

Gender Dimensions on Adoption of Modern Agricultural Marketing Initiatives among Emerging Farmers in Rural Economies

Takalani Isaac Khorombi and Mpho Tshikororo*

University of Venda, Faculty of Science, Engineering & Agriculture

Department of Agricultural Economics and Agribusiness

Abstract

The demand for food has led to continuous changes in the food systems to cope with the changing needs and environment. Agricultural marketing remains critical for farmers' performance, a component that contributes to the sustainability of food supply around the globe. The current study sought to investigate adopting initiatives that supplement traditional marketing mechanisms. The study was conducted in the Thulamela municipality of the Vhembe district. Furthermore, a simple random sampling technique was used to select 127 emerging farmers, while structured questionnaires were used as the data collection tool. The Discriminant Analysis method was used to draw distinct differences in gender dimensions toward adopting non-traditional agricultural marketing initiatives. The study findings revealed that female farmers were leading in adopting digital marketing initiatives compared to their counterparts. In comparison, male farmers were leading in adopting home-delivery initiatives as they enhanced customer retention. The study recommends future studies to investigate the economic benefits of various marketing initiatives associated with various commodities to enhance a product-marketing approach.

Keywords: Adoption, Marketing, Initiatives, Farmers, Gender.

1 Introduction

With the ever-rising population around the globe, the importance of the food system cannot be overemphasized, particularly the primary agricultural production in developing countries for its crucial role in their economic independence (Agnusdei & Coluccia, 2022). The rising demand for food around the globe burdens the agricultural sector, with the dominance of informal and unregulated agricultural markets proving to be the critical point of its meagre supply chain design.

Furthermore, this is mainly because poor agricultural supply chain design, particularly in developing countries, has resulted in increased deterioration of perishable products, ultimately reducing the direct supply of agricultural and food products to the end consumers (Pérez-Mesa et al., 2021). A similar study by Accorsi et al. (2019) alluded to the increasing global food demand being a driving force for the agrifood sector to identify effective new production, distribution, and consumption strategies. In comparison, it has also been noted that the agrifood system needs continuous conversions to enhance sustainability, reduce waste, and stimulate a change toward healthy and sustainable diets (Fischer & Miglietta, 2020). Smallholder farmers' participation in modern supply chains is crucial for rural economic development and poverty reduction. However, such participation is still low and challenging, leading to their loss and inability to grow and enhance their livelihoods (Ruml & Qaim, 2020). In a study by Byemba (2020), the difficulties in securing traditional marketing channels such as contract farming and formal markets have been pinpointed due to their formalities, policies, and higher transactional costs.

Furthermore, agricultural marketing is essential due to its directional influence on the success and sustainability of farmers and other critical stakeholders within the food system (Hanaysha et al., 2016). Gender dimensions are also critical for marketing as they largely contribute to marketing performance within the target market (Stefko et al., 2022). With the infusion of various marketing initiatives to complement the traditional mechanisms, it has been noted that there is a need to adopt new, mainly digital marketing channels for their benefits, such as their swift, cost-friendly, and practical features (Ittaqullah et al., 2020). It has been indicated that developing countries usually benefit by transforming their traditional marketing channel or supply chains into supermarkets or by introducing a new supply chain (Karmarkar & Jain, 2018). The scientific literature confirming the continuous transition of sustainable food models around the globe suggests the urgency of understanding the systematization of initiatives around the food system, including its distribution (Agnusdei & Coluccia, 2022). In response to the urgency of understanding the continuous initiatives within the food system to ensure its competitiveness, the current study sought to investigate the gender dimensions of adopting the current agricultural-related marketing initiatives in a rural setup.

2 Materials and Method

2.1 Study area

The study was conducted in Thulamela, a local Municipality of the Vhembe District in Limpopo province. Thulamela municipality is one of the four local municipalities within the Vhembe District. Agricultural production is a critical economic activity in the Vhembe district (Mokganya & Tshisikhawe, 2019). The Municipality is situated in the northern parts of the Limpopo Province. It covers approximately 5 835 km², with a population estimate of about 618 462 people, and its GPS coordinates are 22°57'S 30°29'E (StatsSA, 2020).

2.2 Sampling technique and data collection

The study population was 314 cash-crop emerging farmers in Thulamela local municipality. The study used a simple random sampling technique to select 127 study participants. Simple random sampling was selected for its strength in giving equal opportunity for all farmers in the study area to be selected and form part of the sample (Sarstedt et al., 2018). Structured questionnaires were used as a data collection tool, and individual interviews were administered with the study participants.

2.3 Empirical method

The current study used a discriminant analysis method to draw the distinct differences in gender dimensions when adopting non-traditional agricultural marketing initiatives among emerging farmers. The Discriminant Analysis method was preferred for its strength in comparing, separating, and drawing differences between categorical variables using their means. The Discriminant Analysis method was further useful in separating both groups for each explanatory variable. Discriminant Analysis is helpful in modelling differences in classes by splitting two or more classes (Kisaka-Lwayo, 2008). In its final fitting, the model is mathematically expressed as:

$$Di = b_1X_1 + b_2X_2 + b_3X_3. b_nX_n..... (a)$$

The description of the explanatory variables used for the analysis is detailed in Table 1 below.

Table 1: Description of explanatory variables used in the discriminate analysis.

Variable	Type of measure	Expected sign
Streamlined target	Individuals=0; Groups=1; Combined=2	+
Digital marketing	Mobile=0; Online video=1; social media=2; Computer=3	+/-
Customized packaging	Yes=0; No=1	+/-
Bulk-buying discount	Yes=0; No=1	+
Online marketing influencer	Yes=0; No=1	+
Retention prioritization	Yes=0; No=1	+/-
Product-bundling	Yes=0; No=1	+/-
Pre-ordering	Contract=0; Online ordering=1; Initial payment=2	+/-
Home-delivery	Yes=0; No=1	+
Supply reorientation	Direct consumer=0; Distributors=1; Outlets=2; Vendors=3	+/-
Collective or Group marketing	Yes=0; No=1	+

Source: Author's computation, 2024.

3 Results and Discussion

The results in Table 2 below show the distribution of the socioeconomic characteristics among farmers within the study sample. The study sample reveals that most farmers were male at 59.8% and were 60 years and older, accounting for 43.3%. Furthermore, the second dominant group of farmers were aged between 40 and 59 years, accounting for 35.4%. Regarding the educational status, most farmers possessed primary education (44.9%), followed by those with secondary education. Regarding farming experience, most farmers within the sample study had six to ten years of experience, accounting for 36.2%. The second largest group of farmers had a farming experience between a year and five years. Meanwhile, those with over fifteen years of farming experience accounted for 20.5%, which most farmers could largely influence within

the study sample being elderly. Most farmers within the study sample had full ownership of the farming land, accounting for 70.9%.

Table 2: Socio-economic characteristics of the participants

Variable	Frequency	Percentage (%)
Gender		
Female	51	40.2
Male	76	59.8
Age group		
25-39 years	27	21.3
40-59 years	45	35.4
60 and above	55	43.3
Educational status		
Primary Education	57	44.9
Secondary Education	53	41.7
Tertiary Education	17	13.4
Farming experience		
Between 1-5 years	36	28.3
Between 6-10 years	46	36.2
Between 11-15 years	19	15
More than 15 years	26	20.5
Land ownership		
Yes	90	70.9
No	37	29.1
Total	127	100

Source: Field survey (2023).

The results in Table 3 below show the discriminant analysis results about the gender dimension relating to the adoption of marketing initiatives.

Table 3: Discriminant analysis on gender dimensions towards marketing initiatives

Variables	Female	Male	All	P-value
Streamlined target	0.38 (.593)	0.38 (.593)	.70 (.592)	.725
Digital marketing	0.13 (.337)	0.23 (.423)	.11 (.376)	.061*
Customized packaging	0.94 (.247)	1.12 (.098)	1.05 (.695)	.022**
Bulk-buying discount	0.53 (.501)	0.94 (.239)	.41 (.243)	.032**
Online marketing Influencer	0.85 (.733)	.51 (.503)	.23 (.501)	.071*
Retention prioritization	0.60 (.491)	.92 (.815)	.13 (.766)	.527
Product-bundling	0.29 (.456)	.60 (.492)	.31 (.490)	.772
Pre-ordering	0.18 (.190)	.28 (.450)	.21 (.453)	.083*
Home-delivery	0.73 (.557)	2.13 (5.366)	2.15 (.845)	.006***
Supply reorientation	1.80 (.836)	.53 (.502)	.43 (.607)	.279
Collective or Group marketing	0.46 (.500)	.49 (.503)	1.67 (.925)	.130
Numbers (n)	51	76	127	

Source: Field survey (2023). Note: Standard deviations in brackets. Significant levels: *** (1%), ** (5%) and * (10%).

3.1 Discussion on agricultural marketing initiatives dominated by female farmers

This section below discusses the marketing initiatives female farmers had adopted within the study sample.

3.1.1 Digital marketing initiative

From the study findings, female farmers had taken advantage of marketing initiatives such as digital marketing, customized packing, and influencer marketing. The digital marketing and influencer marketing mechanisms were found to be statistically significant at a 10% significance level, while the customized packaging marketing initiatives were statistically significant at a 5% significance level. The study findings show a distinct difference between female and male farmers using digital marketing. Female farmers adopted the digital marketing initiatives due to their cost-friendly association with its execution. Digital marketing initiatives

are also advantageous in covering a more comprehensive range of areas, which could positively reach the intended potential customers. Recently, a rise in demand for readily available and high-quality agricultural products has led to the rapid growth of the agri-food e-commerce markets (Agatz et al., 2011).

Furthermore, digital marketing initiatives are critical in swiftly reaching a more comprehensive audience range than traditional ones. A similar study indicated that the emergence of advanced mobile technologies has increased business opportunities that help connect farmers and customers regardless of time and place (Eze et al., 2020). For farmers without agricultural marketing contracts, it is essential to advertise the availability of their products as it enhances the chances of securing buyers within the shortened period. Once the agricultural products have been harvested or reached their maturity level, concluding their transactions at the earliest convenience is economical due to the perishability of the harvested and maintained livestock. Furthermore, digital marketing initiatives have proven effective for emerging farmers due to their potential to reach the intended audience cheaply. In a study by Daneshvar et al. (2023), it has been noted that the rise in supply, distribution, maintenance, and order expenses have grown, leading to agricultural marketing uncertainty increases, which ultimately shows the need for marketing network channels.

3.1.2 Customized packaging marketing initiatives

Female farmers also led customized packaging marketing initiatives. With female figures being innovators, the customized packaging marketing initiative was adopted mainly by female farmers. Customized packaging is a marketing mechanism that significantly narrows the target markets to only those who seek specific benefits from the product, increasing the chances of customer retention. The study findings imply that customized packaging effectively single out the intended target market and enhances long-term customer retention due to the customer's desired package. Customized packaging is associated with innovative product packaging design, primarily preferred for enhancing the deep impression on consumers and positively promoting increasing sales volume (Bahlau & Lee, 2022). According to the current study, customers preferred customized packages due to their extended tailored selection choices. This implies that customers were offered an opportunity to select specific products that were available at that point. Extending freedom of choice amongst customers enhances their willingness to buy from such a supplier compared to limited selection choices. Customized packaging effectively accelerates the modernization transformation of agricultural product

packaging and promotes the continuous development of network-assisted agricultural product packaging toward diversified marketing mechanisms.

3.1.3 Online Marketing Influencers

Furthermore, the study findings indicate that farmers were leading in adopting online market influencers as initiatives to promote their products and services. With the rise in the use and adoption of social network platforms, the use of technological means to market and promote products and services has increased through various industries. The study findings reveal that female farmers were leading in adopting online marketing and transactions. The study could be influenced mainly by the dominant visibility of female figures on social media platforms. The findings could further be translated to female figures having a massive fanbase on social media platforms compared to their counterparts. A study by Lou & Yuan (2019) indicated the importance of using market influencers as they are associated with unique benefits such as targeting, positioning, creativity, and trust, which have superior effectiveness and are accompanied by content control and customer retention. The use of online marketing influencers has gained momentum in recent years as it leverages the importance of technological advancement, and their use has been supplemented by their benefits, such as gaining new customers who are likely to be part of the fanbase of the used online marketing influencer.

Furthermore, the results imply that female farmers were innovative and have spotted an opportunity to utilize influencers rather than traditional brand ambassadors. Online market influencers could be more effective in recruiting new customers than brand ambassadors, which is even more effective for customer retention. The study findings on the usage of marketer influencers could be the flexibility of using such influencers for agricultural produce, as using ambassadors has been rare within the agricultural sector due to the seasonal nature of most commodities. The study findings are supplemented by the discovery of using market influencers being associated with its ability to possibly reach more targeted customer segments, create positioning with greater market acceptance and relevance, and generate more creative and trusted content than they would otherwise achieve (Zeithaml et al., 2020).

3.2 Discussion on agricultural marketing initiatives dominated by male farmers

This section below discusses the marketing initiatives male farmers had adopted within the study sample.

3.2.1 Home-delivery marketing initiative

From the study sample, male farmers were leading in adopting marketing initiatives such as bulk-buying discounts, pre-ordering, and home delivery. The marketing initiatives adopted by male farmers were statistically significant at various levels, with home delivery, bulk-buying discounts, and pre-ordering being significant at 1%, 5%, and 10%, respectively. The study findings revealed that home delivery was the most effective marketing initiative that male farmers had taken advantage of. The results could be primarily influenced by male figures which generally own or have easy access to transportation alternatives compared to their counterparts within the rural setup. With the ever-escalating high operational costs and severe market competition, most farmers resort to home-delivery marketing initiatives by outsourcing the delivery responsibilities to a third party (Mangiaracina et al., 2015).

Furthermore, there are cost implications for the home-delivery marketing mechanism; therefore, male farmers dominate in implementing such a marketing strategy. However, using the home-delivery initiative is ideal for its associated benefits, such as customer retention, secured loyalty, and ease of referral. Furthermore, online ordering has predominantly stimulated the growth of home-delivery services (Tadić & Veljović, 2021). The study findings could also imply that male farmers lead home-delivery marketing initiatives due to its associated risks, such as unguaranteed safety.

3.2.2 Bulk-buying discount marketing initiative

The study findings further reveal that male farmers had adopted the bulk-buying discount as a marketing initiative to secure and maintain high market share. The study findings imply that male farmers use bulk-buying discounts to lure more customers into buying their products. With some agricultural products harvested in bulk, bulk selling is ideal to save on transportation and storage costs; hence, male farmers may be leading in this initiative. In a similar study, it was noted that low-income households could benefit substantially from buying in bulk as they receive goods at a lower price. Given the perishability of agricultural products, selling in bulk is conducive as it saves producers from wastage and allows producers to sell swiftly before the product can be consumed (Bauner & Hossain, 2023).

Furthermore, the study findings could be primarily influenced by male farmers leading home-delivery initiatives, which could supplement bulk selling. It is expected to offer discounted bulk orders within informal agricultural markets to enhance farmers' chances of selling their harvested products promptly. Most smallholder farmers prefer bulk-selling discounts for their potential to spare farmers from possible spoilage, particularly for those with highly perishable products. Interestingly, potential buyers such as street vendors benefit from using the bulk-buying discount, significantly contributing to their profit maximization.

3.2.3 Pre-ordering marketing initiative

Lastly, the study findings also reveal that male farmers were also leading in adopting a pre-ordering marketing initiative. The results could be influenced by male farmers being dominant in securing the marketing contracts within the study sample. The study could imply that male farmers preferred the pre-ordering marketing initiative for its ability to commit both the supplier and consumer in that they agree. This was supported by the study of Ittaquallah et al. (2020), who noted that securing contract farming continues to provide a lifeline for most farmers due to the associated benefits for both the farmer and the contracting entity as it reduces marketing and procurement risks, among other features. The pre-ordering method is ideal for farmers in negotiating and securing a desirable selling price compared to farmers who ought to search for a market after harvesting. The pre-ordering marketing initiative is also ideal for saving maintenance costs after the harvest or reaching the maturity stage with a better forecast of the market performance of the farmer regarding a specific product.

Furthermore, pre-ordering initiatives assist farmers in predicting their potential revenue, which also contributes to their growth and development plan, which could include commercialization. This initiative is ideal for rescuing farmers from searching for markets, potentially leading to undesirable resource loss. Ruml and Qaim (2020) concluded that firms that secure marketing contracts beforehand have the edge over the market shares and sales as the specified price positively affects farm productivity and income.

3.3 Transactional arrangements within the study sample

The study further explored the transactional arrangements in which farmers within the study sample were involved. The study findings revealed that most farmers within the study sample were selling their produce at the farm gate, accounting for 47.01%, followed by those selling by the roadside. The study findings could be influenced mainly by minimal agricultural marketing contract security within the study sample. The minimal contract security and limited

market access have been significant propellers for farmers to develop various marketing initiatives to save themselves from potential losses resulting from spoilage and the high perishability of agricultural produce. Although a roadside market offers a lifeline for some farmers, its uncertainty in customer recruitment and retention is costly, particularly for farmers at times.

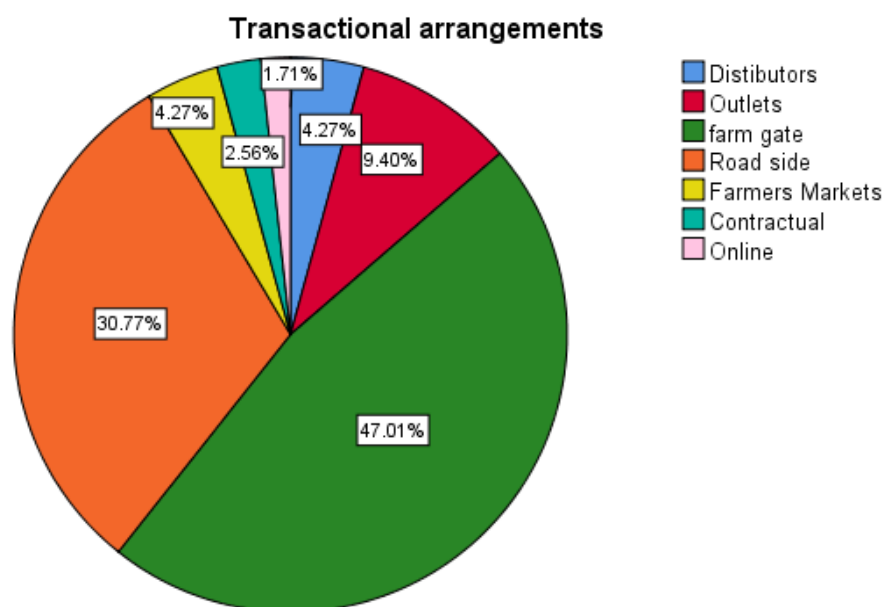


Figure 1: Agricultural Transactional Arrangements. Source: Survey Results (2023).

Furthermore, although there is still low reliance on it, the study findings reveal that there has been an infusion of online marketing for agricultural produce, something that has not been common, particularly for elderly rural-based farmers. From the study findings, it could be pinpointed that farmers selling their produce to the outlets could be closely associated with the home-delivery marketing initiatives as farmers may drop their produce in various outlets. Furthermore, farm gate dominance and roadside transactions signal the importance of regulating the local agricultural markets to ensure fair competitiveness.

Conclusion and recommendations

From the study findings, the low security of agricultural marketing contracts and limited access to high-value markets have led farmers to initiate various marketing mechanisms for their survival and growth toward commercialization. Furthermore, the study findings reveal the gender dimensions when exploring various marketing initiatives among farmers. From the study sample, female farmers pursued marketing initiatives such as digital marketing, customized packaging, and marketing influencers. In comparison, male farmers sought to

utilize marketing initiatives such as home delivery, bulk-buying discounts, and preordering through marketing contracts. From the study findings, female farmers opted for marketing initiatives based on their benefits, such as being cost-friendly and securing new customers promptly.

In contrast, male farmers preferred effective marketing initiatives in customer retention and securing a desired selling price. With the use of various marketing initiatives within the study sample, the study recommends the continuous promotion of marketing initiatives within farmers' groups, networks, and organizations to enhance the acclimatization of farmers to the vast initiatives. The study further recommends enhancing agricultural market regulation at a local level to enhance fairness and competitiveness within the agricultural markets. The study recommends future studies to investigate the economic benefits of various marketing initiatives associated with various commodities to enhance a product-marketing approach. The study also recommends assisting farmers in spotting effective marketing initiatives for specific products.

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