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PRICING STRUCTURE OF AGRICULTURAL PRODUCTS AND SUSTAINABILITY OF FARMERS IN TANZANIA: AN EMPIRICAL REVIEW

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ABSTRACT
This was a literature review on the pricing structures of agricultural products and the sustainability of farmers in Tanzania. The choice of the review was based on the availability of studies done in the area of agricultural products which is sufficient to analyse what is already known on the pricing structure. The study reviewed 18 papers that were related to the pricing of agricultural products in Tanzania basing on pricing theory. The study finding has concluded that agricultural products' pricing is viewed from two angles, the seller and the buyers' view point. The seller and or the buyer can influence pricing decisions; despite the pricing, the theory states that the pricing of agricultural products is determined by the demand and supply of a product in the market. The buyers and sellers have different objectives when setting prices; the buyer wants to maximise profit while seller wants to cover production costs with a small percentage profit margin. The study revealed that the product's demand and supply as part of pricing theory need to be used for the determination of the pricing structure of agricultural products. The study revealed that the principles of demand and supply are not well used in the pricing of agricultural products in Tanzania. The study comes with two recommendations; farmers creating a scarcity of products to increase demand for the products by establishing associations/cooperative societies for their sustainability. Strengthening the farmers' cooperative societies and having the same voice in the pricing of agricultural products.

Key words: *Pricing, pricing theory, scarcity, demand, supply and sustainability*.
Paper type*: Research paper*
Type of Review: *Peer Review*

1. INTRODUCTION

The pricing structure for a product or service is the approach to assigning the price or value of a product (Bhasin, 2019). The pricing structure defines the product value of a product with discounts attached to it in consistence with the firm's objective. There are different bases for pricing structure including penetration pricing, price skimming, competition pricing, psychological, and bundle pricing (Bhasin, 2019). For the farmers, a sustainability pricing structure is an important element as it determines the wealth of products and future development. Pricing structure allows for efficient resources allocation, the farmers can allocate the factors of production to be used for valuation purposes. It is the pricing structure with the pricing policy, farmers can allocate available resources to ensure the best yield of products which generates profit hence sustainability. Pricing structures have different options for policymakers, bases from free-market structure to command market structure (Kokemuller, 2020).

The pricing structure of the farm product is the basis of farmers sustainability as the majority of Tanzanian depend on farming for their living (Ismail & Changalima, 2019). The farmers' sustainability is important to be considered as to support farmers' development through agricultural products. It is noted that in cases where farming is not promising to the standard of living, villagers tend to migrate to town. As the villagers migrate to towns, the production of food becomes low (Msese & Mashenene, 2020). The majority of Tanzanians (80%) are farmers, it is expected that farming makes standard life of farmers hence sustainable farming (Chongela, 2015). Pricing structures of farm products can support the sustainability of farmers and economic development in Tanzania as farming is the dominant employer.

The pricing structure is one of the critical elements of marketing; others are product, place, promotion, physical evidence, people, and positioning. Pricing is the process whereby a business sets the value at which it will sell its products and services and may be part of its marketing plan (Kotler, 2010).The price of a product depends on the pricing structure in the market (Landsburg, 2014). This review bases on the price theory or theory of pricing propounded by Saxton in 1942 and developed further by Agapos and Dunlap in 1970 and later by Kahn in 1984. The theory assumes from the economic point of view that, the price for any specific good or service is based on the relationship of supply and demand (Agapos & Dunlap, 1970; Kahn, 1984). The theory of price posits that the point at which the benefit gained from those who demand the entity product meets the seller's marginal costs is the most optimal market price for that goods or service (Lawrence, 1949; Landsburg, 2014).

The goal of the price theory was propounded to achieve the equilibrium where the quantity of the goods or services provided matches the demand of the corresponding market and its ability to acquire the goods or service (Smith, 2011). The concept of price theory allows for price adjustments as market structures change. Supply denotes the number of products or services that the market can provide while demanding the amount of product or service required to satisfy a need. This includes both tangible and intangible goods. In each instance, the available supply is limited in nature (Hauser, 1984). The theory states that supply can be impacted by the price structure and demand. Demand may fluctuate depending on a variety of factors, like whether an improved version of a product is available by an item's perceived value by the consumer market.

Economists use price theory to find the selling price that brings supply and demand as close to the equilibrium as possible. Equilibrium occurs when the total number of items available in the market is consumed by potential customers. If a price is too high, customers may avoid the goods or services (Hauser, 1984; Landsburg, 2014). The higher prices would result in excess supply hence lowered price. In contrast, if a price is too low, demand may significantly outweigh the available supply (Heien, 1977; Landsburg, 2014). This is the important point of using the theory of price in the review as the sustainability of farmers in Tanzania depends on the standard prices of agricultural products. The pricing structure of agricultural products needs to be considered for farmers' income and sustainability.

In setting prices, the business considers the value which could acquire the goods, the manufacturing cost, the marketplace, competition, the market condition, the brand, and the quality of the product. Price becomes a strategic issue of marketing a product and meets rivals, and even wins the market. The pricing method is used to set the cost of the producer's offerings relevant to both the producer and the customer (Kotler, 2010).The pricing structure is the method or process of determining the value of a producer and the value for the exchange of goods and or services at reliable sustainability. The price structure is a fundamental aspect of financial modelling and the only revenue-generating element amongst the marketing mix elements, the rest being cost centres. However, the other marketing elements decrease price elasticity and enable price increase to drive more significant revenue and profits (Spulber, 2018). Pricing can be a manual or automatic process of applying prices to purchase and sales orders, based on factors such as a fixed amount, quantity break, promotion, or sales campaign. Sometimes, specific vendor

quotes, price prevailing on entry, shipment or invoice date, the combination of multiple orders or lines, and many other techniques for pricing (Kotler, 2010). Automated pricing systems require more setup and maintenance but may prevent pricing errors. The consumer's needs can be converted into demand only if the consumer has the willingness and capacity to buy the product. Thus, pricing is the most crucial marketing concept; it is used as a tactical decision to change competitive, market, and organisational situations. The main unanswered question is, what is the pricing structure of agricultural products in Tanzania?

Farmers operate with the primary objective of earning profits and the same can be realised through the pricing methods adopted by the firms. While setting the price of a product or service, the following points have to be kept in mind: the nature of the product/service, the price of a similar product/service in the market, the target audience for whom the product is manufactured. Others are the production cost against labour cost, the raw material cost, the machinery cost, the inventory cost and the transit cost. Other factors include external factors such as the economy, government policies, legal issues and competition patterns (Pavani, 2019). The market structure of pricing in Tanzania is not known for the agricultural products in relation to the pricing theories. The dominant question is, who determines the prices of agriculture products in Tanzania? This paper aims to review the literature on the pricing structure of agricultural products in Tanzania using the theory of pricing. The paper hypothesized that the price of agricultural products is the basis of small holder farmers sustainability in Tanzania. The paper starts with examining the pricing objectives and the economic view of pricing.

1.1 Pricing Objectives

Pricing is a managerial task that involves establishing pricing objectives, identifying the factors governing the price, ascertaining their relevance and significance. It determines the product value in monetary terms and formulation of price policies and strategies (Landsburg, 2014). Once set, the objective gives the business path; which direction to go (Kotler, 2010). The following are the pricing objectives that show clearly the reason for business existence. The pricing objective of a product determines the pricing structure of the product. When the market has an objective of the price it is easier to set policy and pricing structure.

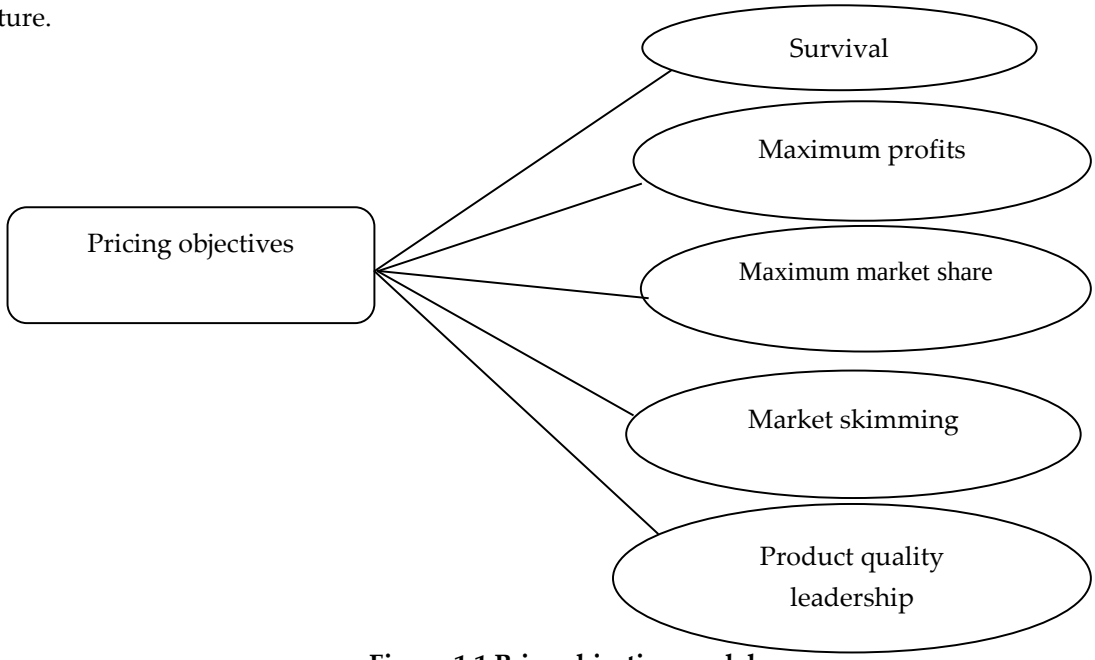

Figure.1.1 Price objective model

1.1.1 Survival objective

The foremost pricing objective of firms is to set the optimum price and help the product or service survive and become sustainable for long. Each firm faces competition for getting ruled out from the market because of the intense suppliers of the same or related products (Pavani, 2019). The competition rules to market share during market maturity are to monitor customer tastes and preferences. Thus, a firm must set the price covering the fixed and variable cost incurred without adding any profit margin and then adds a small percentage (Landsburg, 2014). The survival plan for pricing should be the short term objective; once the firm gets a hold in the market, it must strive for additional profits. The new firms entering the market adopt this type of strategic pricing objective.

1.1.2 Profit maximisation objective

Many firms try to maximise their current profits by estimating the demand and supply of goods and services in the market. Pricing is done in line with the customers' requests and the substitutes available to fulfil that demand. The higher the offer, the higher the price charge. The seasonal supply and demand for goods and services are the best examples that can be quoted here. The demand and supply of the product into the market are critical to the price of a product for maximising profits (Parisi & Depoorter, 2002; Melolidakis, Leonardos, & Koki, 2018).

1.1.3 Capturing colossal market share objective

Many firms charge low prices for their Products to capture a more significant market share. The reason for keeping the price low is to increase sales resulting from the economies of scale. For farmers, it is to encourage production to the maximum. Higher sales volume leads to lower production costs and increased profits in the long run (Hauser, 1984; Kotler, 2010). This strategy of keeping the price down is also known as market penetration pricing. This pricing method is generally used when the competition is intense and customers are price sensitive. Mostly this strategy is used by new entrants to the market for earlier break even. For agricultural products, it can use the method for perishable and or horticulture farm products. Lowing prices help to attract demand and hence to have higher sales as compared to competitors.

1.1.4 Market skimming objective

Market skimming is a strategy for charging a high price for innovative firms' products and services and it uses modern technology (Kotler, 2010). The prices are comparatively kept high due to the high cost of production incurred because of modern technology. Mobile phones and electronic gadgets are the best examples of skimming pricing launched at a very high cost and cheaper with the period. Some customers may relate the higher price of a product with quality, assuming that higher quality products have higher prices (Han, Nunes, & Dreze, 2010).Price skimming is a pricing strategy in which a marketer or producer sets a relatively high initial cost for a product or service at first and then lowers the cost over time. It is a temporal version of price discrimination/yield management (Smith, 2011). For agriculture products, it can use strategy for earlier ripen products and when the majority of products are mature, prices are lowered.

1.1.5 Product – Quality leadership objective

Many firms keep the price of their goods and services under the quality perceived by the customers. Generally, the luxury goods create their high quality, taste and status image in customers' minds for which they are willing to pay high prices. Luxury cars such as BMW and Mercedes create a high-quality high-status image among customers (Han, Nunes, & Dreze, 2010; Smith, 2011). In terms of agricultural products, no product is termed as luxury as all creation is needed for the survival of human beings. However, quality predicts product price, the farm product quality affects the price. Thus, every firm/farmer operates with the ultimate objective of earning profits, for the farmers the main objective is farming sustainability.

The pricing objectives need clearly defined goals and develop a sound price structure. In practice, very few farmers define their pricing objectives in unambiguous terms. The specific pricing objectives may vary from farmer to farmer and even for the same farmer at different points in time depending on the financial requirements. Pricing is not an end in itself but a means to achieve the firm's marketing objectives (Chen & Groenewold, 2018). Therefore, a farmer's pricing strategy, for example, should be designed to achieve specific goals. Like other operating objectives, the pricing structure is derived from the firm/farmer's overall objectives. The primary objectives of a firm are survival, growthand sustainability.

Agricultural products in this study mean crops from farms. The crops under consideration of pricing in the study were maize, Irish potatoes, beans and wheat. Agricultural product pricing is a subject of lively debate. It has evoked divergent views, ranging from forceful advocacy of support prices of essential farm commodities and subsidies for significant inputs to complete liberalisation of prices and reliance upon the market mechanism to achieve efficiency and competitiveness. Agriculture is critical to economic growth and poverty reduction in Tanzania and other developing countries. It accounts for 26.7% of the GDP and employs over 80 per cent of the workforce (Chongela, 2015; Mwambulukutu, 2020). The average annual growth of agricultural output at more than four per cent has been quite impressive. However, future development depends on increasing productivity, which requires significant changes in systems, policies and institutions for agriculture. One of the key government policies, which directly impact agricultural growth, relates to pricing. Tanzania's support price program primarily aims to provide a floor to market prices in the post-harvest season and initially covered eight crops: wheat, rice, cotton, sugar cane, potato, onion, gram, sunflower, safflower, soybean, and canola (Chongela, 2015).

The implementation of support prices of various crops has evolved and undergone policy and institutional changes. The importance of agricultural price policy has dwindled with market and price liberalisation as an integral part of the economic reforms since the early 1990s. In Tanzania, since 2001, support price for only four crops, i.e., wheat, rice, cotton and maize is being notified (De Janvery & Sadoutet, 2010). The policy of selective intervention on a need basis to protect the farmer against extreme price volatility is being followed and market forces generally allowed free play. Experts have debated the relative effectiveness of input subsidies and output pricing. The role of output support price in enabling producers to use inputs flexibly has been underscored. In contrast, input subsidies encourage the adoption of specific technology and higher use level of information. Output prices at the same time are relevant only for those having a marketable surplus, while input subsidies benefit all those who are using the technology (Chongela, 2015).

Sustainable agriculture is viewed in many ways; ultimately it seeks to sustain farmers, resources and communities by promoting farming practices and methods that are profitable, environmentally sound and good for communities (Sheghezzo, Huaranca, & Verga, 2020; Sellare, Meemken, Kovame, & Qaim, 2020). Sustainable agriculture fits into and complements modern agriculture. Sustainable agriculture rewards the true values of producers and their products for future endeavours. Sustainability works on farms and ranches harnessing new technologies and renewing the yields and the farmers' wealth. Sustainable agriculture must be economically viable, socially responsible and ecologically sound. The economic, social and ecological are interrelatedand all are essential to sustainability (Kadigi, 2020). Agriculture that uses up or degrades its natural resource base, or pollutes the natural environment, eventually will lose its ability to produce, hence no sustainability of farmers (Sheghezzo, Huaranca, & Verga, 2020). Agriculture that fails to meet the needs of society, as producers and citizens as well as consumers, will not be sustained by society. Sustainable agriculture must be all three elements, ecologically sound, economically viable and socially responsible, and the three must be in harmony.

Sustainable agriculture frequently encompasses a wide range of production practices (Sheghezzo, Huaranca, & Verga, 2020). Sustainable agriculture improves the production of sufficient human food and raw materials to meet the needs of a sharply rising population. Sustainable agriculture protects the environment and expansion of the natural resources supply, and sustainment of the economic viability of agriculture systems. All three when harmonised helps the farmers' well-being development. The link between the best practice pricing systems allows profitable agriculture, at least over time. The profitability of products allows farmers to stay in farming products for long. This paper aims to review the pricing structure of agricultural products in Tanzania concerning the pricing and support of the farmer's initiatives towards the sustainability of agriculture. It is viewed as the pricing structure that leads farmers' continuity hence sustainable agriculture for farmers development and well-being.

2. LITERATURE REVIEW

2.1 Price Determination by Demand and Supply

Price is the worth that buys a finite amount, weight, or another match of goods or services. It also expresses the value of the goods produced and the services rendered by production factors such as land, labour and capital. Thus, the determination of prices is of great significance in an economy (Chen & Groenewold, 2018). Determination of prices means establishing the cost of goods sold and services rendered in the free market. In a free market, the forces of demand and supply determine the prices. Issues that affect price determination are demand and supply, market competition, pricing objectives and marketing methods.

In this paper, demand and supply are considered for discussion of the pricing structure, demand and supply is an economic model of price determination in a market. In a competitive market, the price policy for a particular product would vary until it settles at a point where consumers' quantity demanded equals the amount supplied by producers at the current price, resulting in an economic equilibrium of price and quantity (Prajwal, Manasa, & Gupta, 2019). The pricing policy for that matter is based on the laws of supply and demand assumptions. If demand increases and supply remains unchanged, it leads to a higher equilibrium price and higher quantity. As demand decreases and supply remains unchanged, it leads to a lower equilibrium price and lower quantity demanded. If supply increases and demand remains unchanged, it leads to a lower equilibrium price and higher quantity. If supply decreases and demand remains unchanged, it leads to a higher equilibrium price and lower quantity (Prajwal, Manasa, & Gupta, 2019).

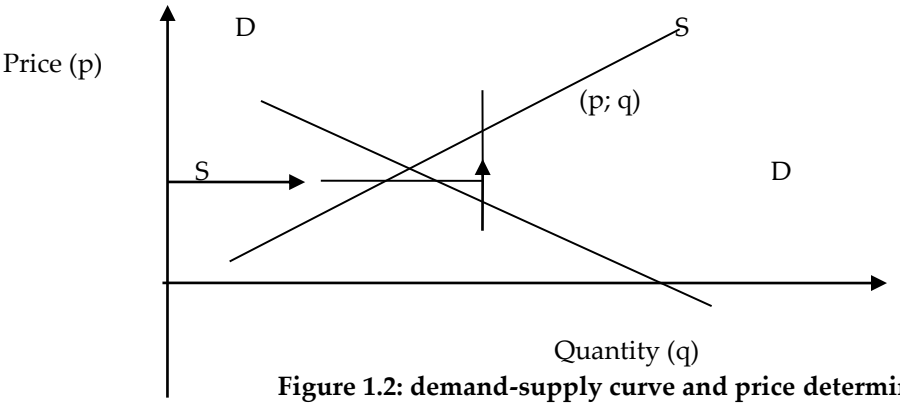

Figure 1.2: demand-supply curve and price determination

Equilibrium is defined as the price-quantity pair where the quantity demanded is equal to the amount supplied, represented by the intersection of the demand and supply curves. Market equilibrium is a market situation when the price is such that the quantity that consumers wish to demand is correctly balanced by the amount that firms want to supply. Economics assumes that the consumer is a rational decision-maker and has perfect information (Spulber, 2018). The price for a particular product goes up and the customer is aware of all relevant information which will reduce demand for that product. When

the price declines, the request for a product increases or vice versa; the price will stabilize. That is, the quantity demanded typically rises, causing a downward sloping demand curve. A demand curve shows the quantity demanded at various price levels.

As a seller changes the price requested to a lower level, the product or service may become an attractive use of financial resources to many buyers, thus, expanding the total market for the item. This whole market demand by all buyers for a product type (not just for its brand name) is called primary need (Prajwal, Manasa, & Gupta, 2019). Additionally, a lower price may cause buyers to shift purchases from competitors, assuming that they do not meet the lower price strategy. If primary demand does not expand and competitors meet the lower price, the result will be lower total revenue for all sellers. Woodruff (2018) argues that the law of supply and demand determines the price of a product. Consumers have a desire to acquire a product and producers manufacture a collection to meet this demand. The equilibrium market price of a product is the price at which quantity supplied equals quantity demanded. Graphically, the supply and demand curves intersect at the equilibrium price (Woodruff, 2018). From this point, the theory of demand and supply is recommended to be used by farmers to price farm products and earn the required income for sustainability.

2.2 Pricing Theory

The pricing theory is an economic theory propounded by Saxton in 1942; it states that a product or service's price is based on the relationship between supply and demand of the product or service (Lawrence, 1949; Agapos & Dunlap, 1970; Kahn, 1984). It is important to note that; price carries weight for the product or service. Price theory has the variables of pricing four main elements: market share, sales volume, competition and profitability. Price carries an indication that influences consumers' perception about the price agenda and the price of a product that influences consumers' buying decision (Hauser, 1984; Chen & Groenewold, 2018). Therefore, it is proper that price is more than money and time. Marketers focus on price as to the information process; that is, the consumers look at the cost as an informed quality. However, marketers tend to be close to managerial decision making. Therefore, the marketers consider pricing in terms of the profitability of business undertaking as explained in demand and supply.

2.3 Studies on Pricing and Sustainability of Smallholder Farmers

Several studies have been done on the pricing of farm products and sustainability of smallholder farmers specifically in rural areas of Tanzania. Mototay and Tumusiime (2014) did a study on agriculture sustainability, inclusive growth and development assistance in Tanzania. The study examined and categorised farmers in their participation in production and the production structure employed and the implication in sustainability development and food security. The study found that sustainable development is found at the individual level (Mototay & Tumusiime, 2014). It is evident that for significant sustainable development of farmers who are endowed with suitable land, access of water, credits and participating in the production. Also, the study found that, the challenges of sustainable development for farmers in using new technologies. With the farmer's challenges, the study did not dwell on evaluating the pricing structure as a barrier to farmers development and sustainability in Tanzania. The study concluded that the government has taken series of policies and investments framework. The study also commented that the success of agriculture depends on government initiatives to guarantee farmers income level, distribution of productive resources and increased participation of the community for sustainability.

Msongole (2015) assessed the impact of climatic change variability in the effect of crop production in Tanzania. The study aimed to understand the productivity trend of maize production in smallholder farmers due to climatic changes. The study dealt with the farmers of maize sustainability in cases of climatic changes and the adaptability capacities in rural areas. The study found that agriculture in

Tanzania is affected by expected changes in climate conditions as the farmers have no alternative to adapt to the changes (Msongole, 2015). The study also found that farmers plant long term crops that perish before maturity as the climate changes. Also, the study found that, increased population had an impact on productivity with low production and climatic change are driving forces to reduced agricultural production. The study shows that climatic change has an influence on low productivity hence sustainability is uncertain (Msongole, 2015). The sustainability of farmers depends on several factors from policy, production framework and marketing part of the farm products. The study did not say about prices as contributing factor for the uncertainty of farmer's sustainability.

Kadigi (2020), did a study to analyse the risks of forecasting and economic feasibility on staple foods in Tanzania. The study aimed at analysing, validating and demonstrates the scholastic procedure in understanding the risk and uncertainty in the forecasting of maize, sorghum and rice as staple foods in Tanzania. The selection of these crops was based on their importance as a source of food security and fighting hunger. The study established that the future of crop productivity of staple food is at risk as some uncertainty exists about future productivity (Kadigi, 2020). The uncertainty hinders the implementation of different agricultural policies and plans to achieve the better livelihood of farmers. In the study, it was found that inadequate and inaccurate information on production, market and forecasted yields hinders the farmers' knowledge of their farm products. The study noted that the available economic models forecast only yield and net returns (Kadigi, 2020). The study did not analyse the pricing issues as one of the risks for farmers development and sustainability. The pricing structure is an important element in the crop production and profitability and livelihood of farmers.

A study done by Pierre, Pauw, and Magrini (2017) analysed the effects of the National Food Reserve Agency on food security in Tanzania (NFRA). The study noted the role of the agency as to ensure food security in Tanzania through procuring, reserving and recycling grains primarily maize in a cost-effective manner (Pierre, Pauw, & Magrini, 2017). The study found out that the agency has the mandate to procure crops, specifically maize but has no direct mandate of price stabilisation. It is known that the price of maize is set by the agency with consideration of estimated costs of production. The agency sets the price just above production cost to encourage more production. The agency has the role of free distribution or at discounted prices to vulnerable households, subside sales to millers, sale to prisons and non-governmental organisations to support vulnerable communities (Pierre, Pauw, & Magrini, 2017). The pricing of maize is fixed by the Agency calculated prior harvesting period basing on estimated production cost. The pricing method of crops should base on the theory of pricing and the pricing structure of the market at the time and elements of demand and supply.

Huka, Ruoja and Mchopa (2014) did a study analysing the impact of price fluctuation of agricultural products in Tanzania. The study found out that the price fluctuation is a challenge to farmers development. The uncertainty of the pricing structure of agriculture products make farmers lose capital investment and when unsatisfied with the prices, the next season shifts to other non-agricultural activities (Huka, Ruoja, & Mchopa, 2014). The study revealed that the price fluctuation is attributed to various factors including those that culminate in dangerous consequences. Although higher prices can technically be good to farmers, however, price fluctuation is extremely dangerous as farmers and other agents in the food chain risk their investment when prices fall (Huka, Ruoja, & Mchopa, 2014). The study recommended the use of demand and supply theories as to the mechanism for determining prices. It is known that price fluctuation disturbs the marketing system and economics of demand and supply as a determinant of prices in a given market. The sustainability of farmers depends on the good prices of farm products which increase income, motivating farmers on effective use of resources towards improved farmer's livelihood.

A study on socio-economic factors influencing livelihood outcome sustainability established that farmers have been categorised in levels (Mchopa & Jeckoniah, 2018). The study aimed at determining the levels of livelihood outcome sustainability among smallholder farmers of sunflower in Iramba and examined the socio-economic factors for livelihood outcome sustainability. The study found out that small farmers are the potential for country development and livelihood despite the imperfection along the production chain which lowers the expected impact and leaves farmers vulnerable to stress and shocks (Mchopa & Jeckoniah, 2018). The study revealed that the majority of small farmers were categorised into lower-level livelihood outcome sustainability. The study revealed the influencing factors for livelihood sustainability include household size, head of household education, savings of the household and assets possessed. The farmer's imperfection for sustainability, price structure and lower prices continue to leave farmers exposed and vulnerable to stress and shocks which affect the chances of livelihood sustainability.

It is known that livelihood is considered to be sustainable when it can support households to cope with the recovery of farmers stress and enhance the capacity providing livelihood opportunities for next-generation (Mchopa & Jeckoniah, 2018). Despite looking at sustainability, the pricing structure of agriculture products cannot be neglected for stress and shocks of farmers. The study dwelt on livelihood sustainability, however, smallscale farmers need support for better prices of farm products to encourage farmer's production to support livelihood outcome sustainability.

Kweka (2018) in a study on the welfare of coffee farmers in Tanzania, concluded that the impact of commodity price volatility on growth, public financing welfare has a huge impact in absence of a clear hedging mechanism of pricing. Producers remain uncertain about the prices in dynamic markets with price volatility. The uncertainty arising from commodity price volatility and has a detrimental impact on the farm and macroeconomic level (Kweka, 2018). The finding of the study argues that the importance of price mechanism on the pricing of coffee products shows the impact of farmers sustainability. The decision making on price structure cannot isolate the knowledge of price behaviour and setting appropriate mechanism to distribute resources in dealing with the impact of price volatility on the welfare of farmers in Tanzania. The study showed the weakness of pricing of agricultural products in Tanzania which need special attention for farmers sustainability.

A study on price risk perception and management strategies by rice smallholders in Mbeya, Tanzania noted the challenges of price impacts to farmers (Mgale & Yunxian, 2021). The study noted the main risks that tend to affect the profitability and wellbeing of smallholder rice farmers considering the price volatility of rice. Improving farmers capacity of farmers to manage price mechanisms and increase farmers income hence encouragement to more production. The study finding shows that farmers try to manage risk through spot market strategy (Mgale & Yunxian, 2021). The spot price strategy harms rice prices and the possible farmers' sustainability as farmers have no assurance of better prices. The study suggests for the farmers to develop pricing policies aimed at establishing and promoting derivative markets, improving market information and storage facilities. It is recommended that the government and farmers set up the mechanism for price guarantee for farmers to cope with the production costs rather than using the spot prices (Mgale & Yunxian, 2021). It is learned from the study that, no specific pricing structure of rice products in Tanzania. The study recommends for the smallholders to establish storage facilities to store rice at lower prices in the market and sell when the demand is high. Also, smallholders are empowered to create price policy ability and legal framework to manage the prices of rice. One alternative for a price mechanism to manage price risk is to establish storage facilities and cooperative societies where market information and supporting each other are easily possible. The paper is proposing suggestions to rescue the smallholder farmers sustainability in Tanzania.

3. METHODOLOGY

The study is an integrative review of literature on the pricing structure and sustainability of agriculture products. The study included all studies found to be addressing identical to the research issue. The

integrative review helps to understand and provide a framework of different relations levels in the study theme (Torracro, 2005; Cook & Elise, 2014). The targeted articles searched were looking at the pricing structures of agricultural products. This paper's analysis was based on the key themes of the study: pricing, pricing theory, the theory of demand and supply, and the pricing of agricultural products. The study used the Google scholar search engine to establish themes and studies in pricing agricultural products by other scholars. The search managed to identify 66,300 articles from the Google search engine for tasks related to the pricing of farm products and farmers sustainability. The papers were screened to meet relevance to the issue at hand, and 18 articles relevant to the study were identified used in the study review. The identified papers pertinent to the study were reviewed to examine the critical issues in agricultural products' pricing structures and the related pricing theory for farmers sustainability. Several empirical studies were reviewed and analysed from the articles to understand the pricing structures of agricultural products for the sustainability of smallholder farmers in Tanzania.

4. DISCUSSION ON PRICING OF AGRICULTURAL PRODUCTS

The pricing of a product or service depends on the price variables, which influence the buying decision and determine the demand for a product or service. The relationship between demand and supply is the main participant in the pricing and exchange process of products (Landsburg, 2014). The variables of price to determine the supplier are the expected demand and the order in the market. Market competition is essential for the determination of price for farm products. The variables focus on the farmers' profitability, which leads to the long life-cycle of the product or service. It is known that when the price of the product is stable, then the possibility of farmers' sustainability is obvious. The question is still unanswered, who determines the price of agricultural products in Tanzania? Do the theory of pricing used to determine the price of farm products?

4.1 The participants of exchange and the price

Generally, the term price is a component of a business or transaction between two parties. In the conversation, one party must give up (buyer) to obtain something offered by another party (seller) (Curtis, Salibury, Ward, & Durward, 2019). Yet this view of price provides limited explanation of what price means to participants in the transaction. In this view, the price is determined by either the seller/farmers or the buyer/vendors. It is argued that in price determination, the seller should be interested in exchanging at a small profit while the buyer would want to maximise the benefit of the product.

4.1.1 Sellers' View of price

In an exchange transaction, sellers reflect the cost as the revenue generated for each product sold and, thus, are an essential factor in determining profit. For marketing organisations, the price also serves as a marketing tool and is a critical element of marketing promotions. For example, most retailers highlight product pricing in their advertising campaigns. It is believed that the total output of the farm product responds little if at all in the view of the average price of the farm product (Johnson, 1950). Most farmers believe that it is right for the downward movement of the actual cost when the farmers accept the output's direct control(Johnson, 1950; Melolidakis, Leonardos, & Koki, 2018).

As the supply part increases, the price becomes lower, and the reverse is true (Heien, 1977; Chongela, 2015). Despite the supply and demand dictating a product's worth, the production cost influences it and has significant input in price determination. In most processes, the cost has a small influence on agricultural product pricing. Until recently, traditionally, subsector analysis for agricultural products has mainly focused on supply-side consideration of pricing. This price is incredibly right in the crops sector, where supply is considered first in response to demand. Recent experience showed farmers having lower value of products, specifically during the harvest time, as caused by higher supply (Heien, 1977; Landsburg, 2014). The pricing process of agricultural products is determined by lagged prices, production costs, government interventions, output, and price expectations; this can determine the demand of the product hence

the price (Heien, 1977). From the notion by Heien (1977), price is determined by the demand and supply of a product; that is, the best price will be the interaction between needs and supply (equilibrium point). The seller should determine the price of a product in no way depending on production cost and the element of demand and supply.

4.1.2 Buyers' View of price

Price refers to what must be given up to obtain benefits (Tonya, 2017). In most cases, what is given up is financial consideration (e.g., money) in exchange for acquiring access to goods or service; this means value for a product. But the financial concern is not always what the buyer gives up. Sometimes in a barter situation, a buyer may acquire a product by giving up its effect. For instance, two farmers may exchange cattle for crops. In the modern world today, a product is exchanged with money as a medium of exchange compared to the barter trade era. At this point, the buyers view price as what farmers produce, what the consumers prefer to consume, and willingness to pay and add to inputs associated costs for production (Curtis, Salibury, Ward, & Durward, 2019).

Farmers aim to get a small profit out of the sale to cover the costs of production. Despite the farmers/sellers' objective of profit, buyers need quality products concerning product value. The buyers view the profit over a product concerning buying location. The buyers' decision-making depends on the market location, which determines the buying price of a product (Curtis *et al*., 2019). As the farm product market is easily accessible to buyers can influence the buying decisions for a product. The price of a product can be affected by market location. A study by Curtis *et al*. (2019) concluded that buyers determine the fair price for agricultural products basing on some factors, including product location, product item, production methods, costs, consumer preferences, and seasonality. Market location and product quality take more weight in the pricing of agricultural products. Accordingly, to the views, it is known that the pricing of farm products is determined by buyers depending on the factors considered including location. The main factors for buyers to determine the price of agricultural products are seasonality, product items, location and consumer preference. It is this reason the buyers take advantage of the factors to determine the cost of agricultural products.

This paper has come out with the knowledge that the theory of price is used to determine agricultural products' cost. The theory of pricing basing on demand and supply variables does not apply directly to agricultural products in Tanzania. For the reason of buyers planning for the prices of agricultural products, the government needs to intervene for the farmers sustainability. The buyers take advantage of the seasonality and preference of consumers to price the products from farmers, which bases on buyers' interest. If the trend continues, farmers will be discouraged as their sustainability will be in doubt.

It is learned that farmers can join cooperatives and have a Savings and Credit Cooperative Societ, which will help them avoid selling products during pre-harvesting time as the supply becomes higher. As the stored products become huge, the prices become lower. The farmers need to have the mechanism to manage the setting of farm product prices. Creating a scarcity of products and selling products when the demand for the product is high attracts higher prices.

5. CONCLUSION

This study was looking at the pricing structure of agricultural products in Tanzania for farmers sustainability. The study's main issue was to understand what makes the final decision of prices for farm products. The study has reviewed related studies in the pricing of agricultural products and farmers sustainability and concluded that products' pricing structure is based on different phenomena. The phenomena in which pricing is based is the buyers' view and the sellers' view. Given the setting of the price is where the pricing theory is applicable. The idea of pricing states the importance of using demand and supply mechanisms to determine a product's price. The use of demand and supply gives room for all the participants to come to a conclusive decision, which is the pricing set at the equilibrium point (where the demand and supply curve intersects) (Chen & Groenewold, 2018). The results are useful to both buyers and sellers of agricultural products in the sense of price decisions. It is the sellers who can determine and create

scarcity to allow for low supply. According to the pricing theory, when demand is higher and supply is low, the price of a product will shoot.

This study comes with the recommendation that, the farmers can dictate the price of agricultural products by creating scarcity, which is an essential point in the economy and competition. Scarcity is one of the most significant factors that influence supply and demand. The scarcity of farm products can play a substantial role in affecting competition in any price-based market. Because scarce farm products are typically subject to greater need, they often command higher prices as well. However, the decision to create scarcity can cause losses for fresh products. To create a scarcity of new products, a group of farmers can have association and cropping of the products be alternated by the members to allow scarcity, which is low supply into the market. The study results have an essential issue for policy makers to involve farmers in pricing strategies. The administrative management has always complained about the unfair practice of pricing and measurement of agricultural products since the 1980s. The problem of burning the transportation of un-standardized size is not an administrative issue with understanding determinants of price in economics as the theory statement in supporting pricing. The control of supply and delivered demand can allow the measurement standard and control by sellers.

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