail, (1983) expounded further on this theory regarding how countries are classified according to their political, economic, social and communication systems underscoring that one of the key functions of mass communication in any country is to provide an avenue for social interaction and participation. Essentially, the mass media system of any country desirous of safe environments and sustainable development, therefore, should provide a forum for collective engagement and the weighing of various options to arrive at well-considered decisions.

Fundamentally, to serve the ends of sustainable development, the mass media should provide ‘a market place for the exchange of comment and criticism regarding public affairs,’ (Ansah, 1988). Rogers (1978) defines development as ‘a widely participatory process of social change in a society, intended to bring about both social and material advancement (including greater equality, freedom, and other valued qualities) for most of the people through their gaining greater control over their environment. Kwame Nkrumah (1965) observes that the ‘newspaper as a collective organizer, a collective instrument of mobilization and a collective educator,’ which is in tandem with the tenets of Development Media theory, (McQuail, 1987) that media should make a positive contribution of the national development process echoed by (Schramm, 1973) in advancing the critical role of mass media for national development especially the role of information in the developing countries.

Essentially, the media representation of family farming expressed in words, concepts, images and advertisements informed by the Development Media theory would undoubtedly reinforce the fight against food insecurity, poverty and inequalities, providing income and means of subsistence and ensuring the sustainability of communities. and its resources in safe environments for sustainable development.

1.4. Methodological Approach

In terms of methodology, other than carrying out literature reviews of published works on media, family farming and sustainable development, the study used quantitative and qualitative content analysis of media messages to quantify, analyze and determine the presence of words, concepts, images and advertisements that portray family farming among the youth. Whereas quantitative measures provide insight, it is important to also analyze the text in its own context to retain meaning (Miles & Huberman 1994). Besides, the extraction of meaning from inference on purely numerical analysis, but also the context and richness found in textual data equally augment meaning with examples and details (Neal, 2012).

Cognizant of the sources, situations, time periods and intertextualities, the study used a purposive sampling strategy for the comparative content analysis of media messages depicting family farming with regard to the youth in jornal *noticias* and *opais* of which the time period under review for this study was May 20, 2023, and July 20, 2023. It is noteworthy that newspapers have a high “pass along rate” which increases the readership of each newspaper copy by an average of 15 readers thus a convenient way to communicate critical information dealing with subjects such as HIV/AIDS, and for this study: print media representation of family farming with regard to the youth for sustainable development, (Opanga, 2003). Jornal *noticias*, state-owned, is the leading newspaper in Mozambique with a circulation rate of about 13,000. Besides, the

editorial policy of this newspaper leans towards the government policy. On the other hand, jornal *opais* is privately owned with subscription rate of about 3,000.

A manual search was conducted under the subject term “family farming/agriculture or small holder farms.” This translated to a total of 124 newspaper articles published both in the two journals: *noticias* and *opais* between the two months (May 20, 2023, and July 20, 2023) selected for the study being the sample for the study.

In conceptualizing the coding category, the categorization approaches from (Clogston, 1990) and (Haller, (1995) were adopted and contextualized for this study on media representation of family farming expressed in words, concepts, images and advertisements through inductive and deductive methods. Whereas Clogston (1990) and (Haller, (1995) modeled their headings under traditional and progressive frames, this study adopted the negative for the traditional frame while positive for the progressive one and where the depiction was neither negative nor positive, then the neutral category was created, (see. Tables 1, 2 & 3).

Table 1: Presence of pictures

| Pictures | Positive (progressive) | Neutral | Negative (traditional) |
|--|------------------------|---------|------------------------|
| o Picture of Justino Guambe on his rice farm | | | negative |
| o Photo of four poorly dressed women farmers with their hoes cultivating their land | | | negative |
| o Picture of Rukssana Saide, the MD of Dream Agribusiness and the packaged farm produce: beans, soya and maize | | neutral | |
| o A photo of rice crop | | neutral | |
| o A photo of crop of cabbage and lettuce | | neutral | |
| o A picture of seedlings of cashew nuts | | neutral | |
| o Photos of Elsa Maria Slavador and the processed products from cassava; drink, samosa and rissole | positive | | |
| o A photo of shabbily dressed women farmers on their farms | | | negative |

Table 2: Presence of words

| Presence of words | Positive (progressive) | Neutral | Negative (traditional) |
|---|---|---------------------------------------|--|
| exceeded, existing opportunities, exceed, create livelihoods among the rural population, relaunch, asking for support, intensify, resumption, get mechanized, food security depends on productivity | exceeded, existing, opportunities, exceed | Food security depends on productivity | relaunch, asking for support, intensify, resumption, get mechanized, create livelihoods among the rural population |

Table 3: Presence of concepts

| Concepts | Positive (progressive) | Neutral | Negative (traditional) |
|---|------------------------|---------|------------------------|
| o Agricultural production of different crops has exceeded their goal among small holder farms due to increased service by extension officers | positive | | |
| o Farmers/producers in the districts of Massangena Chicualacuala and Mapai in northern Gaza province who have just received diverse seeds and inputs to relaunch agricultural production | | | negative |
| o A rice farmer asking for support for farm inputs and mechanization to plant his rice crop after he came back to family farming after his stay in South Africa. | | | negative |
| o Two young people have formed small company dedicated to agricultural activities motivated by existing opportunities in the area and by the need to contribute to the stability of the local economy | positive | | |

| | | | |
|--|----------|---------|----------|
| o Massive mechanization in the planting and harvesting of rice have helped to exceed goals of rice production in the district of Mecanhelas in Niassa province. | positive | | |
| o A speech by PS in the Ministry of Agriculture and Rural Development who says the food security depends on productivity. | | neutral | |
| o A campaign to intensify the growing and production of cashew nuts in Mapai in Gaza province which entail giving 100 seedings per family to provide a source of livelihood to these families. | | | negative |
| o A PhD student's project to transform the cassava for value chain products e.g. to create livelihoods among the rural population. | positive | | |
| o The resumption of agricultural production in Boane 4 months later when it was affected by floods that destroyed 9 thousand hectares and all the production that was in the machambas. | | | negative |
| o The small holder farmers get mechanized ways of tilling their land | | | negative |

1.5. Results and Discussion

In view of the period under review for this study, 124 news articles were analyzed for the study. It was found that, out of a total of 124, only 10 news stories about family farming regarding the media representation of family farming expressed in words, concepts, images and advertisements among the youth were published during the period of this study, which is, 20 May 2023 and July 20, 2023. This media underrepresentation of family farming, expressed in words, concepts, images and advertisements among the youth, represents only around 8% of media coverage on family farming. But the most surprising thing is that Jornal *Opais* published only one news article about family farming during this period.

Furthermore, it was found out that a majority of the words, concepts and images (54%, n=28) used the negative (traditional) representation, 29% (n=28) used the positive (progressive) representation and 17% (n=28) was categorized as neutral because their choice of words (i.e. tone), concepts and pictures was simply plain. Thus, the media misrepresentation expressed in words, concepts and images of family farming was mostly negative, with images of the family farmer portrayed as disadvantaged, in difficulty and disheveled, for example, female farmers were poorly dressed while the male farmer was both a retiree and 'returnee,' from South Africa and over the age of 60 hardly in the age bracket of the youth. It is noteworthy that there were no advertisements about and/or for family farming with regard to media depiction of family farming among the youth in jornal *noticias* and *opais* under this time period under study.

The study also used purposive sampling the for face-to-face interviews with key informants, especially reporters/journalists from jornal *noticias* and *opais* to provide insight into why print media messages portraying family farming expressed in words, concepts, images and advertisements among the youth receive less coverage, while urban lifestyles receive more, which influences the youth's perception of family farming versus urban lifestyles under the time period for this study i.e. May 20, 2023 and July 20, 2023.

The journalist in charge of *Society* segment from jornal *noticias* provided insights into the factors that influence their news selection and publication on family farming among the youth, namely: inaccessibility of sources of information among family farmers, financial constraints in covering stories on family farming, seasonal reporting i.e. stories on family farming conform with seasons of farming, prize-driven journalism i.e. journalists write articles to win awards yet family farming doesn't feature anywhere, majority of readers are from the city/cities, when the government finances the young people, it is always away from family farming and lastly, the editorial policy of *noticias* is pro-government i.e. reflects and supports the position of the government which, in turn, enjoy government advertising.

On the other hand, the journalist in charge of the *Society* section from jornal *opais*, (an entirely online and by subscription), expounded on the factors that influence their news selection and publication on family farming with regard to the youth, namely: there are more journalists in the TV section, who cover and report about small holder farms, than print since the former has more impact than the latter i.e. small holder farmers

don't read, majority of readers are from the city/cities particularly executives who are decision makers, human resource and financial constraints in covering stories on family farming, and lastly, this jornal being privately-owned, journalism and media is managed as a business entity on the profit and loss model. This means that news selection and publication on family farming with regard to the youth hardly get the desired attention since small holder farmers can barely buy, subscribe, make policy decisions nor bring in the much sought-after advertising revenue by the media house.

This study examined how media represents family farming expressed in words, concepts, images and advertisements in the print media in jornal *noticias* and *opais*, of Mozambique under the time period of May 20, 2023 and July 20, 2023. The contribution of this study to the body of knowledge and issues of small holder farms in Mozambique and beyond cannot be gainsaid.

The results showed that the print media not only underrepresents, but also misrepresents family farming which hardly inspires the youth to venture into the same but rather subtly glorifies urban lifestyles. This, in effect, reinforces rural-urban migration that worsens rural and urban poverty levels, increases inequalities and the proliferation of informal settlements without accessible drinking water and deplorable sanitation, damaging the environment, threatening the sustainability of communities and their resources: sustainable development.

The findings also show that besides the media underrepresentation of family farming, the print media equally employs the more negative (traditional) representation as opposed to positive (progressive) representation during the period of the study. While the media might apply a negative (traditional) representation of family farming to highlight the plight of small holder farmers, in the long run it is counterproductive as it does little to inspire young people to venture into family farming, but subtly glorifies urban styles to the detriment of the rural lifestyle.

Besides, the ownership patterns of media equally influence the editorial policy of the respective jornals which impacts negatively on their media representation of family farming in the print media among the youth. For example, whereas the editorial policy of *noticias* is pro-government which reflects and supports the position of the government, they, in turn, enjoy government advertising which to an extent influences the news selection and publication on family farming. On the contrary, Jornal *opais* is focused on the profit and loss model to increase subscription and advertising revenue which in effect gives little attention to family farming in their coverage.

However, regardless of their ownership patterns, media in Mozambique ought to not only highlight challenges of small holder farmers but also give more space for coverage and appropriate representation of the same. This will catalyze the youth into venturing into family farming to buttress the proverbial goose that lays the golden egg in addressing the present world's triple challenge of food insecurity, poverty and inequality, the sustainability of communities and their resources in safe environments for sustainable development.

1.6. Conclusions

The continued underrepresentation and misrepresentation of family farming in the media - the bulwark against food insecurity, poverty and inequality, and the sustainability of communities and their resources - only strengthens rural-urban migration. This exacerbates rural and urban poverty levels, increases inequalities and the proliferation of informal settlements without accessible drinking water and deplorable sanitation, destroying the environment, threatening the sustainability of communities and their resources: sustainable development.

The media must play its influential and critical role in raising awareness and disseminating information and knowledge about family farming in words, concepts, images and advertisements in an equitable and positive (progressive) way to incentivize the youth into the same. Besides, regardless of media ownership patterns in Mozambique and beyond, journalists and their respective media houses must provide equitable, accurate and balanced coverage and representation of family farming among the youth. This would go a long way towards addressing the current triple global challenge of food insecurity, poverty and

inequality, the sustainability of communities and their resources for safe environments and sustainable development, both in rural and urban areas and nationally and globally.

1.7. Acknowledgments

Special thanks to the AMAS Project for Intra-Africa Academic Mobility Scheme for the award of the 6-month Credit Seeking Scholarship to Moses Nangulu in PhD in Development and Society at Eduardo Mondlane University, the Department of Sociology of the Faculty of Arts and Social Sciences, Eduardo Mondlane University, Maputo - Mozambique, for the time, space and academic guidance, the Department of Communication, Media and Information Science and the School of Information and Science and Technology, Kisii University, Kisii - Kenya for granting study leave to Moses Nangulu to participate in the AMAS Project program and Mr. Democrito Adolfo da Natividade Manyissa of Central Library Brazao Mazula, Eduardo Mondlane University for his interpretation and translation work during the content analysis phase of this research.

References

- 2015 | FAO / *Food and Agriculture Organization of the United Nations*. (n.d.). Retrieved July 17, 2023, from <https://www-fao-org.translate.goog/news/archive/news-by-date/2015/pt/? x tr sl=pt& x tr tl=en& x tr hl=en& x tr pto=sc>
- Acholonu J., Igbozurike, A. J. C., & Agwu, E. A. (2015). “*Selling for Survival: Effect of News Commercialization on Public Service Broadcasting in Nigeria*” in I. S. Ndolo and S. Udeze (Eds) *International Journal of Media, Security and Development*, 2(1), 32-40.
- Adewale, J. G. (2005). Socio-Economic Factors Associated with Urban-Rural Migration in Nigeria: A Case Study of Oyo State, Nigeria. *Journal of Human Ecology*, 17(1), 13–16. <https://doi.org/10.1080/09709274.2005.11905752>
- Amrevurayire, E. O., & Ojeh, V. N. (2016). *CONSEQUENCES OF RURAL-URBAN MIGRATION ON THE SOURCE REGION OF UGHIEVWEN CLAN DELTA STATE NIGERIA*. 7(3).
- Ansah, P. A. V. (n.d.). *In Search of a Rolefor the African Media in the Democratic Process*.
- Ben-Enukora, C. A., Ejem, A. A., Aremu, C. O., Adeyeye, B. K., & Oloruntoba, A. F. (2023). Access to Dry Season Agricultural Content in the Broadcast Media and Dry Season Irrigation Farming among Smallholder Farmers in Nigeria. *Agriculture*, 13(6), 1139. <https://doi.org/10.3390/agriculture13061139>
- Bezu, S., & Holden, S. (2014). Are Rural Youth in Ethiopia Abandoning Agriculture? *World Development*, 64, 259–272. <https://doi.org/10.1016/j.worlddev.2014.06.013>
- Birner, R., & Resnick, D. (2010). The Political Economy of Policies for Smallholder Agriculture. *World Development*, 38(10), 1442–1452. <https://doi.org/10.1016/j.worlddev.2010.06.001>
- Bosc, P.-M., & Hanak Freud, E. (1995). *Agricultural research and innovation in tropical Africa*. CIRAD-SAR.
- Burnet, R., Deacon, B., and Mirzoyants, A. 2017. #Shujaaz360: *It’s All About The Money 2017*. - Google Search. (n.d.). Retrieved July 17, 2023.
- CIAT; World Bank. 2017. *Climate-Smart Agriculture in Mozambique. CSA Country Profiles for Africa Series. International Center for Tropical Agriculture (CIAT); World Bank. Washington, D.C. 25 p.* - Google Search. (n.d.). Retrieved July 17, 2023.
- Clogston, J. S. (1990). *Disability coverage in 16 newspapers*. Avocado Press.

- Czaika, M., & Reinprecht, C. (2022). Migration Drivers: Why Do People Migrate? In P. Scholten (Ed.), *Introduction to Migration Studies: An Interactive Guide to the Literatures on Migration and Diversity* (pp. 49–82). Springer International Publishing. https://doi.org/10.1007/978-3-030-92377-8_3
- Das, S., Ahmed, K., & Awal, M. (2022). The role of radio and television in the dissemination of agricultural technologies among farmers of Bangladesh. *Bangladesh Journal of Agriculture*, 55–64. <https://doi.org/10.3329/bjagri.v46i1-6.59974>
- Elias, M., Mudege, N., Lopez, D. E., Najjar, D., Kandiwa, V., Luis, J., Yila, J., Tegbaru, A., Ibrahim, G., Badstue, L., Njuguna-Mungai, E., & Bentaibi, A. (2018). Gendered aspirations and occupations among rural youth, in agriculture and beyond: A cross-regional perspective. *Gendered Aspirations and Occupations among Rural Youth, in Agriculture and beyond: A Cross-Regional Perspective*, 1. <https://doi.org/10.19268/JGAFS.312018.4>
- FAO (Ed.). (2012). *Investing in agriculture for a better future*. FAO.
- FAO. 2010a. *Global Forest Resources Assessment 2010. Main report. FAO Forestry Paper No. 163. Rome. Available at: Www.fao.org/docrep/013/i1757e/i1757e.pdf—Google Search*. (n.d.). Retrieved July 19, 2023, from [https://www.google.com/search?q=fao+\(2012b\)+download&oq=FAO+\(2012b\),&aqs=chrome..69i57j33i16j0l3.3829j0j7&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=fao+(2012b)+download&oq=FAO+(2012b),&aqs=chrome..69i57j33i16j0l3.3829j0j7&sourceid=chrome&ie=UTF-8)
- Filmer, D., & Fox, L. (2014). *Youth Employment in Sub-Saharan Africa*. The World Bank. <https://doi.org/10.1596/978-1-4648-0107-5>
- Giller, K. E., Delaune, T., Silva, J. V., Van Wijk, M., Hammond, J., Descheemaeker, K., Van De Ven, G., Schut, A. G. T., Taulya, G., Chikowo, R., & Andersson, J. A. (2021). Small farms and development in sub-Saharan Africa: Farming for food, for income or for lack of better options? *Food Security*, 13(6), 1431–1454. <https://doi.org/10.1007/s12571-021-01209-0>
- Graeb, B. E., Chappell, M. J., Wittman, H., Ledermann, S., Kerr, R. B., & Gemmill-Herren, B. (2016). The State of Family Farms in the World. *World Development*, 87, 1–15. <https://doi.org/10.1016/j.worlddev.2015.05.012>
- Haller, B., Dorries, B., & Rahn, J. (2006). Media labeling versus the US disability community identity: A study of shifting cultural language. *Disability & Society*, 21(1), 61–75. <https://doi.org/10.1080/09687590500375416>
- Hazell, P., Poulton, C., Wiggins, S., & Dorward, A. (2010). The Future of Small Farms: Trajectories and Policy Priorities. *World Development*, 38(10), 1349–1361. <https://doi.org/10.1016/j.worlddev.2009.06.012>
- Ho, M.-W. (2013). Sustainable agriculture and off-grid renewable energy. In: UNCTAD Trade and Environment Review 2013: Wake up before it is too late. Geneva: United Nations Publication: 72-76).
- Irungu, K. R. G., Mbugua, D., & Muia, J. (2015). Information and Communication Technologies (ICTs) Attract Youth into Profitable Agriculture in Kenya. *East African Agricultural and Forestry Journal*, 81(1), 24–33. <https://doi.org/10.1080/00128325.2015.1040645>
- Kadzamira, M., Kazembe, C., Kadzamira, M., & Kazembe, C. (2015). *Youth engagement in Agricultural Policy Processes in Malawi*. <https://doi.org/10.22004/AG.ECON.211821>
- Lamarche 1993—*Google Search*. (n.d.). Retrieved July 17, 2023, from <https://www.google.com/search?q=Lamarche+1993&oq=Lamarche+1993&aqs=chrome..69i57j33i160.1699j0j7&sourceid=chrome&ie=UTF-8>

- LaRue, K., Daum, T., Mausch, K., & Harris, D. (2021). Who Wants to Farm? Answers Depend on How You Ask: A Case Study on Youth Aspirations in Kenya. *The European Journal of Development Research*, 33(4), 885–909. <https://doi.org/10.1057/s41287-020-00352-2>
- Lipton, M., & Lipton, M. (2006). *Can Small Farmers Survive, Prosper, or be the Key Channel to Cut Mass Poverty?* <https://doi.org/10.22004/AG.ECON.110129>
- Lobley, M., Baker, J., & Whitehead, I. (2010). Farm Succession and Retirement: Some International Comparisons. *Journal of Agriculture, Food Systems, and Community Development*, 49–64. <https://doi.org/10.5304/jafscd.2010.011.009>
- Magagula, B., & Tsvakirai, C. Z. (2020). Youth perceptions of agriculture: Influence of cognitive processes on participation in agripreneurship. *Development in Practice*, 30(2), 234–243. <https://doi.org/10.1080/09614524.2019.1670138>
- McDonagh, J., Farrell, M., & Conway, S. (2017). The Role of Small-scale Farms and Food Security. In R. Bhat (Ed.), *Sustainability Challenges in the Agrofood Sector* (pp. 33–47). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119072737.ch2>
- McQuail, D. (1983). *Mass communication theory: An introduction*. Sage Publications.
- McQuail, D. (1987). *Mass communication theory: An introduction* (2nd ed). Sage Publications.
- Mincyte, D. (2011). Subsistence and Sustainability in Post-industrial Europe: The Politics of Small-scale Farming in Europeanising Lithuania: Subsistence and sustainability in Europe. *Sociologia Ruralis*, 51(2), 101–118. <https://doi.org/10.1111/j.1467-9523.2011.00530.x>
- Mussa, E. C. (2020). Youth Aspirations, Perceptions of Farming, and Migration Decisions in Rural Sub-Saharan Africa: Further Empirical Evidence From Ethiopia. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3616359>
- Neal, M. R. (2012). Media Content Analysis: Qualitative Methods. In K. E. Dill (Ed.), *The Oxford Handbook of Media Psychology* (p. 0). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195398809.013.0029>
- Nkrumah, Kwame. 1965. *The African Journalist*. Dar es Salam: Tanzania Publishing House.
- Potter, C., & Lobley, M. (1996). Unbroken Threads? Succession and its Effects on Family Farms in Britain. *Sociologia Ruralis*, 36(3), 286–306. <https://doi.org/10.1111/j.1467-9523.1996.tb00023.x>
- Poulton, C., Dorward, A., & Kydd, J. (2010). The Future of Small Farms: New Directions for Services, Institutions, and Intermediation. *World Development*, 38(10), 1413–1428. <https://doi.org/10.1016/j.worlddev.2009.06.009>
- Proctor, F., & Lucchesi, V. (2012). *Small-scale Farming and Youth in an Era of Change*.
- Rogers, E. M. (1978). The Rise and Fall of the Dominant Paradigm. *Journal of Communication*, 28(1), 64–69. <https://doi.org/10.1111/j.1460-2466.1978.tb01564.x>
- Santos, A. (n.d.). *Mozambique Country Strategy Paper 2018 -2022*.
- Schramm, W. (1973). *Mass media and national development: The role of information in the developing countries*. Stanford Univ. Pr. [u.a.].
- Siebert, F. S., Peterson, T., & Schramm, W. (1963). *Four Theories of the Press: The Authoritarian, Libertarian, Social Responsibility, and Soviet Communist Concepts of What the Press Should Be and Do*. University of Illinois Press. <https://doi.org/10.5406/j.ctv1nhr0v>

The State of Food Security and Nutrition in the World 2020. (2020). FAO, IFAD, UNICEF, WFP and WHO. <https://doi.org/10.4060/ca9692en>

Trade and Environment Review 2013. (2013). https://unctad.org/system/files/official-document/ditcted2012d3_en.pdf

United Nations 2015 Sustainable Development Goals Pdf—Google Search. (n.d.). Retrieved July 17, 2023
United Nations Decade of Family Farming 2019-2028—Global Action Plan. (n.d.).

Valdés, A., & Foster, W. (2010). Reflections on the Role of Agriculture in Pro-Poor Growth. *World Development*, 38(10), 1362–1374. <https://doi.org/10.1016/j.worlddev.2010.06.003>

Van Campenhout, B., Vandavelde, S., Walukano, W., & Van Asten, P. (2017). Agricultural Extension Messages Using Video on Portable Devices Increased Knowledge about Seed Selection, Storage and Handling among Smallholder Potato Farmers in Southwestern Uganda. *PLOS ONE*, 12(1), e0169557. <https://doi.org/10.1371/journal.pone.0169557>

Vogt, C. (n.d.). *EDITORA DA UNIVERSIDADE ESTADUAL DE CAMPINAS UNICAMP*.

Ye, W., & Zeldes, G. A. (2020). The Representation of People With Disabilities in an Official Newspaper in China: A Longitudinal Study of the People's Daily From 2003 to 2013. *Journal of Disability Policy Studies*, 31(1), 26–34. <https://doi.org/10.1177/1044207319868783>

Zondo, W. N. S., & Ndoro, J. T. (2023). Attributes of Diffusion of Innovation's Influence on Smallholder Farmers' Social Media Adoption in Mpumalanga Province, South Africa. *Sustainability*, 15(5), 4017. <https://doi.org/10.3390/su15054017>