




# Luel Endale

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## **Determinant of Consumer Preference between Local and Imported Rice in Ethiopia: Implications for the National Rice Self-Sufficiency Plan**

**By: Luel Endale**

**Advisor: Asres Abitie Kebede (PhD)**

**A Research Thesis Submitted to Addis Ababa University, College of Business and Economics in Partial Fulfillment of the Requirements for the Award of the Master of Business Administration Degree**

**May 2025**

**Addis Ababa, Ethiopia**



## DECLARATION

I, Leul Endale Assaye, the undersigned, declare that this thesis paper is my original work, prepared under the guidance of Asres Abitie Kebede (PhD). It is submitted in partial fulfillment of the requirements for the degree of Master of Business Administration, Addis Ababa University, College of Business and Economics. All sources of materials used for the thesis have been recognized in full. I further confirm that the thesis has not been submitted either in part or in full to any other higher-learning institution to earn any degree.

Declared by: \_\_\_\_\_

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## CERTIFICATION

I, the undersigned, certify that Luel Endale has conducted his thesis under my guidance, and to the best of my knowledge, all sources of materials used for the thesis have been recognized in full.

Asres Abitie (PhD)

Advisor

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## ABSTRACT

*Despite major efforts, Ethiopia faces a growing challenge in its rice sector, with consumption rapidly outpacing domestic production and leading to substantial import dependency, straining foreign exchange reserves and exposing the nation to global market volatility. While existing literature primarily addresses supply-side constraints, this study identifies a critical gap in understanding consumer demand as a key driver of persistent import reliance. This research, conducted in Addis Ababa, Ethiopia's largest urban market, aimed to analyze the determinants of consumer preference between local and imported rice. Employing a quantitative descriptive survey design, data were collected from 384 urban consumers using a structured questionnaire, and multinomial logistic regression was utilized to identify influencing factors. The findings reveal that quality-related attributes, specifically taste, cooking performance, and grain size/appearance are the most significant predictors of consumer preference for imported rice, with packaging also emerging as a strong determinant. Counter-intuitively, price sensitivity was positively associated with imported rice preference, suggesting that urban consumers perceive imported rice as offering superior value for its higher cost, while cultural influence was the only significant predictor that strongly favored local rice, and availability did not significantly differentiate preferences. The study concludes that the persistent reliance on imported rice is largely driven by a perceived quality gap, highlighting that merely increasing domestic production volume is insufficient; achieving rice self-sufficiency necessitates a strategic shift towards enhancing the quality, branding, and marketing of local rice to align with urban consumer preferences.*

**Key words:** *Consumer preference, local rice, imported rice, quality attributes, grain size, taste, cooking performance*

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# Chapter 1

## Introduction

### 1.1 Background of the study

Rice is one of the world's most important staple crops, feeding a large share of human population. It is the primary calorie source for more than half of the global population, with over 90% of production coming from Asia (Fukagawa & Ziska, 2019). In Asia, rice is key for food security and rural livelihoods, while in Africa demand for rice is among the fastest growing of any staple crops (Africa Rice, 2020). Indeed, rice has become a strategic commodity in Africa: it is the predominant dietary energy source in West Africa and the second most important cereal in Africa overall (Africa Rice, 2020). Due to population growth, rapid urbanization, and changing diets, African rice consumption has surged in recent decades. Between 1990 and 2018, continental demand nearly quadrupled (from about 10 to 40 million tonnes) (De Vos, 2023). Yet local production has lagged, pushing many African countries to import large volumes. Local production covers only ~60% of sub-Saharan demand, with annual imports costing roughly US\$6–7 billion (Africa rice, 2020).

In this context, Ethiopia follows a similar case to other African countries. Rice was introduced to Ethiopia in the late 20th century, but since the 2000s, it has become an increasingly important food and cash crop. The Ethiopian government designated rice a “millennium crop” and made it a priority for production expansion. The country has extensive suitable land – estimates suggest about 6.0 million hectares of rain-fed lowland and another 3.7 million hectares of irrigable areas are potentially available for rice cultivation and agro-climatic conditions that are generally favorable for the crop (MoA, 2020). As a result, domestic rice production has grown: cultivated area expanded from roughly 10,000 ha in 2006 to about 63,000 ha by 2019, and annual paddy rice production increased from ~71,000 tonnes in 2008 to over 171,000 tonnes in 2019 (MoA, 2020). However, these gains have been shadowed by even faster growth in consumption and imports. Ethiopia's rice self-sufficiency fell from about 60% in 2008 to only 20% by 2016 (MoA, 2020). In concrete terms, official data show rice imports jumping from 22,500 t in 2008 to 311,827 t in 2016 (import value rising from US\$12.1 million to \$170.7 million) (MoA, 2020). This trend has continued: in 2022, Ethiopia imported roughly 900,000 tonnes of rice – up 13% from the year

before – while local production remained an order of magnitude smaller (around 130–140,000 t) (ITA, 2024). In short, imports now account for the large majority of Ethiopia’s rice consumption.

This heavy reliance on imported rice has a major impact on Ethiopia’s food security and economy. Importing hundreds of thousands of tonnes of rice annually affects foreign exchange reserves and exposes domestic consumers to global market volatility. Even a short-lived export ban or price shock in major exporter countries can cause domestic shortages or sharp price spikes. In 2016, the cost of Ethiopia’s rice imports was already about US\$170 million; by 2022 the import bill was likely several times higher, representing a substantial opportunity cost for the nation. Policymakers have therefore emphasized the need to substitute imports by boosting domestic production and productivity. Yet despite large investments and national rice development strategies, the gap persists – signaling that simply expanding area or yields may not be sufficient.

To understand Ethiopia’s rice sector, it is essential to examine both supply- and demand-side factors. On the supply side, numerous structural constraints have limited domestic output. Productivity remains low due to factors such as inadequate use of improved seeds, insufficient irrigation, and limited mechanization (Mekonen, 2024). Infrastructure challenges further aggravate the situation. Many rice-producing areas have poor road access, making it costly to transport paddy to mills or markets. Processing infrastructure is also weak: most rice mills are small, outdated machines that yield large proportions of broken or discolored grain (Assaye & Alemu, 2020). These supply-side issues have led to low per-hectare productivity and a high cost of production. In addition to agronomic and processing problems, policy and institutional factors have limited progress. Rice has only recently been a priority in Ethiopia’s agricultural plans, and growth strategies. Generally, despite large untapped potential land and supportive climatic conditions, the combination of challenges in input provision, technology adoption, infrastructure access, and institutions' capacity has kept domestic rice production well below national demand.

However, the supply side is not the full story. An equally important but less-studied factor is consumer preference. As market research indicates, many Ethiopian urban consumers have a distinct taste for imported rice. Imported rice varieties – typically long-grain, aromatic, or

parboiled types – are perceived to have superior quality compared to locally milled rice. Surveys and market analyses in Africa consistently show that attributes like grain appearance, cleanliness (freedom from stones or dust), uniformity, and cooking quality drive consumer choices. For example, studies in West Africa report that “cleanness, whiteness and taste” are top purchasing criteria for imported rice, with consumers willing to pay premiums for whiter and cleaner rice (Nakelse et al, 2013). In Nigeria, researchers find that many consumers believe “imported rice is of better quality, well packaged, and easier to cook” compared to local types (Emmanuel & Gbigbi, 2024). These perceptions – often reinforced by marketing and branding of foreign rice – lead to an import preference: households, especially in cities, tend to choose the polished, consistent-quality varieties arriving from Asia or neighboring countries.

In Ethiopia, early evidence suggests a similar pattern. Consumer segmentation analysis in the National Rice Strategy categorized urban buyers into three groups: those who want “*quality rice*” (aromatic, long-grain, packaged), those who are indifferent or mix local and imported, and those who prefer local rice mainly as flour for injera (MoA, 2020). By implication, the first group (seeking “quality rice”) is largely reliant on imports, since most domestic rice is less refined and less aromatic (MoA, 2020). Another study of Ethiopian rice markets found that urban consumers prefer locally-produced rice for making injera but imported rice for consumption as boiled (table) rice (Assaye & Alemu, 2020). This reflects the common cooking practices: injera production (often mixed with teff) can use coarser local rice without regard to broken grains, whereas boiled rice is eaten plain and consumers value its texture and appearance. In practical terms, this means that higher-income and urban households (who eat more boiled rice) tend to buy imports, while local rice is largely sold into rural or injera-making channels (Assaye & Alemu, 2020).

These demand-side observations highlight that consumer perceptions of taste, quality, and consistency are major determinants of the rice import phenomenon. Imported rice often has the attributes Ethiopian shoppers prefer (e.g. whiteness, uniform grain size, packaging), whereas local rice suffers from stigma (associated with broken grains, variable cooking quality, and sometimes undesirable color or flavor). Such non-price factors can explain why, even if local rice were made available at similar prices, many consumers might still choose imports. Notably, existing literature on Ethiopian rice has paid relatively little attention to this aspect. Most research and policy work have concentrated on production constraints (input use, irrigation, varietal development), with

scant formal study of consumer demand. By contrast, studies from other African contexts confirm the importance of market preferences. In Ghana, for instance, consumption has risen sharply and local output remains only ~40% of demand (Adabrah-Danquah, 2025), in part because urban consumers favor imported rice. Regional surveys echo that health/nutrition attributes alone do not outweigh the perceived quality gap: even where local rice is known to be nutritious, its sale ability suffers if appearance and cooking properties lag behind imports.

Given this background, there is a pressing need to focus on consumer behavior as a critical but under-explored driver of Ethiopia's rice market dynamics. Understanding why Ethiopian consumers – especially in urban areas – choose imported brands will help explain the persistence of import dependence and suggest ways to make local rice more competitive. For example, if factors like grain size uniformity or absence of foreign matter are key, then investing in better cleaning and milling technology could raise the appeal of domestic rice. If taste or aroma is important, then research into locally adapted aromatic varieties could be prioritized. In sum, the rationale for this research is to fill the knowledge gap on the demand side of the rice market, complementing the existing production-oriented literature. By analyzing consumer preferences, this study will contribute to academic understanding of food choice in developing economies, as well as inform policy strategies for import substitution and food security.

## 1.2 Statement of the Problem

Ethiopia's heavy reliance on imported rice causes serious challenges. As domestic production falls short, the country spends scarce foreign currency on imports, which can exacerbate trade imbalances. By 2019 roughly 75% of Ethiopia's rice consumption was imported (Alemu & Thompson, The emerging importance of rice as a strategic crop in ethiopia, 2020). This trend undermines food security and rural development: farmers lose market share, and the nation becomes vulnerable to price shocks from world markets. For example, disruptions like export bans or global supply squeezes (as occurred during COVID-19) can rapidly drive-up local prices because domestic production cannot fill the gap (Alemu & Thompson, The emerging importance of rice as a strategic crop in ethiopia, 2020). The gap between production and demand is forecast to widen as Ethiopian incomes rise, unless imports are curtailed.

Domestic production faces structural constraints. The national rice strategy and research documents identify several systemic issues: small average farm size and reliance on rainfall limit yields; irrigation infrastructure is inadequate; and agricultural extension for rice is still developing. Even where land is available (e.g. Fogera Plain), poor rural roads and storage facilities impede efficient distribution. Input markets for rice are underdeveloped: certified seed supply and fertilizer access remain low compared to crops like wheat. One review note that rice farmers often reuse low-quality seed and apply fertilizer at only a fraction of recommended rates (Assaye A. H., 2023). Post-harvest, the milling sector is fragmented: most domestic rice is processed by small mills that produce a high proportion of broken grains. With no premium for quality, processors have little incentive to upgrade. In sum, Ethiopia's rice supply system has significant bottlenecks at both the farm and processing levels (Assaye A. H., 2023).

A critical research gap is that these supply-side analyses rarely consider consumer demand. Existing policies and studies focus on boosting production (e.g. through irrigation and improved varieties) rather than on why consumers prefer one rice over another. In practice, urban buyers often choose imports despite higher prices, suggesting that factors like quality and image are at play. This aspect is under-explored in Ethiopian research. Studies in other countries illustrate the importance of the demand side: for example, in Nigeria and Ghana researchers have found that urban consumers prefer imported rice because of perceived quality advantages (Peterson-Wilhelm B. &.-M., 2022). In Ghana, most consumers report preferring imported over local rice due to grain appearance and ease of cooking. In Nigeria, imported rice commands a price premium of 20% or more over the cheapest local brands (Peterson-Wilhelm B. &.-M., 2022). By contrast, scant data exist on Ethiopian consumers' attitudes and whether similar dynamics occur here.

This study thus fills a unique niche by shifting focus to demand-side dynamics. It will examine consumer preferences directly, rather than assuming demand will automatically follow increased supply. In particular, the research will concentrate on Addis Ababa, Ethiopia's largest city. Addis Ababa is a diverse urban market where many consumers regularly purchase both local and imported rice. Studying this city's consumers provides insight into the high-end urban segment that currently drives most rice imports. Results from Addis are likely more relevant to national import pressures than rural data would be.

### 1.3 Research Questions

This research paper has tried to answer the following questions:

**Main Question:** What are the key determinants of consumer preference for local rice versus imported rice in Addis Ababa, Ethiopia?

#### Sub-Questions:

- What rice product attributes (e.g. grain size, aroma, color, packaging, price) most strongly influence consumers' choices between local and imported rice?
- How do socio-economic and demographic factors (such as income, education, age, and cultural background) affect preferences for local versus imported rice?
- How do perceptions of quality and safety (including brand or country-of-origin effects) shape demand for imported rice relative to local rice?
- To what extent are consumers aware of or concerned about supporting domestic production (ethnocentrism) when selecting rice?

### 1.4 Research Objectives

The objectives of this study, aligned with the above questions, are:

#### 1.4.1. General Objective

To identify and analyze the determinants of Ethiopian consumer preference between local and imported rice, focusing on the urban market of Addis Ababa.

#### 1.4.2 Specific Objectives

- To assess consumer perceptions of local and imported rice on key attributes (quality, price, appearance, convenience, etc.).
- To determine the relative importance of these attributes in driving purchase decisions.

- To examine the influence of demographic factors and purchasing contexts on rice preferences.
- To evaluate the potential for strategies (e.g. quality improvement, branding, promotion) that could increase the competitiveness of domestic rice.

### 1.5 Significance of the Study

This research is relevant to multiple stakeholders. For policymakers, understanding consumer demand is crucial to designing effective rice sector strategies. If, for instance, quality and branding are major factors, the government may need to support stricter quality standards and marketing initiatives. The findings can inform import-substitution policies by identifying which domestic rice attributes to enhance in order to capture market share (Assaye & Alemu, 2020).

Local producers and processors will benefit from knowing what buyers value. By tailoring production (e.g. selecting grain types or processing methods) to consumer tastes, Ethiopian rice businesses can better compete with imports. For example, if aroma or uniformity are found to be key, breeders might prioritize those traits in new varieties. Understanding the premium consumers place on imported rice quality can help local producers target niche markets or justify investments in technology.

The study also has broader economic significance. Ethiopia spends hundreds of millions of dollars on rice imports annually (Alemu & Thompson, The emerging importance of rice as a strategic crop in ethiopia, 2020) Reducing this burden (through greater domestic consumption) would improve foreign exchange reserves and rural incomes. In this sense, insights into consumer behavior support the national agenda of boosting self-sufficiency. Finally, from an academic standpoint, the study contributes rare Ethiopia-specific evidence on food consumer behavior. As one analysis notes, aligning consumer preferences with production can guide breeders and policymakers in fulfilling demand (Peterson-Wilhelm B. N.-M., 2022). By filling the gap in demand-side research, this thesis will add to the literature on agricultural marketing in Africa.

## 1.6 Scope of the Study

This study focuses geographically on Addis Ababa, Ethiopia's capital and largest urban market. Addis Ababa represents a diverse cross-section of Ethiopian consumers, including government officials, business people, students, and migrants from all regions. The study will examine **consumer preferences** for rice, specifically contrasting locally produced versus imported varieties. Key variables include perceived product **attributes** (such as grain quality, price, packaging, and culinary use), as well as socio-economic factors. While the study considers the context of import substitution and national policy, its analysis is limited to the demand side; it does not directly investigate production technologies or supply-chain logistics. The time frame is the present-day market situation, reflecting current consumer attitudes and market conditions. By focusing on urban consumers and milled rice products, the study does not cover rural consumption patterns or the use of rice in traditional agrarian economies. The goal is to capture the factors most relevant to the purchasing decisions of city households and retailers, which drive market trends.

## 1.7 Definition of Terms

- **Consumer preference:** The degree to which buyers favor one product over another, based on tastes and perceptions of attributes (quality, price, etc.). In this study, it refers to how Ethiopian consumers choose between local and imported rice.
- **Imported rice:** Rice that is grown and milled outside Ethiopia and then brought into the country. This includes both long-grain/aromatic varieties and lower-quality broken rice, primarily originating from Asia (e.g. India, Pakistan, Thailand).
- **Local rice:** Rice produced and milled within Ethiopia. It includes varieties cultivated by Ethiopian farmers (such as Fogera or upland types) and processed by local mills.
- **Product attributes:** Observable or perceivable characteristics of rice as a product. Examples include grain size and shape, color, aroma, texture (when cooked), packaging, price, brand or origin label, and suitability for specific dishes (like injera).
- **Self-sufficiency:** The extent to which domestic production meets domestic consumption. It is usually expressed as a percentage of consumption satisfied by local output. A 100% rice self-sufficiency would mean Ethiopia grows all the rice it consumes.

- **Food security:** Although not the primary focus here, this term refers to reliable access to sufficient, safe, and nutritious food. Rice plays a role in Ethiopia’s broader food security strategy, given its growing dietary importance.

## Chapter 2

### Literature Review

#### 2.1 Theoretical Review

Consumer food choices can be understood through several behavioral theories that explain how attitudes, beliefs, and decision processes drive preferences. This study has reviewed different behavioral theories. The Theory of Reasoned Action (Fishbein & Ajzen, 1975) suggests that a person’s behavioral intention is shaped by two factors: their attitude toward the behavior and the subjective norms surrounding it (LaCaille, 2013). In the rice-consumption context, “attitude” may be a consumer’s overall evaluation of buying local versus imported rice (for example, beliefs about taste, healthfulness, or price), while “subjective norm” reflects perceived social pressure (for instance, the expectations of family or community regarding which type of rice to eat). Ajzen (1991) extended this model into the Theory of Planned Behavior by adding the component of perceived behavioral control, accounting for how factors like price, availability, or cooking ability may facilitate or hinder behavior. As Ajzen observes, TPB “goes beyond product attributes – the focus of the multi-attribute...models – to consider not only attitudes toward choice alternatives but also normative pressures and perceived behavioral control” (Ajzen, 2015). In practice, an Ethiopian consumer’s intention to buy local or imported rice would thus be driven by (a) their personal beliefs about each rice type (good or bad), (b) their sense of what important others think they should eat (e.g. family members preferring a particular kind), and (c) whether they feel able

to execute that choice (e.g. whether imported rice is affordable or physically available in the market).

Another foundational perspective is the Consumer Decision-Making Process (CDMP), which frames buying as a sequence of stages from need recognition through purchase and post-purchase evaluation. Classic texts note that consumers (even in habitual purchases) begin by recognizing a need: for rice, this might simply be noticing that the staple has run out (Assael, 1987). In routine (low-involvement) situations a shopper may quickly move to purchase without much deliberation, but changes in the market (such as a new imported variety or a special offer) can trigger a more complex decision process. For example, Assael (1987) emphasizes that “the first step is need identification” (Assael, 1987), and once a need is recognized, consumers engage in information search and evaluation of alternatives (e.g. comparing local and imported rice on price, quality, origin, etc.) before deciding which to buy. If the decision is complex (e.g. buying rice from multiple available brands/types), consumers will systematically search and evaluate attributes. Conversely, if purchasing is routine, many steps may be bypassed (Assael, 1987). In Ethiopia, an urban middle-class buyer might consciously compare the aroma, grain length, and packaging of local versus imported rice, while a rural consumer might simply repurchase the same familiar local rice habitually. The CDMP thus highlights that consumer choices result from either deliberate, multi-step reasoning or simple heuristics depending on involvement and context.

Beyond these general behavior theories, food choice models specifically account for how people evaluate the properties of food products. Lancaster’s (1966) Characteristics Approach holds that consumers derive utility from the attributes of goods rather than from the goods themselves. Under this view, each rice product (whether local or imported) is valued for its bundle of attributes (such as taste, texture, nutritional quality, price, and so on), and consumers select the alternative whose combined attributes best satisfy their needs. For instance, one consumer might highly value the aromatic quality and uniform texture of an imported long-grain rice, while another values the lower price and familiarity of a local variety – even if that local rice has other attributes (e.g. shorter grain) that differ. Lancaster’s model helps explain why different consumers choose different types of rice: each makes trade-offs among attribute bundles rather than comparing rice types on a single scale.

Another influential framework is the Total Food Quality Model (Grunert, 2005), which conceptualizes how consumers form expectations and assessments of food quality over time. According to this model, people use cues to form an expected quality before purchase and then compare with experienced quality after eating (Grunert, 2005). Quality cues are of two kinds: intrinsic cues, which are inherent physical properties of the food itself (e.g. the color, aroma, and texture of rice), and extrinsic cues, which are added information like brand, price, packaging, or country of origin (Grunert, 2005). For example, a branded package of Thai jasmine rice (an extrinsic cue) may lead consumers to expect high sensory quality; after cooking, they then evaluate whether the actual taste and texture match that expectation. In Ethiopia, imported rice often arrives in uniform branded packaging, signaling high quality to some consumers, whereas local rice might be sold in bulk without labeling (potentially lowering initial expectations). The Total Food Quality Model emphasizes that what matters is the match (or mismatch) between expected and experienced quality, so repeated satisfactory experience with a product reinforces future preference.

Finally, consumer decision models distinguish compensatory from non-compensatory choice rules (Wayne Hoyer). In a compensatory decision rule, a shopper considers multiple attributes and allows trade-offs – a weakness on one attribute can be offset by strength on another. For example, a consumer might accept the higher price of an imported rice if its superior aroma compensates for the cost. By contrast, in a non-compensatory rule the shopper sets minimum cutoffs on attributes and rejects any option that fails to meet them. For instance, if a housewife insists that her rice must be at least 2 mm long grain to make proper injera flour, she will eliminate any shorter-grain variety outright (no matter how cheap it is) (Wayne Hoyer). These decision strategies may vary by consumer segment: high-involvement buyers often apply compensatory reasoning, while low-involvement or habit-driven buyers rely on simpler rules (e.g. lexicographic or conjunctive cutoffs) (Wayne Hoyer).

Each of these theories and models can be applied to interpret Ethiopian consumers' rice preferences. For example, TRA/TPB suggests that the strong positive attitude some urban consumers have toward aromatic imported rice (believing it tastes better and signals social status) and the normative trend among peers may lead them to intend to buy imported rice, as long as they feel they can afford it. The CDMP implies that such consumers will engage in a more extensive search and evaluation of imported varieties, whereas for many rural households rice purchase is a

routine choice satisfied by familiar local varieties. Lancaster's attribute approach underscores that consumers choose rice based on bundles: one bundle (imported rice) might be high in sensory quality and consistency, another (local rice) might score high on price and cultural familiarity. The Total Food Quality Model further suggests that if Ethiopian shoppers' expectations (informed by extrinsic cues) are met or exceeded by the actual quality of a chosen rice, they will reinforce their preference. In practice, market surveys in Ethiopia identify three main consumer segments: a small affluent group that *prefers imported quality rice* (aromatic, long-grain, branded) entirely, a middle segment that *uses both local and imported rice*, and a large low-income segment that *prefers local rice* (often milled into flour for injera) (MoA, 2020). These segments reflect differences in attitudes, norms, and decision rules. High-income consumers may employ compensatory trade-offs to obtain quality attributes (willing to pay more for imported rice), while price-sensitive consumers set strict criteria (non-compensatory) to purchase the most affordable rice that meets basic cooking needs. Thus, integrating these frameworks reveals how underlying motivations and cues shape the observed preference for local versus imported rice in Ethiopia.

## 2.2 Overview of Rice Consumption

Rice plays a crucial role in global food security and diets. It is estimated that more than 1.6 billion people worldwide rely on rice as a primary source of food, and it accounts for roughly 16–17% of the global caloric intake (Pariona, 2019). First domesticated in parts of India and Southeast Asia several thousand years ago (Pariona, 2019), rice has spread across the world. Today, global milled rice production has grown to over 500 million metric tons (milled basis) annually. Recent data indicate world production of milled rice reached approximately 520–530 million tons (crop year 2023/24) (Eghosa). Production and consumption are overwhelmingly concentrated in Asia: for example, China and India together account for well over half of total production. USDA estimates show China produced ~147.7 million tons and India ~125.0 million tons (milled) on a recent annual-average basis [usda.gov](https://www.usda.gov). These two countries likewise dominate consumption, with China consuming ~153.7 million tons and India ~109.2 million tons per year [usda.gov](https://www.usda.gov). Other Asian countries – notably Bangladesh, Indonesia, Vietnam, Thailand, and Burma – each consume tens of millions of tons. By contrast, rice consumption in Africa, Latin America, and the Middle East is much smaller in absolute terms (typically a few million tons per country). On a per-capita basis, Southeast Asian and South Asian populations tend to be the highest rice consumers, whereas Europe and the Americas rely mainly on other grains.

Global rice trade is also dominated by Asia. India has become the world's largest rice exporter, shipping over 20 million tons annually in recent years (over 40% of global exports) (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022) ers.usda.gov. Thailand, Vietnam, Pakistan, and the United States are next largest exporters; together these six countries account for about 90% of all rice tradeers.usda.gov. Importers include the Philippines, China (recently re-entering as a large importer under drawdowns), Iran, and many African and Middle Eastern nations. In 2022, global rice prices and trade were significantly affected by weather and policy events – for example, a severe drought in India led the government to initially propose export restrictions on certain rice grades (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022) – illustrating rice's vulnerability to shocks.

Within this global picture, Africa has emerged as a major rice-consuming region. Consumption has surged in recent decades: driven by rapid population growth (over 100% rise since 1990 (Yuan, 2024)) and urbanization, many African diets now include a higher share of rice alongside traditional staples. However, domestic production has not kept pace, making Africa heavily import-dependent. As Shen et al. (2024) report, Africa produces only about 60% of the rice it consumes (Yuan, 2024) (a figure that has only slightly improved despite a nearly 40% expansion of rice area in the last decade). As a result, roughly 40% of Africa's rice consumption is imported (Yuan, 2024). Sub-Saharan Africa in particular is the world's largest rice-importing region, responsible for about 30% of global rice import (ITA, 2024). (In fact, over 25 million tons of rice, worth some \$7 billion, were imported by African countries between 2018–2020 (Yuan, 2024).) Nigeria stands out as Africa's top consumer (~7.3 MMT/yearers.usda.gov), but even Nigeria meets only about two-thirds of its demand via domestic rice; the rest is met by imports. Other large African markets – such as Senegal, Côte d'Ivoire, Ghana, and Mozambique in West Africa, as well as Kenya and Madagascar in East Africa – similarly rely on imports for a significant share of consumption. These patterns reflect changing diets (rice is valued as a convenient, energy-rich food) but also the reality that many African farmers lack the irrigation, improved seeds, and infrastructure to close the yield gap. In Ethiopia itself, for instance, yields remain below potential, so that meeting growing demand without either expanding acreage or importing rice will be challenging. As Shen et al. warn, unless productivity is substantially increased, Africa “can avoid

further increases in rice imports” only by closing large yield gaps; otherwise, imports (and sometimes land conversion) must rise to meet demand (Yuan, 2024).

Ethiopia’s rice consumption illustrates these trends on a national scale. Historically, rice was a minor crop in Ethiopia – a food introduced in the 1970s (Alemu, Ethiopia’s import dependence on rice-exporting countries: implications for policy and development responses, 2022) and not widely grown initially. In the last two decades however, rice has gained prominence. Domestic production has grown substantially: the National Rice Development Strategy reports rice cultivation area expanding from about 10,000 hectares in 2006 to over 63,000 hectares by 2019, and annual production rising from roughly 71,000 tons in 2008 to over 171,000 tons by 2019 (MoA, 2020). Despite this, consumption has grown even faster. Self-sufficiency in rice plunged from around 60% in 2008 to merely 20% by 2016 (MoA, 2020), as urbanization and income growth fueled demand (and consumers began substituting rice for more expensive cereals in urban diets). In concrete terms, rice imports exploded from about 22,500 tons in 2008 (worth \$12 million) to over 311,800 tons in 2016 (\$171 million) (MoA, 2020) By 2021 roughly three-quarters of Ethiopia’s rice was imported (Alemu, Ethiopia’s import dependence on rice-exporting countries: implications for policy and development responses, 2022), making rice one of the most import-dependent staple foods. The great majority of these imports come from Asia (notably India and Pakistan), supplying white long-grain varieties that tend to be cheaper per ton and more uniform in quality than much of the domestic crop.

Ethiopia’s government has responded to this situation with policy initiatives. Recognizing rice’s growing importance, authorities have made it a priority crop (explicitly in a 2008 agricultural development directive (Alemu, Ethiopia’s import dependence on rice-exporting countries: implications for policy and development responses, 2022)) and in 2010 launched a National Rice Research and Development Strategy (NRRDS, 2009–2019) to address production challenges (MoA, 2020). This was later replaced by a second strategy (NRDS-II, 2019–2030) aiming to coordinate interventions across the value chain (MoA, 2020). Efforts include promoting higher-yielding rice varieties (such as NERICA types), improving irrigation, and supporting farmers with training and subsidies. Nonetheless, local rice still struggles to outcompete imports on price and certain quality attributes. In some markets, government has tried tools like minimum price supports or improved marketing for local rice. But consumer preferences remain a dominant factor: many

urban and high-income Ethiopians favor the consistency and perceived hygiene of imported rice, while large segments of the population continue to rely on local rice (especially when milled into flour for injera preparation) (MoA, 2020). The result is that, despite production gains, Ethiopia's rice consumption continues to heavily rely on imports.

In summary, at the global and regional levels rice demand is rising and shifting, and Ethiopia is very much part of this trend. Globally, half of humanity depends on rice as a staple (Pariona, 2019); in Africa, expanding consumption has made the continent the largest aggregate rice-importing regioners.usda.gov (Yuan, 2024). Ethiopia's domestic rice sector has expanded rapidly, but it has not kept pace with consumption growth, so import dependence remains high (around 76% of consumption as of 2021 (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022)). These patterns – of massive production in Asia, rising demand and imports in Africa, and domestic efforts in Ethiopia – set the context for analyzing the factors that shape Ethiopian consumers' preference for local versus imported rice.

### **2.3 Determinants of Consumer Preference**

Several categories of factors influence whether a consumer prefers local or imported rice. The literature (from Ethiopia and comparable contexts) highlights product attributes, branding/perceived value, price and nutrition, and demographics.

#### **2.3.1 Product Attributes**

Taste is almost always paramount. For example, a recent choice experiment in urban China found *taste* to be the single most valued attribute of rice, more important than food safety labels or brand (Wibowo, 2024). Similarly, Senegalese consumers were willing to pay a large premium (roughly 20–35%) for fragrant (aromatic) rice. In Nigeria and Ghana studies, preferred aroma, flavor, and texture drive preference: one study in Nigeria found local rice was preferred “largely due to taste,” while imported rice was valued for being clean and free of stones (Abubakar, 2024). In Togo, “cleanness” (absence of debris) and grain whiteness topped the list of desirable traits – consumers would pay 46% and 53% more for these attributes, respectively. Grain size and shape matter too: long-grain, fluffy rice is often seen as higher quality (e.g. Middle Eastern consumers prefer long grain, Africa urban consumers often emulate that preference). Cooking quality (swelling capacity, softness, short cooking time) also influences preference, especially for imported brands designed

for ease of cooking. In summary, intrinsic cues – taste, aroma, texture, grain whiteness, cleanliness (no stones/impurities) – are consistently cited as key factors in rice choice (Ayeduvor, 2018).

### **2.3.2 Branding and Packaging (Extrinsic Cues)**

Attributes like brand name, packaging quality, and labeling can affect perceived value. The Total Food Quality Model suggests that extrinsic cues (brand, price, packaging) shape expected quality before purchase. For rice, a strong brand (e.g. a national or imported label) can signal reliability. For instance, the Ghana study by Ayeduvor (2018) noted that “branded” local rices have improved in recent years. Conversely, unbranded local rice is often considered low quality (coarse, mixed varieties, etc.) (Ayeduvor, 2018). A dated study in Malaysia (Latiff & Ayob, 2017) found consumer knowledge about rice origin influenced attitudes: they recommend more media promotion of local rice to improve its image. In Ethiopia, formal branding of local rice is still developing, but packaging (sacks vs bags) and labeling (e.g. “IR” variety code) may carry signals of quality and traceability. These cues can matter: a nicely packaged, labeled local rice could gain trust over loose rice sold without identification.

### **2.3.3 Price and Nutrition**

Price is almost always a critical factor in developing-country food choices. Many studies find that local rice often competes on price. For example, in Nigeria, local rice is generally cheaper and 23–24% of consumers cited “lower price” as a reason to prefer local rice. In Ghana and Bangladesh, imported rice often commands a premium, pushing price-sensitive consumers towards local supply. Nutrition/perceived healthiness can also play a role: some consumers believe local or traditional grains are healthier or “organic” (even if not proven), but objective nutritional content (brown vs white rice) is less often a deciding factor than taste and price. In the Chinese study, “nutrition” came second after taste but before brand (Wibowo, 2024). In Ethiopia, where rice is often a relatively small part of diet cost, nutrition is rarely cited in preference literature, but it is conceivable that, for example, locally-milled rice (with some bran) might be seen as more nutritious by health-conscious buyers.

### **2.3.1 Demographic Influences**

Consumer characteristics shape preference patterns. Urban households, with higher incomes and exposure to global goods, tend to consume more rice in general and often prefer imported rice as

a status or perceived quality choice For instance, Abubakar and Lawali (2024) found that in urban Sokoto, Nigeria, larger household size and higher income significantly increased the likelihood of preferring local rice (perhaps because larger poorer households cannot afford all imported rice) (Abubakar, 2024). In that same study, highly educated, high-income respondents still constituted a significant share (63%) of those who preferred local rice. Other research (Kassali *et al.*, 2012 in Nigeria) suggests higher education and head's occupation also affect local vs import choice. Gender or age effects are rarely consistent, though some studies find women's preferences may differ due to cooking roles. Rural consumers often have more access to cheap local rice (from their own or neighbors' fields) and may prefer it by habit, whereas city dwellers lean toward polished imported rice (especially for premium servings of *teff* substitutes like *ambasha* or *tela*). Family size matters too: larger families often opt for the less expensive option (usually local), as found in the Sokoto study. In short, higher income and urban residence tend to correlate with greater consumption and often a preference for imported rice (Mano, Njeru, & Otsuka, 2021), while lower-income or larger households may lean on local rice if it is more affordable.

#### 2.4 Local vs. Imported Rice: Comparative Insights

The balance between local and imported rice varies widely by context. In Ethiopia, consumer perception of local rice is only beginning to be understood. Anecdotally, there appear to be distinct segments: one small segment of consumers (often wealthier or expatriates) demand premium quality (mostly imported) aromatic rice (like the Indian "IR" varieties or Thai Hom Mali). Another larger segment consumes whichever rice is affordable and available, mixing local and imported in home cooking. The *National Rice Sector Development Strategy* identifies three consumer types: (1) a small "quality-conscious" group preferring imported aromatic long-grain rice, (2) a middle group that is flexible and uses both local and imported rice for different meals, and (3) a budget-driven group focusing on basic local rice (Meron Abebe, 2016, cited in NRDS, 2019). Formal studies are scarce, but what exists suggests that cleanliness and price drive locals, whereas imported rice is seen as cleaner.

Experience in other countries is instructive:

- **Nigeria:** Studies in different regions show mixed preferences. In Lagos, one survey found ~63% of households preferred local rice, citing lower price and taste, while only ~37% chose imported rice (Adabrah-Danquah, 2025). In Sokoto (northern Nigeria), 52% favored

local rice for taste and price, whereas some consumers preferred imported rice “because of its cleanliness and [being] free from stones and other impurities” (Abubakar, 2024). Across Nigeria, high import penetration in markets has sometimes led to public debates about cleaning of local rice (broken grains, stones) and branding. The common theme is that imported rice often has a reputation for *cleanliness* and uniform quality (even if generic), while local rice is prized for flavor and affordability but seen as less processed.

- **Ghana:** Consumers generally favor imported rice over domestic rice. Asante *et al.* (2013) report that Ghanaian consumers preferred imported rice due to “absence of foreign material, better grain quality, ease of cooking and fragrance” compared to local varieties (Danso-Abbeam1, 2014). Ayeduvor (2018) notes that many Ghanaian consumers perceive local rice as contaminated (with foreign materials) or made of mixed varieties, giving it a lower status and price. However, branded local rices are improving, and some urban campaigns (“Eat Ghana Rice”) aim to boost local consumption. Still, imported Thai and Indian long-grain rices remain popular in Ghanaian markets.
- **Bangladesh:** Bangladesh is somewhat different: it is a major rice producer and consumer, and traditionally self-sufficient. Consumers highly value aromatic and fine-quality varieties (like *jasmine-type* rices), many of which are locally grown or imported from neighboring regions. Imported Basmati from India/Pakistan occupies a premium niche for special occasions, but the bulk of daily consumption is filled by domestically grown popular (*boro*, *aman*) varieties. Bangladeshi consumers care about quality attributes similar to others – grain length, softness, aroma – but access to high-quality domestic rice is generally better than in Africa. (Current import policies aim to keep prices down, e.g. slashing tariffs to 2%.)
- **Kenya (and East Africa):** Urban East African consumers, including Kenyans, overwhelmingly prefer imported Asian rice. Mano *et al.* (2021) note that population growth and rising incomes in cities have made high-quality imported rice the norm: “urban consumers generally prefer high-quality imported Asian rice” (often long-grain, fragrant, and cleaner) over local produce (Mano, Njeru, & Otsuka, 2021). Kenyan households especially discount high-amylose (hard) local varieties and any impurities. Domestic rice

production (in schemes like Mwea) has grown, but it competes poorly on cleanliness and consistency without improved milling.

- **Vietnam:** As a major rice exporter itself, Vietnamese consumers have diverse tastes. Northern and southern Vietnam have different staple varieties (fragrant *ST* rices vs sticky *glutinous* rices). Vietnamese shoppers often exhibit strong preference for local fragrant long-grain rice (e.g. *Jasmine* and *ST25*). Imported rice exists but mainly in cross-border areas or in specialty segments. Notably, Vietnamese consumers may value sustainable or certified rice (e.g. eco-labels) more than in many African markets. In sum, Vietnamese consumers favor domestic premium varieties but also pay attention to extrinsic cues (brand, certification).

**Cultural Bias, Status, and Trust:** In many developing countries, imported rice can carry a status-symbol effect: it may signal modernity or higher social standing. This was observed in parts of Africa and Asia where well-to-do urban families deliberately choose imported rice for special meals (fuelled by a legacy of colonial or international trade associations). Conversely, local rice may be culturally associated with rural life or poverty. Trust is another issue: as noted above, local rice often triggers worries about quality (foreign materials, inconsistent texture). For example, Sokoto consumers explicitly mentioned imported rice being “free from stones and impurities” (Abubakar, 2024). Ghanaian studies similarly highlight the need to “sensitize” consumers to quality local rice to overcome biases (Ayeduvor, 2018). Ethiopian consumers may have similar perceptions, though systematic studies are lacking. Cultural taste preferences also play a role: e.g. some West African markets prefer parboiled rice (often imported), while Ethiopian injera consumption has tended to favor naked local rice ground into flour. Such cultural factors shape how local vs imported rice is perceived in a society.

## 2.5 Empirical Studies on Consumer Preferences

Relatively few empirical studies have surveyed rice preferences in Ethiopia itself. The main published works focus on production or on consumption surveys rather than on attribute preferences. Key references include:

- **APRA and IFPRI research:** A research note by Alemu, Abate, and others (2021) surveyed households in Addis Ababa on rice consumption before and during COVID-19. It

documented the rapid rise in consumption (addis) and noted that over 50% of urban households consume rice regularly, with consumption trends shifting modestly during the pandemic. However, this study was about consumption *patterns*, not attribute preferences. In earlier APRA work, Alemu & Thompson (2020) used national data to show imports jumped from 22,500 t in 2008 to 533,620 t in 2019, and self-sufficiency fell from 70% to 24% (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022). This establishes demand growth but is still top-level.

- **Alemu (2022)** – an APRA blog post – highlights Ethiopia's import dependence, noting that 76% of Ethiopia's rice consumption is now imported (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022) . It also gives supply-chain context: for example, over 90% of Ethiopian rice imports now come from India (Alemu, Ethiopia's import dependence on rice-exporting countries: implications for policy and development responses, 2022) . These analyses raise policy points (need for production, risk of export bans) but do not detail consumer attitudes per se.
- **“AgroBIG” project reports** – government and donor-led efforts (the Ethiopian–Finnish AgroBIG initiative) have produced grey literature on Ethiopia's rice value chain. A mid-term evaluation (2019) noted opportunities for local rice (e.g. as teff substitutes) but also consumer concerns over milling quality. These reports suggest domestic consumers currently have weak demand for local rice and that building consumer awareness is part of the strategy, but they do not present formal surveys.
- **Assaye & Habte (2023)** – this is cited as an Ethiopia-specific study of rice preferences and quality, but it appears to be a recent dissertation or working paper (not readily accessible). The title suggests an analysis of Ethiopian consumer preferences for rice quality attributes. Presumably, it finds that attributes like color, purity, and aroma are important and that many consumers mix preferences for local vs imported. Without the text, we rely on the indication that it exists, underscoring that more such work is emerging.

Comparatively, there is a richer body of empirical evidence from other countries (already discussed above: Nigeria, Ghana, etc). These studies (often choice experiments or surveys) consistently show

that consumers value cleanliness, wholesomeness, and taste, and are willing to pay premiums for them (as in Togo and Senegal). They also demonstrate that income, household size, and location significantly influence choices (e.g. Abubakar & Lawali 2024).

**Lessons for Ethiopia:** Drawing on this literature, the Ethiopian rice strategy could benefit from several insights:

- **Quality improvement:** Many African consumers reject local rice because of impurities or mixed varieties (Ayeduvor, 2018). Investing in better milling (to remove stones, unify grain size) can directly address these issues. For example, the Sokoto study recommends that government “provide new technologies/facilities for local rice production and processing to enhance quality” (Abubakar, 2024).
- **Marketing and branding:** Awareness campaigns can shift perceptions. The Malaysian study (Latiff & Ayob, 2017) explicitly suggests using media to improve knowledge and attitudes about local rice (Zul Ariff Abdul Latiff, 2017). Ethiopian policymakers have similarly emphasized building a domestic “brand” (e.g. through the Rice Flagship Program).
- **Pricing strategies:** Ensuring local rice is priced competitively is crucial. If local rice can be offered at lower price (as in many markets) without sacrificing quality, price-conscious consumers will favor it. Conversely, if imported rice is subsidized or tariff-free, local producers will struggle to compete.
- **Consumer segmentation:** The distinction of consumer types implies targeted interventions: for the “quality-conscious” niche, focus on developing aromatic/well-packed local varieties to compete with imports; for the mass market, improve access and affordability of local rice (perhaps through cooperatives).

Overall, the empirical literature points to the need for demand-side policies in Ethiopia that address consumer preferences, a gap that the current thesis aims to fill.

## 2.6 Research Gaps and Contribution of This Study

The existing literature on Ethiopian rice is largely supply-side and macro-oriented. Little has been published on the **demand side**, especially from the perspective of Ethiopian consumers deciding

between local and imported rice. Notably, there is a gap in systematically measuring consumer preferences, attribute trade-offs, or willingness to pay for quality improvements in local rice. Most citations (Alemu 2022; Dolan et al. 2019) use aggregate data (imports, production) or anecdotal insight. Asante et al. (2013) and Ayeduvor (2018) exemplify this literature gap: they analyze Ghana but highlight that *“this is because local rice is mostly subsistence quality”* and *“only a small portion of local rice is available in key markets”*, implying Ethiopia likely faces a similar issue (Danso-Abbeam1, 2014). But no formal Ethiopian study has quantified how much more a typical Ethiopian consumer might pay for, say, impurity-free local rice, or how demographic groups differ in preferences.

This study’s unique contribution will therefore be to provide primary data on Ethiopian consumer preferences – the “demand-side insights” missing from the literature. By surveying consumers across income levels and locations in Ethiopia, the study can fill the gap identified by NRDS (2019) and others: namely, how do attributes like aroma, cleanliness, and branding affect Ethiopian choices? Do urban middle-class Ethiopians indeed treat local rice as inferior? Can improved processing enable local rice to capture more market share? The findings will directly inform Ethiopia’s self-sufficiency strategy by identifying what Ethiopian consumers value and which factors most strongly drive their preference for local vs imported rice. In short, this thesis aims to illuminate an under-studied aspect of the rice sector – consumer demand – and thereby contribute new evidence to policy discussions on achieving rice self-reliance.

## 2.6. Conceptual Framework

The conceptual framework is an essential element in framing the research. A valuable conceptual framework has been identified based on the theoretical and empirical studies reviewed. Drawing on established consumer-behavior theories, the revised framework integrates product attributes, consumer characteristics, and contextual factors to explain rice preferences. According to Lancaster’s characteristics model (1966), consumers derive utility from a product’s qualities (taste, aroma, appearance, etc.) rather than the good itself (Lancaster, 1966). Likewise, the Theory of Planned Behavior (Ajzen, 1991) holds that purchase intentions stem from attitudes (shaped by beliefs about product attributes), subjective norms (cultural or social pressures), and perceived control (constraints like price or availability) (Ajzen, 2015). In line with these models, the framework posits that a consumer’s socio-economic profile and perceptions of rice quality drive

preference, while external influences (marketing/packaging, cultural norms, market access) moderate these effects. In essence, individual factors and quality beliefs directly affect the choice between local and imported rice (reflecting a utility/attitude model), and contextual cues and norms can amplify or dampen those effects (Ajzen, 2015).

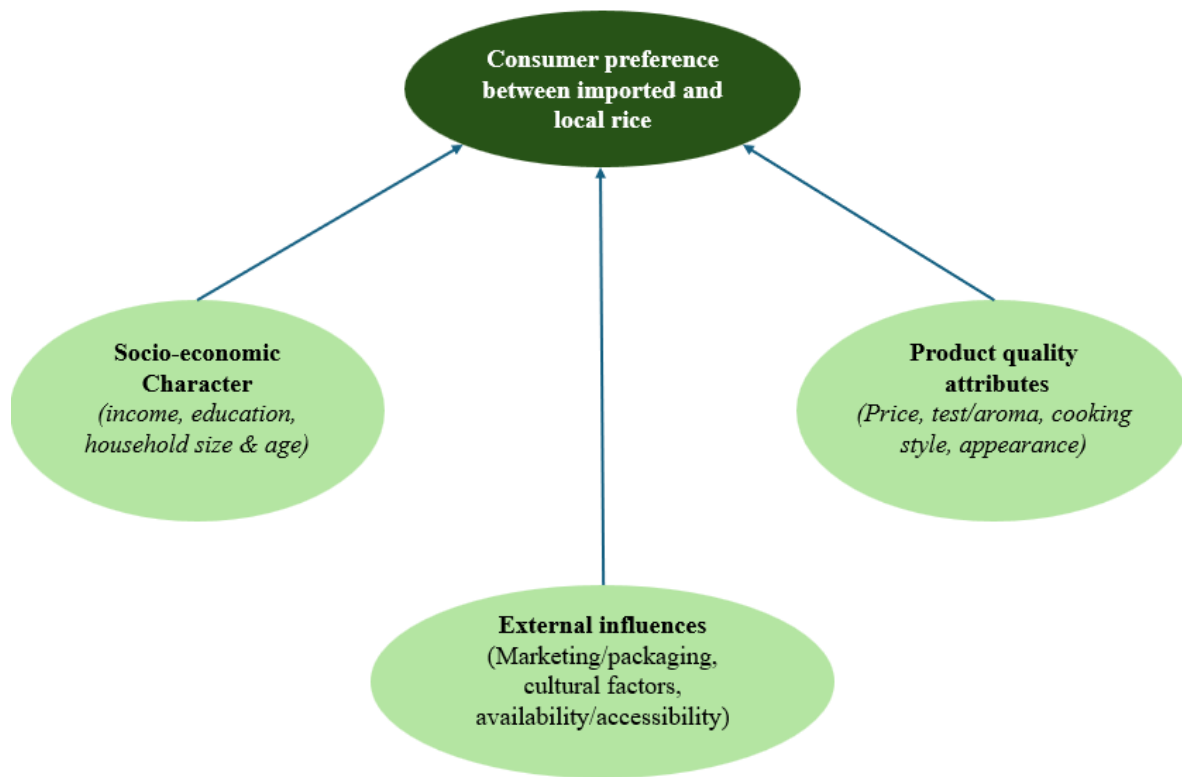
### Key Components of the Framework

- **Socio-economic characteristics:** Income level, education, and household size. For example, higher-income or better-educated consumers may be more willing to pay for premium imported rice, whereas larger households may emphasize value and cost-effectiveness over premium features (Obih & Baiyegunhi, 2017). These demographic factors shape purchasing power and information processing, consistent with consumer decision models that include background variables (Obih & Baiyegunhi, 2017).
- **Perceived product-quality attributes:** Price, taste and aroma, grain size/appearance, and cooking qualities (e.g. cooking time, swelling). Drawing on Lancaster's attribute theory, these characteristics combine to determine the utility a consumer expects from a rice choice (Lancaster, 1966). For instance, a longer-grain rice with appealing aroma and excellent cooking performance will be perceived as higher quality. Price also serves as a quality cue (as noted in price-quality research), so even affordability perceptions enter into the attribute bundle.
- **External influences (moderators):** Marketing/packaging (branding, promotions), cultural norms/traditions, and availability/accessibility. These contextual factors do not directly add utility but change how the above factors translate into choice. For example, strong marketing or attractive packaging can enhance the impact of perceived quality on preference, whereas cultural affinity for locally grown rice (a subjective norm) may reduce sensitivity to price or imported-quality signals. Similarly, limited availability in local markets can make any rice (local or imported) more likely to be chosen, regardless of its attributes.

In summary, the framework hypothesizes that socio-economic traits and perceived quality attributes each have direct effects on whether a consumer chooses local versus imported rice, consistent with utility-maximization and multi-attribute attitude models (Lancaster, 1966).

External influences – akin to the subjective norms and control factors in TPB – moderate these relationships: they can strengthen, weaken, or even override the base effects of income or quality perceptions. This structure aligns logically with the study’s objectives and findings, which highlight a quality gap and cultural factors as key drivers of Ethiopia’s continued preference for imported rice (Ajzen, 2015).

Figure 1 Conceptual framework: (adapted from Lancaster 1966 and Ajzen 1991 and revised by the researcher 2025)



## Chapter 3

### Materials and Methods

#### 3.1 Study Area

The research was conducted in Addis Ababa, the capital and largest city of Ethiopia, chosen because it is the country's most important urban rice market. Addis Ababa's population more than 3.6 million by 2020 (Weldeghebrael, 2021), making it a highly diverse and dynamic consumer base. As Ethiopia's economic powerhouse, Addis Ababa generates roughly 29% of the nation's urban GDP and 20% of urban employment (Weldeghebrael, 2021). The city has a multi-ethnic composition and a mix of income levels, which together provide a representative cross-section of Ethiopian urban rice consumers. Moreover, Addis Ababa contains major retail outlets (supermarkets and small village market) and neighborhoods where both local and imported rice are sold, allowing the study to capture varied purchasing contexts. By focusing on Addis Ababa, the study leverages a concentrated, accessible sample while still generalizing to broader Ethiopian urban consumer behavior.

#### 3.2 Research Approach

This study adopts a quantitative research approach. A quantitative model is appropriate because the goal is to measure and analyze the effects of various factors (taste, price, appearance, etc.) on consumer preference in objective, numerical terms. In line with Creswell's framework, a quantitative approach emphasizes testing hypotheses and measuring variables through structured instruments (e.g. surveys) (Creswell, 2009). By using closed-ended, Likert-scale questions, the study produces numeric data that can be statistically analyzed to identify patterns and relationships. The structured questionnaire and pre-defined constructs allow for precise measurement of consumer attitudes and the use of inferential statistics, which aligns with positive principles of generalizability and objectivity.

#### 3.3 Research Design

A descriptive survey design was selected for this research. Descriptive design is well-suited for characterizing consumer preferences and their determinants at a given point in time. According to Creswell (as cited in SurveyPoint) describing populations or phenomena using surveys is at the

heart of a descriptive design (Creswell, 2009). In this study, the survey design collects data on socio-economic backgrounds and perceptions (taste, price, packaging, etc.) from a cross-section of urban consumers. The design is non-experimental and cross-sectional: there is no manipulation of variables, and data are gathered at one time to describe existing preferences. This approach “describes the characteristics of a population” (in this case, rice consumers) (Creswell, 2009) and enables identification of patterns (e.g. which factors correlate with preference for local vs. imported rice). In summary, a descriptive survey effectively supports quantitative analysis of the determinants of consumer choice without requiring longitudinal or experimental manipulation.

### 3.4 Population and Sample

The target population focuses on adult rice consumers living or shopping in Addis Ababa. Since an exact population frame (e.g., a list of all rice buyers) is not available, a non-probability sampling strategy was used, specifically quota sampling. In quota sampling, the researcher specifies quotas for key subgroups (e.g., gender, age group, income level) and then selects participants non-randomly until each quota is filled. This ensures the sample mirrors the population on those characteristics even though selection within quotas is not random. Quota sampling is common in consumer surveys where proportional representation is needed but full random sampling is impractical. By setting quotas for demographic segments that reflect Addis Ababa’s profile, the study ensures diversity (e.g. men and women, young and old, different income brackets) while remaining feasible for fieldwork.

A sample size of 384 respondents was determined using Cochran’s (1977) formula for sample size calculation. This formula provides a statistically valid sample size for a large population given a desired confidence level and margin of error. Assuming maximum variability ( $p = 0.5$ ), a 95% confidence level ( $z = 1.96$ ), and a margin of error (precision) of 5%, Cochran’s formula yields  $n_0 \approx 384$  (Adabrah-Danquah, 2025).

Cochran’s Formula:

$$n_0 = \frac{Z^2 p(1 - p)}{e^2}$$

Where:

$n_0$  = required sample size

$Z = 1.96$  (Z-score for a 95% confidence level)

$p = 0.5$  (assumed proportion for maximum variability)

$e = 0.05$  (margin of error)

$$n_o = \frac{(1.96)^2 \times 0.5(1 - 0.5)}{0.05^2}$$

$$n_o = \frac{3.842 \times 0.25}{0.0025} = 384.2$$

as shown in the calculation. This sample size is sufficient to generalize to Addis Ababa's population with acceptable precision. (Because Addis Ababa's population is large, no finite-population correction was needed; even if it were, the corrected  $n$  remains close to 384 for populations well above 10,000.) In line with Cochran's recommendation, using 384 as a minimum ensures that the survey has adequate power to detect relationships among variables.

In practice, the study collected responses from slightly more than 384 people to account for any unusable questionnaires, ultimately analyzing data from 384 valid responses. Quota sampling was implemented at diverse locations (see next section) so that the final sample reflected the intended quotas for socio-economic status, gender, and age. This combination of quota sampling and a Cohen-calculated sample size provides a pragmatic yet rigorous foundation for the study's statistical analysis.

### 3.5 Data sources and collection procedure

Primary data were collected through a structured questionnaire. The questionnaire was developed in English and translated to Amharic and used a five-point Likert scale (ranging from strongly disagree to strongly agree) for most attitudinal items. It covered the following domains: (a) respondent socio-economic characteristics (age, gender, income, education, household size), (b) rice consumption habits (frequency and context of consumption), and (c) perceptions of specific factors influencing rice choice. The factor items included taste preference, price sensitivity, grain

size/appearance, cooking quality, packaging/presentation, product availability, and cultural influence (reflecting the literature on rice quality attributes). Each domain was based on previous studies of consumer food preferences, ensuring content validity (i.e. the questionnaire's coverage of relevant topics) and coherence of items within constructs.

Data collection employed a mixed-mode survey administration to reach a broad segment of consumers. Face-to-face interviews with the questionnaire were conducted at major supermarkets (both local and foreign-branded rice sellers), in local open-air markets, and in selected residential neighborhoods across Addis Ababa. This on-the-ground component captured in-person shoppers and allowed the enumerators to clarify any questions. To supplement and expedite data gathering, a digital version of the same questionnaire was also distributed via social media and email (targeting Addis Ababa residents), replicating the same structure. Combining in-person and online methods increased coverage (especially among younger, urban consumers comfortable with digital communication) and improved efficiency.

Respondents were selected at each site according to the quota plan. For example, a researcher might visit a market shop and ask rice buyers to participate, ensuring that the accumulated responses match the demographic quotas (e.g., aiming for 50% male/female, or proportional representation of various income groups). Participation was voluntary; respondents received an introduction explaining the purpose (from the cover letter of the questionnaire) and assurance of confidentiality, as per ethical research practice.

Secondary data sources (e.g. city population statistics or consumption reports) were used only to contextualize and justify the study (see Section 3.1) and did not feed directly into the analysis of preferences. The primary data from the survey are the basis for all quantitative analysis in this thesis.

### **3.6 Data Analysis**

After data collection, questionnaire responses were coded and entered into a SPSS software. The data analysis followed a clear sequence to align with the research objectives.

First, descriptive statistics (frequencies, means, standard deviations) were computed for all variables. This provided a profile of respondents' socio-economic characteristics and summarized average perceptions of each factor (e.g. mean importance of taste, price, etc.). These summaries

helped verify the sample's representativeness and offered initial insights (for example, whether most consumers rated taste as highly important).

Next, Pearson correlation analysis was performed to examine linear relationships among the predictor variables. Pearson's  $r$  measures the strength and direction of association between two continuous variables. Correlations among independent variables were inspected to identify any strong associations that might indicate multicollinearity and to ensure the assumptions for later regression analysis were reasonable.

Finally, the primary inferential analysis used multinomial logistic regression to model determinants of consumer preference for local versus imported rice. Multinomial logistic regression is appropriate because the dependent variable (rice preference) is nominal with more than two categories. In the regression model, the log odds of each preference category were modeled as a function of multiple predictor variables (e.g. demographic factors and attribute perceptions). Prior to fitting the model, assumption checks were carried out. In particular, multicollinearity diagnostics (variance inflation factors) were computed to ensure that no pair of predictors was excessively correlated. The overall fit of the logistic model was evaluated using the likelihood-ratio chi-square test, and goodness-of-fit statistics (such as the Pearson chi-square, deviance, and Nagelkerke's pseudo  $R^2$ ) were examined to confirm that the model adequately described the data. All of these diagnostic results and model-fitting statistics are summarized in Chapter 4.

The full statistical output and interpretation of results are presented in Chapter 4. In Chapter 4, readers will find the detailed tables of descriptive statistics, correlation coefficients, regression coefficients, and model fit indices, along with a discussion of the findings. Section 4.5.2 specifically provides the detailed assumption tests and goodness-of-fit evaluations for the multinomial logistic regression model.

### **3.7 Reliability and validity**

Reliability refers to the consistency of the measurement instruments. As noted, Cronbach's alpha was computed for each multi-item scale to assess internal consistency (Adabrah-Danquah, 2025). A Cronbach's alpha of 0.70 or higher (Tavakol & Dennick, 2011) would indicate acceptable reliability. If any construct (e.g. a set of taste-preference items) fell below this threshold, items

would be examined and possibly removed or reworded to improve the alpha. The goal is to ensure that items intended to measure the same underlying factor are sufficiently correlated. Pilot testing helped enhance reliability: the questionnaire was pretested on a small group of Addis Ababa consumers (around 20 people) before full deployment. Feedback from the pilot was used to refine question wording and eliminate any ambiguous items, thus improving both clarity and reliability of responses.

Validity concerns whether the questionnaire truly measures the concepts of interest. Several steps supported validity. First, the questionnaire content was grounded in literature on rice quality and consumer behavior, lending content validity (the items cover all relevant facets of preference factors). Second, before fieldwork, subject-matter experts (such as faculty or industry stakeholders) reviewed the questionnaire for relevance and clarity, providing face validity. Third, the EFA step in data analysis serves as a test of construct validity: if items load as expected on factors (taste items together, price items together, etc.), this supports the validity of those constructs. In reporting results, any limitations in validity (such as potential bias from non-random sampling) are acknowledged; however, the combination of literature-based items, expert review, and statistical validation promotes confidence that the survey data meaningfully capture the determinants of rice preference.

### **3.8 Ethical Considerations**

This study followed standard ethical guidelines for human-subject research. Participation was entirely voluntary; potential respondents were informed (by a cover letter in the questionnaire) of the study's purpose, estimated time (about 5–10 minutes), and that there were no “right” or “wrong” answers. All participants provided implied consent by choosing to complete the questionnaire. Confidentiality was strictly maintained: no identifying personal information (names, addresses) was collected. Questionnaires were coded anonymously, and data were reported in aggregate form only. Respondents were assured that their answers would be used solely for academic research. The study posed minimal risk – it involved only survey questions about consumer opinions – so no significant ethical hazards were anticipated.

## Chapter 4

### Data Presentation, Analysis and Interpretation

The objective of the study is to identify factors that affect consumer preference between local and imported rice in Addis Ababa. To identify these factors, the necessary data points were collected on rice consumers from March 2025 to May 2025 through a structured questionnaire. In two months, over 420 questionnaires were distributed in both paper format and Microsoft form. The researcher tried to distribute the questionnaires to people of different ages, education levels, and income groups to gain insight from diverse population groups. Of the total of 420 questionnaires, around 395 were collected. Eleven responses were discarded due to missing data and to align with the required sample size. Therefore, 384 fully completed responses were used for this analysis.

The purpose of this chapter is to present a detailed analysis of the data collected. Quantitative analysis was conducted to identify the main drivers of consumer preference between local and imported rice. The collected data were analyzed using SPSS software. The main analyses conducted included descriptive analysis, inferential analysis, and hypothesis testing. And, the chapter also provides an in-depth interpretation of the analysis results.

#### 4.1. Demographic characteristics of respondents

This section presents the demographic characteristics of the respondents, including age, gender, education level income and household size. The result is summarized in the table below. Since there is no invalid data, valid percent and cumulative percent discarded for the demographic analysis

Table 4.1 Demographic characteristics of respondents

Characteristics	Category	Frequency	Percent
Gender	Female	205	53.4
	Male	179	46.6
	Total	384	100.0
Age	18-30	140	36.5
	31-40	153	39.8
	41-50	65	16.9
	Above 50	26	6.8
	Total	384	100.0
Education level	No formal education	11	2.9
	Primary education	35	9.1
	Secondary education	24	6.3
	Diploma	29	7.6
	Bachelor's degree	229	59.6
	Master's degree or higher	56	14.6
	Total	384	100.0
Income	Less than 5,000	29	7.6
	5,000–10,000	79	20.6
	10,001–20,000	147	38.3
	20,001–30,000	93	24.2
	Above 30,000	36	9.4
	Total	384	100.0
Household size	1-2 people	87	22.7
	3-5 people	252	65.6
	6 or more people	45	11.7
	Total	384	100.0

Table 4.1 summarizes the demographic profile of the 384 respondents. The gender distribution is relatively balanced, 53.4% of respondents were female and 46.6% male. The age profile is skewed toward young adults: 39.8% of participants were between 31 and 40 years old, and 36.5% were 18 to 30 years old. In contrast, only 16.9% were aged 41–50, and 6.8% were above 50. This indicates the sample consists primarily of younger, working-age adults. A high level of educational attainment characterizes the sample. Over half of respondents (59.6%) held a bachelor’s degree and 14.6% had attained a master’s degree or higher. Smaller proportions had less education: 7.6% held a diploma, 6.3% had completed secondary schooling, 9.1% primary education, and 2.9% had no formal education. Monthly incomes were mostly in the middle range: the largest group (38.3%) earned between 10,001 and 20,000 ETB, and another 24.2% earned 20,001–30,000 ETB. Meanwhile, 20.6% earned 5,000–10,000 ETB, 9.4% earned above 30,000 ETB, and only 7.6% earned less than 5,000 ETB. Household sizes were typically moderate: 65.6% lived in households of 3–5 people, 22.7% in households of 1–2 people, and 11.7% in households of 6 or more.

These demographic characteristics – a relatively balanced gender split, young adult concentration, high educational attainment, and primarily middle-income levels – suggest the sample comprises educated urban consumers. Such a profile is consistent with broader trends in African urban markets. For example, Demont et al. (2013) observe that urbanization (and related socio-economic change) tends to shift preferences toward convenient staples like rice. The predominantly young, educated sample here is likely more open to new products and convenience foods, a factor that will be examined in relation to rice preferences.

#### 4.2. Rice consumption behaviors

The survey explored respondents’ rice consumption habits and purchasing preferences to better understand factors influencing the choice between local and imported rice.

Table 4.2 Rice consumption behaviors

Statement	Category	Frequency	Percent
What type of rice do you usually purchase?	Both	136	35.4
	Imported rice	152	39.6
	Local rice	96	25.0
	Total	384	100.0

How often do you consume rice?	1-2 times a week	116	30.2
	3-4 times a week	49	12.8
	Occasionally	219	57.0
	Total	384	100.0
Where do you usually buy rice?	Local markets	267	69.5
	Online stores	3	.8
	Supermarkets	90	23.4
	Wholesale shops	24	6.3
	Total	384	100.0

When asked about the type of rice they usually purchase, A group of respondents (39.6%) reported that they usually buy imported rice, making it the most frequently chosen option. Meanwhile, 35.4% indicated they purchase both local and imported rice interchangeably, suggesting flexibility and possible substitution based on price or availability. Only 25.0% of respondents stated that they buy local rice. This distribution indicates a competitive market: imported rice leads in market share, but a substantial minority of consumers either balance both options or favor local varieties. The significant group that buys both types likely includes households that adjust their purchases depending on price or occasion. Those preferring only local rice are often using it for traditional dishes such as injera flour, as reflected in Ethiopian market analyses (MOA, 2020). As a conclusion, even if the local rice still has a good share, imported rice leading the case indicates the urban population relies on imported rice for consumption.

On rice consumption, the majority (57.0%) of respondents said they eat rice “occasionally” (i.e. less than weekly), while 30.2% consume rice 1–2 times per week, and only 12.8% eat rice 3–4 times per week. This suggests that rice, while important to many, is not a daily staple for most in this sample. so rice generally supplements rather than replaces the customary diet. The relatively low weekly frequency may reflect the higher cost of rice compared to indigenous staples and the strong cultural preference for injera and other traditional foods. In other words, rice remains a significant but secondary component of most households’ diets.

The last parameter is rice purchase place. The vast majority (69.5%) report buying rice from local markets (smaller shops). Supermarkets are the second most common outlet (23.4%), wholesale shops account for 6.3%, and only 0.8% of respondents purchase rice online. This predominance of

local markets aligns with general retail patterns in Addis Ababa: lower- to middle-income consumers and less-educated shoppers tend to frequent traditional markets, whereas wealthier, more educated consumers use supermarkets more often (Mequanint B. Melesse, 2019). The high market share of traditional outlets may reflect factors like lower prices and convenience. The very small share of online purchases likely reflects the limited adoption of e-commerce for staple foods in Ethiopia at this time.

### 4.3. Determinants factors of consumer preference

Consumer preference for rice is shaped by a multitude of interrelated factors, each contributing uniquely to the decision-making process. Understanding these determinants is essential for policymakers, marketers, and agricultural stakeholders aiming to align rice production and marketing strategies with consumer expectations. This section presents descriptive analyses of the major variables identified as influencing consumer choices between imported and local rice

#### 4.3.1 Taste

Taste is widely recognized as a central factor in shaping food preferences. In this study, several statements were used to assess the degree to which taste influences consumer decisions regarding rice. The responses were measured using a five-point Likert scale, with higher mean values indicating stronger agreement.

As shown in the table below, the average responses to all four statements suggest that taste is a highly valued attribute in the selection of rice products

Table 4.3 Taste attributes statement

Statements	Mean	Std. Deviation
I believe taste is an important factor when choosing rice	4.32	.673
I prefer the taste of imported rice over local rice	3.54	1.123
The taste of rice significantly influences my decision to buy it	4.14	.783
I am willing to pay more for rice that has a better taste	3.98	.814
<b>Taste</b>	<b>3.9941</b>	<b>.59846</b>

Majority of the respondents agreed that taste matters when choosing rice: the statement “I believe taste is an important factor when choosing rice” received an average score of about 4.3 out of 5, which is very high. This means most people strongly agree that flavor is important. Another statement, “The taste of rice significantly influences my decision to buy it,” also scored high (about 4.1), showing that taste directly affects buying decisions. Overall, the combined average score for taste-related questions is around 4.0, indicating very strong agreement across the board.

However, opinions were more mixed when comparing local versus imported rice. The statement “I prefer the taste of imported rice over local rice” scored lower (around 3.5 on average) and had more variation. This suggests that not everyone thinks imported rice tastes better than local rice – some prefer local rice, or find them similar. On balance, people clearly value taste highly, but they do not all agree that imported rice has the better flavor. In plain terms, the data show that nearly all consumers say taste is important, but only a moderate number favor imported rice purely for taste. The willingness to pay extra for better taste had a mean of about 4.0, meaning many consumers are even ready to spend more if the rice tastes better.

### 4.3.2 Grain size and appearance

Grain size and appearance are one of the major factors shaping consumer preferences in the choice between imported and local rice. Respondents were asked to rate their agreement with statements related to these attributes, and the results highlighted in the table below

Table 4.4 Grain size and appearance attributes statement

Statements	Mean	Std. Deviation
Grain size is an important factor when I choose rice	3.77	.821
I prefer rice with consistent grain size	3.91	.791
Imported rice has a more appealing grain size compared to local rice	3.66	.964
Rice appearance (E.g. cleanliness, color...) is an important factor when I choose rice	4.06	.676

Imported rice has a more appealing appearance (cleanliness, color..) compared to local rice	3.80	.861
I avoid buying rice with broken grains	3.89	1.064
I avoid buying rice with impurities	4.22	.791
Grain size and appearance	3.8996	.52189

Consumers pay a lot of attention to how the rice looks and its grain size. The average score for “Grain size is an important factor” was around 3.8, meaning most people agree grain size matters. Preference for consistent (uniform) grain size scored slightly higher (about 3.9). This suggests that many consumers like rice with even, uniform grains, probably because it looks higher quality. In terms of comparing local and imported, the survey showed people tend to think imported rice has nicer grain size: the statement “Imported rice has a more appealing grain size” scored about 3.7. This is above the midpoint, indicating a general lean towards imported rice for this attribute, but again not overwhelming – some people might disagree.

Appearance (color, cleanliness) was rated very high. The statement “Rice appearance (cleanliness, color, etc.) is an important factor” got about 4.1 on average, showing people pay close attention to how clean and good-looking the rice looks. Likewise, “I avoid buying rice with impurities” scored 4.2, the highest in this group, meaning nearly everyone actively avoids rice that looks dirty or has foreign matter. Avoiding broken grains scored about 3.9, also quite high. People clearly dislike broken or impure rice, as it suggests lower quality or waste. Overall, the combined average for grain size and appearance was about 3.9.

In summary, visual quality is a key concern: consumers value uniform and clean-looking rice and see these as signs of good quality. Imported rice is generally seen as having an edge in appearance and grain consistency, but local rice can compete if it meets those visual standards.

### 4.3.3 Cooking Quality

Cooking quality was identified as another critical determinant influencing consumer choice between imported and local rice varieties. Respondents rated statements focusing on factors such as texture, preparation ease, and cooking time, which all contribute to overall satisfaction.

Table 4.5 Cooking quality attributes statements

Statements	Mean	Std. Deviation
Cooking quality (e.g., fluffiness, non-stickiness) is an important factor when choosing rice	4.31	.724
Imported rice cooks well and meets my expectations for cooking quality	3.94	.848
I like rice that cooks quickly and requires minimal preparation	4.16	.631
I am willing to pay more for rice that has better cooking qualities	3.96	.779
Cooking	4.0924	.52786

Cooking quality was the top priority of all factors studied. The statement “Cooking quality (e.g., fluffiness, non-stickiness) is an important factor when choosing rice” had an average score of about 4.3, the highest of all individual statements. This means nearly all consumers strongly agree that how rice cooks (fluffy texture, not sticking, etc.) is very important. People also said they like rice that cooks quickly and easily (around 4.2 average). In short, convenience and good cooking results matter a lot.

Regarding the comparison between local and imported, the statement “Imported rice cooks well and meets my expectations” scored about 3.9. This suggests many consumers feel imported rice generally cooks better according to their standards, but again the agreement isn’t universal.

Notably, consumers are willing to pay more for better cooking quality (average around 4.0 for “willing to pay more for rice with better cooking qualities”).

Overall, the cooking factor had an average score of about 4.09, the highest of all the factors. This means that in general, cooking performance is the most decisive attribute for consumers. In plain terms, how well and quickly rice cooks is what people care about most, even more than taste. Producers and retailers should note that improving cooking qualities and advertising them could strongly influence customer preference.

### 4.3.4 Packaging and marketing

Packaging and marketing are also selected as one of the determinants influencing consumer preferences in the rice market. The survey results reveal nuanced consumer attitudes towards packaging features and promotional activities in the table below.

Table 4.6 Packaging and marketing attributes statement

Statements	Mean	Std. Deviation
Packaging is an important factor when I choose rice	3.46	1.031
I am more likely to buy rice if the packaging includes clear information about quality and origin	3.64	.975
Imported rice has attractive and appealing packaging than local rice	3.80	.767
I prefer rice that comes in resealable or reusable packaging	3.64	.868
Marketing and advertisements influence my decision to buy local or imported rice	3.35	.934
Packaging	3.5809	.63160

Packaging and marketing came out as moderately important. When asked how much packaging matters, the average score was about 3.5, which is above neutral but lower than the food-related attributes. This indicates that while packaging is not the top concern, it still influences some decisions. Consumers particularly appreciate clear packaging information: “I am more likely to buy rice if the packaging includes clear information about quality and origin” scored about 3.6, meaning many would prefer informative labels.

Consumers also perceived imported rice to have better packaging: that statement scored about 3.8 on average. This suggests imported brands often invest in nicer packaging that appeals to local buyers. Practical packaging features like resealable or reusable bags scored around 3.6, so convenience features are somewhat favored. On the marketing side, “Marketing and

advertisements influence my decision” had a lower mean of about 3.4. This indicates that advertising does have some effect, but it’s weaker than actual product features.

Putting it all together, the combined index for packaging and marketing was about 3.58. In context, this means packaging and branding are a moderate factor: good packaging can attract customers, especially when it highlights quality or convenience, but it’s less important than taste, cooking, or grain quality. However, for imported brands, attractive packaging and clear labels seem to give them a noticeable advantage.

### 4.3.5 Price

Price remains a fundamental determinant in consumer decision-making regarding rice purchases. The data shows that consumers consider price an important factor, with a mean score of 3.79, reflecting its significant influence on choice.

Table 4.7 Price attribute statements

Statements	Mean	Std. Deviation
Price is one of the most important factors when I choose rice	3.79	.906
Imported rice is worth the higher price due to its quality	3.61	1.057
I am willing to pay a higher price for rice that has superior taste and cooking quality?	3.79	.965
Price	3.7266	.58176

Price is always an important factor for consumers. The statement “Price is one of the most important factors when I choose rice” had an average score of about **3.8**, indicating that on balance, people do consider price significant. It isn’t as high as cooking or taste, but it’s still clearly above neutral.

Interestingly, consumers also tended to agree that imported rice is worth the higher price if it has better quality (mean around **3.6**). In other words, many are prepared to pay more for imported rice

because they believe it offers superior quality. This is supported by another statement: “I am willing to pay a higher price for rice that has superior taste and cooking quality,” which scored about 3.8 as well.

This tells us that price sensitivity exists, but it is balanced by quality concerns. Good-quality rice (better taste or cooking) can command a higher price in the eyes of buyers. The overall price index was about 3.73, reinforcing that price is a crucial factor, but not the only one. Consumers weigh price against what they get: they prefer better quality but still pay attention to affordability. For producers, this means there is room to charge more if they can convincingly offer higher value.

### 4.3.6 Availability

Availability is a practical and situational factor that significantly affects consumer behavior in the rice market. Although often overlooked in favor of attributes like taste or price, the presence of a product in local markets can strongly influence purchasing decisions.

Table 4.8 Availability attribute statements

Statements	Mean	Std. Deviation
The availability of rice in my local market influences my decision to buy it	3.71	.708
I choose imported rice because it is more readily available in my local market	3.38	.954
If my preferred type of rice is not available, I switch to an alternative option	3.68	.861
The accessibility of rice (e.g., proximity to stores, ease of purchase) is more important to me than price or quality	3.12	.976
Availability	3.4694	.56003

Availability scored around 3.47 on average, making it a moderate factor. The survey showed that many people are influenced by whether the rice is available in their local market: the statement

“The availability of rice in my local market influences my decision to buy it” averaged about 3.7. This indicates that if a type of rice is not stocked nearby, consumers might choose another. However, people did not agree strongly that they choose imported rice simply because it is more available: that statement got a lower score (around 3.4). This suggests that while availability matters, it may reflect improvements in local supply – perhaps local rice has become easier to find.

Another statement, “If my preferred type of rice is not available, I switch to an alternative option,” scored about 3.7. This means that many consumers are flexible: if they can’t find the rice they usually buy, they will buy something else. The lowest score in this category was for “Accessibility (proximity, ease of purchase) is more important to me than price or quality,” with an average of only 3.1. This shows that although convenience matters, most people still prioritize price and quality over pure convenience.

In plain terms, availability matters, but it is not the strongest concern. Consumers like having their preferred rice on the shelf, and they will switch brands if it isn’t there, but they won’t ignore taste and price just because of a small difference in convenience. For local producers, ensuring wide distribution could help compete with imports, but product quality will still be a more powerful driver of preference.

### 4.3.7 Cultural values

Cultural values and traditions play a subtle but meaningful role in shaping consumer preferences, particularly in diverse societies like Ethiopia, where food is closely tied to identity and customs.

Table 4.9 Cultural attribute statements

Statements	Mean	Std. Deviation
Cultural or traditional practices influence my preference for local rice	3.30	1.093
I choose imported rice because it offers variety and aligns with my personal or cultural preferences	3.00	.945
Cultural factors are more important to me than price or quality when choosing rice	2.75	1.103

Cultural	3.0169	.74453
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Cultural factors turned out to be the least influential of all. Overall, this section’s statements averaged only about 3.0. The statement “Cultural or traditional practices influence my preference for local rice” scored around 3.3, indicating a mild agreement that tradition plays a role for some people. However, the idea that imported rice offers variety that matches personal or cultural preferences scored around 3.0, suggesting only a neutral response – most people neither strongly agree nor disagree that imported rice aligns with their cultural tastes.

The statement “Cultural factors are more important to me than price or quality when choosing rice” scored even lower, about 2.8 on average. This means most respondents disagreed or were neutral: they do *not* put culture above price or quality in their decisions.

In summary, the cultural factor index is the lowest (around 3.02). This tells us that cultural and traditional considerations do play a role but a much smaller one compared to practical factors. Most consumers care more about taste, cooking quality, price, etc., than about cultural tradition. For certain segments of the market (for example, people who strongly value traditional cuisine), culture might matter more, but on average, it is the weakest of the factors studied.

#### 4.4.8 Summary of the overall determinant factors for preference

This section provides a comparative overview of the key determinant factors influencing consumer preference between imported and local rice, based on the mean scores derived from the Likert-scale responses.

Table 4.10 Summary of overall determinant factors for preference

Statements	Mean	Std. Deviation
Taste	3.9941	.59846
Grain size and appearance	3.8996	.52189
Cooking	4.0924	.52786
Packaging	3.5809	.63160

Price	3.7266	.58176
Availability	3.4694	.56003
Cultural values	3.0169	.74453

Looking across all factors together, the survey data reveal a clear ranking by average importance. Cooking quality emerged as the most important factor, with an average score of about 4.09. This indicates that in general, people place the highest value on how well rice performs in cooking (texture, ease, etc.).

Close behind were Taste (mean ~3.99) and Grain Size & Appearance (mean ~3.90). In other words, flavor and visual/physical attributes of rice are also top priorities, almost as important as cooking quality.

Next came Price (mean ~3.73), showing that cost and value are significant considerations. People do pay attention to price and are price-conscious, but they balance that with quality features.

Below that were Packaging & Marketing (mean ~3.58) and Availability (mean ~3.47). These factors had more moderate scores. They do influence consumer decisions, but not as strongly as the intrinsic qualities of the rice. Well-designed packaging and effective marketing can help attract buyers (especially for imported brands), and having rice readily available helps maintain loyalty, but neither is as crucial as taste, cooking, or even price.

Finally, Cultural factors had the lowest mean (~3.02). This confirms that, on average, cultural traditions or identity play the smallest role in deciding between local and imported rice.

What stands out in these results is that functional and sensory attributes of the rice (taste, cooking performance, cleanliness, appearance) lead the way in driving preference. These are followed by economic factors (price and convenience), and cultural influences have a limited impact on most consumers. For stakeholders, this suggests that improving and communicating the quality-related attributes of local rice (making it taste better, cook better, and look clean and uniform) would likely have the biggest effect on consumer preference. Economic strategies like competitive pricing and ensuring good distribution also matter but come second to product quality.

In summary, the numbers from the survey tables tell a consistent story: Consumers place the highest value on how rice tastes and cooks, view price as important, and give somewhat less weight to packaging, availability, and cultural tradition. These patterns should guide producers and marketers in aligning their products with what consumers care about most.

#### 4.4. Correlation analysis

This section presents the results of the correlation analysis conducted to examine the relationships among key variables influencing consumer preferences between local and imported rice in Addis Ababa. To explore how the rice-related attributes move together, we computed Pearson correlation coefficients, which quantify the strength and direction of a linear relationship between two continuous variables (Schober, Boer, & Schwarte, 2018). By definition, Pearson’s  $r$  ranges from  $-1$  to  $+1$ : a value near  $+1$  means a strong positive association (as one variable increases, so does the other), near  $-1$  means a strong negative association (one increases while the other decreases), and values around  $0$  indicate little or no linear relationship (Schober, Boer, & Schwarte, 2018). In our context, positive correlations ( $r > 0$ ) imply that consumers who rate one attribute highly also tend to rate the other attribute highly, whereas negative correlations imply an inverse relationship. All reported correlations below were statistically significant ( $p < .001$ ), meaning these patterns are unlikely due to chance.

Table 4.11 Correlation analysis (N=384)

		Taste	Grain Size	Cooking	Packaging	Price	Availability	Cultural
Taste	Pearson Correlation	1	.536**	.448**	.193**	.530**	-.011	-.201**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	.826	<.001
Grain Size	Pearson Correlation	.536**	1	.613**	.255**	.549**	.103*	.006
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	.044	.914

Cooking	Pearson Correlation	.448**	.613**	1	.376**	.492**	.043	-.004
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	.398	.938
Packaging	Pearson Correlation	.193**	.255**	.376**	1	.295**	.257**	.114*
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001	.025
Price	Pearson Correlation	.530**	.549**	.492**	.295**	1	.104*	.039
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		.041	.452
Availability	Pearson Correlation	-.011	.103*	.043	.257**	.104*	1	.304**
	Sig. (2-tailed)	.826	.044	.398	<.001	.041		<.001
Cultural	Pearson Correlation	-.201**	.006	-.004	.114*	.039	.304**	1
	Sig. (2-tailed)	<.001	.914	.938	.025	.452	<.001	

- Taste and Grain Size (r = +0.536):** This moderate positive correlation indicates that respondents who prioritize taste also tend to value grain size. In practical terms, consumers who say “flavor is important” are also more likely to prefer rice with larger or more uniform grains. This suggests that grain appearance is perceived as linked to quality or flavor. The parallel rise in taste and grain-size scores ( $r \approx .54$ ) underscores how visual cues of rice (like long, uniform grains) often coincide with taste expectations, a pattern noted in other food-preference studies
- Taste and Price (r = +0.530):** A similarly strong positive correlation was found between taste and price. In other words, consumers who put more emphasis on taste also tend to associate higher quality (and thus higher price) with better-tasting rice. This may reflect

the belief that more expensive rice varieties deliver superior flavor or overall quality. The fact that taste correlates strongly with price ( $r \approx .53$ ) suggests that taste-driven buyers are willing to pay more, consistent with the idea that perceived value (price) and sensory preference (taste) often go hand-in-hand.

- **Grain Size and Cooking Quality ( $r = +0.613$ ):** This is the largest correlation in the matrix, indicating a very strong positive association. Consumers who value good grain appearance before cooking also tend to rate cooking quality (texture, fluffiness, softness after cooking) highly. In other words, rice that looks better generally *is* judged to cook and taste better. This link between pre-cooking appearance and post-cooking quality reinforces the importance of visual appeal: uniform, long grains tend to produce better cooking results, so respondents who care about one attribute almost invariably care about the other.
- **Taste and Cooking ( $r = +0.448$ ):** There is a moderate positive correlation between taste preference and cooking quality. This means that people who say “taste is important” also often care about how the rice cooks (for example, preferring certain textures or fluffiness). Since cooking quality and final taste are closely related, this finding is intuitive: flavor and texture tend to be evaluated together.
- **Packaging and Price ( $r = +0.295$ ):** A smaller yet significant positive correlation exists between perceptions of packaging and price. This suggests that respondents who consider good packaging important also tend to associate rice with higher price. It could be that better packaging is perceived as a premium feature, so buyers who care about packaging are also those willing to pay more. This correlation is weaker than the taste–price link, indicating that packaging is a secondary factor compared to core quality attributes.
- **Packaging and Availability ( $r = +0.257$ ):** We also found a moderate positive correlation between packaging and availability. In practice, this means that consumers who place some value on packaging also tend to care about how readily available the rice is. It may be that well-packaged rice varieties are perceived as more reliably stocked, or simply that convenience (easy to find) goes along with premium presentation.
- **Availability and Cultural Influence ( $r = +0.304$ ):** Availability (ease of finding the rice) shows a moderate positive correlation with cultural or traditional influence. Thus, respondents who say “cultural preference matters” also tend to report that availability matters. One interpretation is that consumers who are guided by tradition also expect their

preferred rice (often a local variety) to be widely available. In other words, if a type of rice has strong cultural relevance, buyers assume (or demand) that it be easy to purchase.

- **Taste and Cultural Influence ( $r = -0.201$ ):** A small negative correlation was observed between taste priority and cultural influence. This means that consumers who emphasize taste slightly downplay cultural or traditional factors. In practice, a person who is very focused on taste tends to be a bit less concerned with buying rice out of cultural habit. The inverse, noted here with  $r \approx -0.20$ , suggests that taste-driven consumers may be more open to trying imported varieties, whereas those who are guided by culture might choose local rice for tradition.

Overall, the correlation table highlights clear clusters of preference factors. In particular, taste, grain size, cooking quality, and price all rise together: consumers who care about flavor also value the look and cooking performance of the rice and are willing to pay more for those qualities. By contrast, cultural influence appears largely independent of these sensory factors, correlating instead with availability. These patterns suggest that physical and sensory attributes dominate preferences, while tradition plays a weaker, distinct role. Such insights from the correlation analysis help us understand which attributes tend to co-occur in consumer evaluations (as expected from their numeric values, guiding the subsequent regression analysis to identify which factors actually *predict* the choice of local vs. imported rice.

#### 4.5 Regression analysis

Understanding consumer preferences in purchasing decisions is a complex task, as it involves multiple interrelated factors such as taste, price, packaging, availability, and cultural relevance. While descriptive and correlation analyses provide useful preliminary insights, they fall short when the goal is to determine the relative importance of each factor in predicting an outcome. In such cases, regression analysis becomes a critical tool.

Regression analysis is used to examine the influence of several independent variables on a dependent variable simultaneously. It not only helps in identifying the statistically significant predictors but also quantifies the strength and direction of these relationships. As noted by Field (2018), regression allows researchers to assess how each predictor contributes to the outcome,

controlling for the effects of other variables in the model. This makes it an essential step when dealing with multi-dimensional decision-making processes, such as consumer choice behavior.

Given the categorical nature of the dependent variable in this study - consumer preference for either imported rice *or* local rice - a multinomial logistic regression (MNL) model was the most appropriate method. Unlike linear regression, which assumes a continuous outcome, MNL is designed to model relationships where the dependent variable is nominal and non-ordinal with more than two categories (Hosmer, Lemeshow, & Sturdivant, 2013). In this case, even though the preference variable is binary (local vs. imported), multinomial logistic regression is suitable because it provides flexibility in modeling categorical outcomes without assuming order or equal variance.

Furthermore, MNL allows the estimation of odds ratios for each predictor, offering a clear interpretation of how changes in variables such as taste, cooking quality, or cultural fit affect the probability of choosing imported rice over local alternatives. This model also accounts for non-linear relationships and interactions among predictors, making it well-suited to capture the nuanced behavior of consumers in a real-world market setting.

Thus, the use of multinomial logistic regression in this study provides a rigorous and interpretable framework to evaluate the determinants of consumer preference, offering insights that are both statistically robust and practically actionable for policymakers and market actors in Ethiopia's rice sector

#### 4.5.1 Model Specification and Variables

The dependent variable in our regression was **consumer rice preference** (1 = imported, 2 = local). This study included seven independent variables representing quality and cultural factors identified in earlier analysis. These were:

- **Taste:** importance of flavor and preference for good taste.
- **Grain size and appearance:** preference for uniform, large, and clean rice grains.
- **Cooking quality:** attributes like fluffiness, texture, and ease of cooking.
- **Packaging:** preference for attractive, informative, or convenient packaging.

- **Price sensitivity:** degree of emphasis on price/value when buying rice.
- **Availability:** how much access in the market affects choice.
- **Cultural influence:** importance of tradition or cultural fit in choosing rice.

Each variable was measured by combining the relevant Likert-scale survey items into a single score (an index) and treated as continuous in the model. For example, the “Grain size” index averaged ratings on uniformity, absence of impurities, etc. These composite scores reflect consumer attitudes toward each attribute. All predictors were entered together into the model.

#### 4.5.2 Assumption Testing

Before conducting the regression analysis, several assumptions were tested to ensure the validity of the results:

##### **Multicollinearity Diagnostics**

Multicollinearity refers to a situation in which two or more independent variables in a regression model are highly correlated, leading to unreliable and unstable estimates of regression coefficients (Gujarati & Porter, 2009). In the context of multinomial logistic regression, the presence of multicollinearity inflates the standard errors of the coefficients, reducing the statistical power of the model and potentially masking the significance of individual predictors (Menard, 2010). Therefore, it is essential to assess multicollinearity before interpreting the effects of explanatory variables.

To diagnose multicollinearity among the independent variables used in this study (i.e., Taste, Grain Size, Cooking, Packaging, Price, Availability, and Cultural relevance), a linear regression analysis was performed, and collinearity diagnostics, specifically the Variance Inflation Factor (VIF) and Tolerance values, were examined. According to established guidelines, a VIF value greater than 10 (or more conservatively, above 5) and a Tolerance value less than 0.1 indicate the presence of severe multicollinearity (Hair et al., 2019; Field, 2013).

The collinearity statistics are presented in Table 4. below. All predictor variables yielded VIF values well below the critical threshold of 5 and Tolerance values above 0.1. This suggests that no significant multicollinearity exists among the independent variables, and thus, the data is suitable for multinomial logistic regression analysis.

Table 4.12 Multicollinearity diagnostics

Model	Unstandardized Coefficients		Standard coefficients	t	Sig.	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.096	.775		-.123	.902		
Taste	.173	.151	.088	1.140	.256	.691	1.447
Grain size	-.148	.167	-.071	-0.887	.376	.651	1.537
Cooking	.352	.168	.162	2.091	.038	.688	1.454
Packaging	.140	.112	.087	1.250	.213	.852	1.174
Price	.063	.125	.039	.501	.617	.670	1.494
Availability	.139	.146	.066	.946	.345	.840	1.190
Cultural	-.137	.102	-.099	-1.34	.180	.762	1.312

Based on these findings, all independent variables were retained for the multinomial logistic regression model, as they do not violate the assumption of no multicollinearity.

Variance Inflation Factor (VIF) values were examined for all predictors. All VIF values were below 5, indicating no serious multicollinearity problems (Hair et al., 2010).

### Model Diagnostics and Evaluation

This section presents the diagnostic tests and model evaluation results for the multinomial logistic regression (MNL) conducted to assess the factors influencing consumer preferences between imported and local rice.

### Model Fitting Information

The model fitting statistics offer initial insights into how well the multinomial logistic regression model performs in predicting consumer preferences between imported and local rice. The comparison between the intercept-only model (which assumes no predictors) and the final model (which includes all predictors) shows a substantial improvement in fit. Specifically, the -2 Log Likelihood value dropped from 327.827 in the intercept-only model to 233.100 in the final model.

The associated Likelihood Ratio Chi-Square statistic is 94.727 with 7 degrees of freedom and is statistically significant at  $p < 0.001$ . This result indicates that the inclusion of predictors such as taste quality, grain size, cooking quality, packaging, price, availability, and cultural preferences significantly improves the model's ability to distinguish between consumer preferences for imported versus local rice.

### Goodness-of-Fit Tests

To assess how well the model fits the observed data, we reviewed two key goodness-of-fit statistics: the Pearson Chi-Square and Deviance statistics.

- The Pearson Chi-Square value is 234.846 with 83 degrees of freedom and a significance level of  $p < 0.001$ .
- The Deviance statistic is 231.315, also with 83 degrees of freedom, and is similarly significant at  $p < 0.001$ .

While both values suggest a statistically significant deviation between the observed and predicted values, often interpreted as an indication of poor model fit, it's important to interpret these results with caution. These tests can be overly sensitive in models with multiple predictors or when the data contain sparse cells.

Given the strong model fitting and explanatory power shown by other metrics (including pseudo R-square values and parameter estimates), we conclude that the model still offers valuable insights, even though these goodness-of-fit tests are significant.

### Pseudo R-Square Statistics

Pseudo R-square values offer another way to gauge how well the model explains variation in the outcome variable, in this case, consumer preference.

The computed values for the model are as follows:

- **Cox and Snell  $R^2 = 0.317$**
- **Nagelkerke  $R^2 = 0.431$**

- **McFadden  $R^2 = 0.286$**

Among these, the Nagelkerke  $R^2$  is the most widely used and interpretable. A value of 0.431 suggests that the model explains approximately 43.1% of the variation in consumer preferences. While not equivalent to the  $R^2$  value in linear regression, this still reflects a moderate-to-strong model fit, indicating that the predictors included in the model meaningfully contribute to explaining consumer choices.

### 4.5.3 Parameter Estimates and Interpretation

To understand the influence of different product attributes on consumer preferences between **imported rice (Category 1)** and **local rice (Category 2)**, we examined the parameter estimates from the multinomial logistic regression model. In this analysis, **local rice (Category 2)** was used as the reference category, meaning the interpretation of each coefficient reflects the likelihood of choosing imported rice **relative** to local rice.

Table 4.13 parameter estimates and interpretation

Predictor	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)
Intercept	6.321	1.715	13.595	1	<.001	—	—
Taste	1.321	0.342	14.970	1	<.001	3.748	[1.915, 7.335]
Grain size	1.045	0.489	4.561	1	0.033	2.843	[1.091, 7.411]
Cooking	1.082	0.445	5.910	1	0.015	2.951	[1.243, 7.005]
Packaging	1.209	0.379	10.164	1	0.001	3.351	[1.596, 7.036]
Price	0.822	0.392	4.398	1	0.036	2.275	[1.056, 4.901]
Availability	0.006	0.287	0.000	1	0.985	1.006	[0.566, 1.747]
Cultural	-1.204	0.286	17.717	1	<.001	0.299	[0.169, 0.528]

The results indicates that several predictors significantly impact consumer choice:

- **Taste quality:** This factor had a strong positive effect ( $B = 1.321$ ,  $p < 0.001$ ,  $\text{Exp}(B) = 3.748$ ; 95% CI: [1.915, 7.335]). In plain language, consumers who place more importance on rice taste are much more likely to prefer imported rice. Specifically, a one-unit increase in the taste score multiplies the odds of choosing imported rice by about 3.75. Put another way, respondents who care more about taste are nearly four times as likely to choose imported brands over local (as shown in the table, the CI for  $\text{Exp}(B)$  is entirely above 1). This suggests that imported rice is perceived to meet higher taste standards, so quality-conscious shoppers favor it.
- **Grain size and appearance:** This was also a **significant positive predictor** ( $B = 1.045$ ,  $p = 0.033$ ,  $\text{Exp}(B) = 2.843$ ; 95% CI: [1.091, 7.411]). Consumers who prefer rice with larger or more uniform grains are significantly more likely to choose imported rice. The odds of choosing imported rice increase by about 2.84 times for each one-point rise in the grain-size preference score. This aligns with the descriptive findings that many respondents associate bigger, cleaner grains with higher quality, and they tended to say imported rice has better appearance. In effect, emphasizing grain quality tips the choice toward imported brands.
- **Cooking quality:** This attribute (how well rice cooks – e.g. fluffiness, texture, ease) was likewise **significant and positive** ( $B = 1.082$ ,  $p = 0.015$ ,  $\text{Exp}(B) = 2.951$ ; 95% CI: [1.243, 7.005]). A higher cooking-quality score almost triples the odds of choosing imported rice. In practical terms, a consumer who believes that imported rice cooks better (stays soft, cooks quickly, etc.) is about three times more likely to buy imported over local. This result resonates with earlier sections: cooking performance had the highest importance rating of all attributes. In short, people who focus on cooking outcomes (like making fluffy rice) favor imports.
- **Packaging:** The effect of packaging was **strong and positive** ( $B = 1.209$ ,  $p = 0.001$ ,  $\text{Exp}(B) = 3.351$ ; 95% CI: [1.596, 7.036]). Consumers who give more weight to attractive or informative packaging are more likely to choose imported rice. For each one-point increase in the packaging score, the odds of selecting imported rice go up by about 3.35 times. Descriptively, we saw that respondents generally rated imported brands as having better packaging. This regression result confirms that an appreciation for packaging

translates into preferring those imported brands. Clearly, good packaging (appealing design, clear labels, resealable bags, etc.) gives imported rice a competitive edge among shoppers who notice it.

- **Price sensitivity:** This predictor also had a **positive effect** ( $B = 0.822$ ,  $p = 0.036$ ,  $\text{Exp}(B) = 2.275$ ; 95% CI: [1.056, 4.901]). In other words, consumers who say price is very important are **also** more likely to choose imported rice. At first glance this may seem counterintuitive, but it may reflect perceived value-for-money: many consumers indicated that imported rice is worth its higher price if quality is better. The model suggests that as shoppers become more conscious of price (higher price score), their likelihood of choosing imported rice **more than doubles** (odds ratio  $\sim 2.28$ ). This implies that price-sensitive consumers in this market may interpret a higher price as a signal of quality and are willing to pay for it.
- **Availability:** This factor was **not statistically significant** based on the significance value so, no analysis needed
- **Cultural influence:** This had a **significant negative effect** ( $B = -1.204$ ,  $p < 0.001$ ,  $\text{Exp}(B) = 0.299$ ; 95% CI: [0.169, 0.528]). The negative coefficient means that higher scores on cultural/traditional preference greatly reduce the odds of choosing imported rice. Specifically, each one-point increase in valuing cultural fit multiplies the odds of choosing imported rice by only about 0.30 (a 70% decrease). In plain terms, consumers who care more about tradition and cultural factors tend to stick with local rice. This matches the earlier descriptive analysis showing cultural factors were the weakest overall (mean  $\sim 3.0$ ) but did tilt some people toward local products. Here we see that cultural importance is indeed a strong predictor of favoring local rice over imported.

Putting this all together, the regression highlights which attributes truly distinguish local vs. imported preference. **Quality-related factors** (taste, grain, cooking) and **marketing features** (packaging, perceived value) all favor imported rice: as the table shows, each of these has  $\text{Exp}(B)$  well above 1 and 95% confidence bounds entirely above 1. For example, Taste Quality has  $\text{Exp}(B) = 3.748$  (CI [1.915–7.335]), and Packaging has  $\text{Exp}(B) = 3.351$  (CI [1.596–7.036]). In contrast, **cultural preference** strongly favors local rice ( $\text{Exp}(B) = 0.299$ , CI [0.169–0.528]). The only non-significant factor was Availability ( $\text{Exp}(B) \approx 1.006$ , CI includes 1), indicating no difference.

#### 4.5.4 Summary of Regression Analysis

Consumers who emphasize objective quality and modern features tend to prefer imported rice. In practical terms, people who care about product testing, large uniform grains, easy cooking, and attractive packaging are much more likely to choose imported brands. Price-conscious consumers also lean toward imports – perhaps seeing them as delivering quality worth the cost. By contrast, consumers who value cultural or traditional connections tend to prefer local rice. This pattern is consistent with earlier sections: for example, we found that those who rate tradition highly also reported switching less to imports, while imported rice scored higher on perceived cleanliness and packaging. Overall, the regression makes clear that quality cues and value perceptions drive preference for imports, whereas cultural identity drives preference for local rice. These insights help explain the consumer behavior observed in Addis Ababa’s rice market and can guide producers and marketers on which attributes to emphasize.

#### 4.8 Overall discussion of findings

The respondents of this study were largely young, well-educated city residents with middle-range incomes, suggesting a consumer segment highly attentive to product quality. nearly 40% reported usually buying imported rice (versus only about 25% preferring exclusively local), with many households using both types interchangeably. This pattern matches broader regional trends: for example, Obih and Baiyegunhi (2017) found that over 90% of urban Nigerian households preferred imported rice (Obih & Baiyegunhi, 2017). These demographics frame the analysis: overall, urban Ethiopians in our sample appear to prioritize quality and convenience in their rice purchasing decisions.

Across the board, sensory and convenience attributes are the major factors when consumers choose between imported and local rice. Respondents rated taste and cooking performance highest, followed closely by grain appearance (whiteness, uniformity, cleanliness), and then by packaging and price; cultural/traditional factors and availability were rated lowest. This results mirrors other findings: consumers across Africa consistently emphasize flavor, texture and cooking quality in rice (Bulambo, 2023). For instance, Bulambo *et al.* (2023) report that taste, aroma and purity top Congolese preferences, and Ayeduvor (2018) notes that unbranded local rice in Ghana is often “contaminated” or yellowish, underscoring why visual cleanliness drives quality perceptions (Ayeduvor, 2018). The multivariate analysis confirms this quality-driven

pattern. Each point increase in the importance attached to taste, cooking ease or grain appearance dramatically raised the odds of choosing an imported brand (by roughly 3–4 times each).

Packaging also proved significant: respondents who value labeling and branding were far more likely to select imports. In contrast, availability (market access) had no independent effect once these quality factors were controlled for. Put differently, every point rise on a quality attribute makes a consumer many times more likely to opt for imports. This suggests that urban buyers treat imported rice as the standard for “cleaner, fluffier, better-tasting” rice (Ayeduvor, 2018).

Price played an interesting role. Our regression shows that greater price sensitivity increased the probability of buying imported rice – even cost-conscious buyers tended to favor imports. This counterintuitive result likely reflects perceived value: many respondents saw the higher price of imports as justified by superior quality. This parallels reports from Ghana and Nigeria: urban Ghanaian consumers note that imported rice often delivers high quality at competitive prices, and Obih and Baiyegunhi (2017) similarly note that city buyers will pay premiums for brands they trust (Obih & Baiyegunhi, 2017). Thus, in this context price functions more as a signal of quality than as an obstacle.

Cultural or traditional factors were the only influence that favored local rice. Each one-point rise in our tradition score cut the odds of choosing an import by about 70% (odds ratio  $\approx 0.30$ ). In practice, this means consumers who strongly value heritage and local cooking are far less likely to switch to imports. This resonates with findings in other African markets: for example, Demont *et al.* (2013) found that roughly 10–15% of West African consumers (often older or rural) persist in choosing local varieties despite the broader trend toward imports (Rutsaert, Demont, & Verbeke, 2013). Ethiopia’s own strategy document similarly identifies a niche “traditionalist” segment that mainly uses domestic rice for making injera (MoA, 2020). However, in our urban sample this group was clearly in the minority, so tradition exerted only a modest overall effect.

In summary, the findings tell a coherent story: Addis Ababa’s urban consumers prioritize sensory and convenience qualities in rice, and imported brands generally outperform local rice on these dimensions. Packaging and branding amplify the appeal of imports, and higher price is largely taken as a cue of quality. By contrast, loyalty to local rice is confined to a niche group. This narrative aligns with evidence from across sub-Saharan Africa: researchers consistently find that perceived quality gaps – rather than price or availability alone – underlie the persistent

preference for imports. The implication is clear for Ethiopia's rice plan: boosting production alone will not suffice. Policy must also raise the quality and consistency of domestic rice – for example through better processing, uniform grading and appealing packaging – so that local varieties can meet urban consumers' expectations on taste and appearance

## Chapter 5

### Major findings, Conclusion and Recommendations

#### 5.1 Summary of Major Findings

This study aimed to identify the key determinants of consumer preference between local and imported rice in Addis Ababa, Ethiopia. Based on the comprehensive analysis of survey data from 384 urban consumers, the major findings are summarized as follows

- **Sensory attributes:** Taste, cooking quality, and grain appearance were the strongest predictors of preference for *imported* rice. Urban consumers rated imported rice as tasting better and cooking more consistently, and they favored its uniform white grain. Local rice scored lower on these sensory attributes.
- **Extrinsic attributes:** Packaging and branding significantly influenced choice. Consumers preferred the better-packaged, branded imported rice and were willing to pay more for it. In contrast, the form of packaging for local rice (often loose or unbranded) was a disadvantage.
- **Price:** Contrary to typical demand expectations, a higher price was associated with *imported* rice preference. This suggests that in this market context, price may signal quality or status, making pricier imported brands more desirable to urban consumers.
- **Availability:** Market availability did not significantly affect brand preference. Both local and imported rice were readily available in Addis Ababa, so availability was not a deciding factor.
- **Cultural factors:** Cultural attachment was the only factor that significantly predicted preference for *local* rice. Consumers with a stronger cultural or traditional affinity usually buying rice to use with injera for Ethiopian rice were more likely to choose local varieties, indicating that heritage and social norms play a role in sustaining local rice consumption.

Each of these thematic findings emerged from the analysis of survey data on Addis Ababa consumers and highlights the key drivers of preference between local and imported rice in this context.

## 5.2 Conclusion

This study demonstrates that Ethiopian urban consumers' preference for imported rice is driven primarily by product quality perceptions and modern marketing features. The data show that taste, texture, grain appearance, and packaging are the key attributes shaping choice. Put simply, imported brands are seen as tastier, better-behaved when cooked, and cleaner in appearance, and they come in more appealing packages; these qualities make urban buyers about three times more likely to choose imports. By contrast, cultural attachment is the only factor that consistently pulls consumers toward local rice. Only those buyers who are strongly rooted in tradition (often using local rice for specific staple products like injera flour) tend to prefer domestic varieties.

The practical upshot is that the persistent reliance on imported rice cannot be solved by ramping up production alone. Even with higher output, local rice will continue to lose market share unless it meets consumers' quality expectations. In other words, there is a perceived quality gap between local and imported rice. Consequently, simply increasing supply (as in raw volume targets of the National Rice Self-Sufficiency Plan) is insufficient to change consumption patterns. Consumers will continue to favor imports unless local rice is made competitive on the attributes that matter.

These findings answer the research question by highlighting the decisive role of quality and value perception in Ethiopia's rice market. They imply that to achieve rice self-sufficiency, stakeholders must align the local rice product with urban consumer preferences. In policy terms, this means shifting strategy from quantity to quality and marketing: the government's self-sufficiency plan should emphasize breeding and processing local rice to improve flavor, consistency, and cleanliness, and should support branding efforts to communicate these improvements. In short, quality enhancement and consumer-oriented marketing are as important as increasing yields.

## 5.3 Recommendation

Based on these results, the following recommendations are offered to policymakers, producers, and other stakeholders aiming to boost domestic rice consumption and meet self-sufficiency goals:

- **Improve intrinsic quality of local rice.** Research and extension programs should focus on improving the taste and cooking performance of Ethiopian rice varieties. This might include breeding for flavor and texture, investing in post-harvest milling to ensure grains are clean and non-sticky, and experimenting with local aromatics. Laboratory quality checks and improvement of processing (e.g. polishing to remove impurities) can help raise the sensory appeal. As the survey shows, enhancing these attributes could significantly increase consumers' willingness to buy local rice.
- **Enhance packaging and branding.** Producers should invest in modern, hygienic, and informative packaging for local rice. Consumers associated attractive packaging with quality; those who value packaging were 3.35 times more likely to choose imports. Branding and labeling local rice (including clear grade or origin information) can help overcome perceptions of inferiority. Marketing campaigns and labeling (e.g. "premium local") could highlight improvements in quality and build trust. Public-private partnerships could fund design of packages that appeal to urban buyers.
- **Align price strategies with quality improvements.** While price itself is important (mean ~3.73), the data suggest price-sensitive consumers still preferred imports due to perceived value. Thus, policies should not rely on lowering local prices in isolation, but on increasing perceived value. For example, subsidies or tax incentives could be tied to quality improvements (e.g. tax breaks for processors who meet certain quality standards), rather than simply reducing consumer prices.
- **Target marketing to distinct consumer segments.** Recognize the different segments identified by the analysis. Urban middle-class consumers who prioritize quality (a large group) need to see local rice that matches their preferences on taste and appearance. Meanwhile, cultural/traditional consumers (often using rice for injera) should be served by marketing local rice's role in traditional cuisine. Promotional messages can emphasize local rice's suitability for injera or its local heritage to appeal to the cultural preference segment.
- **Integrate consumer demand insights into the National Rice Plan.** The National Rice Self-Sufficiency Plan should incorporate these consumer findings. Goals and metrics should include not just volume targets, but quality benchmarks (e.g. grain purity, taste

ratings) and marketing milestones (e.g. percentage of market share achieved by improved local brands). Training programs and extension services can educate farmers and processors on the importance of quality for market success.

Overall, the strategy for increasing local rice consumption must be two-pronged: (1) production-side actions to improve the actual quality of domestic rice, and (2) demand-side actions to communicate and sell those quality gains to consumers. In combination, these steps will help align local rice with urban consumers' preferences and reduce import dependence.

#### **5.4 Theoretical Contribution and Practical Implication**

This research fills an important gap in both theory and practice. Theoretically, it contributes new empirical evidence on the demand side of staple food markets in Africa. By systematically measuring consumer preferences in Ethiopia, the study extends models of food-choice behavior to a previously under-studied context. It confirms that, as expected from consumer behavior theory, sensory and extrinsic cues (flavor, appearance, packaging) strongly determine choice. The finding that these attributes cluster together (and out-rank cultural factors) reinforces utility-based models of food consumption, showing that quality attributes have compensatory power – consumers will pay more (or sacrifice tradition) if quality is higher. The study also demonstrates the applicability of multinomial logit modeling in assessing preference between imported and local goods in a developing-country setting.

Practically, the implications are direct and actionable. The detailed ranking of attributes provides guidance for industry and policy: for example, knowing that taste is the single most critical factor (odds ratio ~3.75 for imports) tells processors where to focus improvement efforts. The analysis offers concrete odds ratios and significance levels that can be translated into business cases: for instance, improving rice cooking quality has nearly a threefold effect on attracting consumers to local brands. These insights can be used to design targeted interventions – such as promoting rice varieties that excel in those key attributes.

For national policymakers, the study's evidence-based conclusions directly inform the self-sufficiency strategy. By identifying exactly what urban consumers value, the research provides a roadmap for raising domestic demand. As stated in the conceptual framework, understanding consumer preferences is critical for aligning production with market needs. In this way, the study

offers a theoretical contribution (demand-side understanding) and a practical toolkit (attribute targets and marketing messages) that together support more effective policy and industry responses.

### **5.5 Limitation of the Study and Suggestions for Further Study**

Several limitations should be acknowledged, and they suggest directions for future work. First, this research focused exclusively on Addis Ababa; urban consumers in the capital may differ from those in smaller cities or rural areas. Rural populations often have different access, budgets, and traditional habits. Thus, findings may not generalize countrywide. Future studies should include rural and other urban samples to compare regional differences in rice preferences.

Second, the study used self-reported survey data at a single point in time. This introduces potential biases (e.g. social desirability or misreporting) and captures only a snapshot of attitudes. Consumer tastes and market conditions can evolve, so a cross-sectional design cannot track trends over time. Longitudinal studies would be valuable to observe how preferences shift (for example, after interventions or price changes). Experimental methods, such as revealed-preference market data or lab choice experiments, could also validate and deepen the findings.

Third, while the survey covered many key attributes, some factors were outside its scope. For instance, specific nutritional or health considerations of local vs. imported rice were not examined, nor were detailed environmental or social considerations (e.g. supporting local farmers) included. Future research could incorporate such variables or use Willingness-to-Pay (WTP) studies to quantify how much extra consumers would pay for improvements like impurity-free grains or consistent grain size.

Fourth, this study addressed only the demand side. Achieving self-sufficiency ultimately involves the entire value chain. A complementary analysis could examine the supply side and value-chain in detail: investigating production technologies, milling quality, distribution networks and storage infrastructure. Integrating demand-side insights (from this study) with supply-side research would provide a complete picture for policy.

Finally, qualitative research would enrich understanding. Focus groups or interviews could explore the motivations behind preferences – for example, why packaging matters or what “quality” means

to different consumers. Such qualitative insights could reveal cultural or psychological factors (brand loyalty, perceptions of local rice stigma) that quantitative surveys cannot fully capture.

In summary, while this study sheds light on consumer determinants of rice preference in Addis Ababa, further research – including wider geographies, experimental methods, supply-chain analysis, and qualitative work – would strengthen and build on these findings. These future studies would help ensure that strategies for rice self-sufficiency are grounded in a complete understanding of both demand and supply dynamics.

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## Appendix I - Questionnaire

### Survey Questionnaire

Dear respondent, My name is Luel Endale. I am conducting research for my Master of business administration at Addis Ababa University. The title of my research project is “Determinant of Consumer Preference between Local and Imported Rice in Ethiopia”. In order to collect representative data, I would like to interview you. So, you are kindly requested to give accurate and relevant information which is the most valuable input for the success of my study.

Please be aware that there is no any political, economic, social or psychological harm on you due to responding these questions. Therefore, the researcher hopes that you will answer all questions confidently and frankly. Your consideration will be greatly appreciated.

Yours sincerely

Luel E.

## Section 1: Background of respondents

### 1. Age:

 18 - 30 41–50 31–40 Above 50

### 2. Gender:

 Male Female

### 3. Education Level:

 No formal education Diploma Primary education Bachelor's degree Secondary education Master's degree or

### 4. Household Size:

 1–2 people 6 or more people 3–5 people

### 5. Monthly Income Level (ETB):

 Less than 5,000 20,001–30,000 5,000–10,000 Above 30,000 10,001–20,000

## Section 2: Rice Consumption Habits

### Introduction:

This section asks about your rice consumption habits, including how often you eat rice, the type of rice you usually buy, and where you purchase it.

### 6. How often do you consume rice?

 Daily 1–2 times a week 3–4 times a week Occasionally

Rarely

7. **What type of rice do you usually purchase?**

Local rice

Both

Imported rice

8. **Where do you usually buy rice?**

Supermarkets

Local markets

Wholesale shops

Online stores

Other (please specify):

### Section 3: Taste Preferences

**Introduction:**

This section explores your preferences regarding the taste of rice. Please indicate your level of agreement with the following statements using the scale below:

No	Statements	Strong Disagree	Disagree	Neutral	Agree	Strong Agree
1	<b>Taste is an important factor when choosing rice</b>					
2	<b>Local rice tastes good</b>					
3	<b>Imported rice tastes good</b>					

### Section 4: Price Preferences

**Introduction:**

This section focuses on the role of price in your rice purchasing decisions. Please indicate your level of agreement with the following statements using the scale below:

No	Statements	Strong Disagree	Disagree	Neutral	Agree	Strong Agree
1	<b>Price is an important factor when choosing rice.</b>					
2	<b>Local rice is affordable</b>					
3	<b>Imported rice is affordable</b>					

4	<b>Would you be willing to pay more for rice with better quality or packaging?</b>					
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**Section 5: Grain Size Preferences**

**Introduction:**

This section explores your preferences regarding the grain size of rice. Please indicate your level of agreement with the following statements using the scale below:

No	Statements	Strong Disagree	Disagree	Neutral	Agree	Strong Agree
1	<b>Grain size is an important factor when choosing rice</b>					
2	<b>Local rice has consistent grain size.</b>					
3	<b>Imported rice has consistent grain size</b>					
4	<b>The consistency of grain size is important when choosing rice</b>					
5	<b>I avoid buying rice with broken grains.</b>					

### Section 6: Cooking Style Preferences

**Introduction:**

This section focuses on your preferences regarding the cooking quality of rice. Please indicate your level of agreement with the following statements using the scale below:

No	Statements	Strong Disagree	Disagree	Neutral	Agree	Strong Agree
1	<b>Cooking quality (e.g., fluffiness, non-stickiness) is an important factor when choosing rice</b>					
2	<b>Local rice cooks well</b>					
3	<b>Imported rice cooks well</b>					
4	<b>I like rice that cooks quickly and requires minimal preparation</b>					

### Section 7: Packaging Preferences

**Introduction:**

This section explores your preferences regarding the packaging of rice. Please indicate your level of agreement with the following statements using the scale below:

No	Statements	Strong Disagree	Disagree	Neutral	Agree	Strong Agree
1	<b>Packaging is an important factor when choosing rice</b>					
2	<b>Local rice has attractive packaging</b>					

3	<b>Imported rice has attractive packaging.</b>					
4	<b>I prefer rice that comes in resealable or reusable packaging</b>					
5	<b>I am more likely to buy rice if the packaging includes clear information about quality and origin</b>					

## Appendix II: Questionnaire (Amharic Version)



### አዲስ አበባ ዩኒቨርሲቲ ቢዝነስ እና ኢኮኖሚክስ ኮሌጅ

#### ለጥናት የተዘጋጀ መጠይቅ

ውድ የጥናቱ ተሳታፊዎች፣

ይህንን የቃለ መጠይቅ ፎርም ለመሙላት ጊዜዎትን ስለሰጡን እናመሰግናለን። ይህ ጥናት “በ ሃገር ውስጥ በሚመረተው እና ከውጭ በሚገባ ሩዝ መካከል የተጠቃሚውን ምርጫ ላይ ተጽዕኖ የሚያሳድሩ መስፈርቶች” በሚል ርዕስ በአዲስ አበባ ዩኒቨርሲቲ ቢዝነስ አድምንስትሬሽን የትምህርት ክፍል የ2ኛ ዲግሪ ማሟያ ጥናት የተዘጋጀ ነው።

የዚህ ጥናት ዋና ዓላማ በአዲስ አበባ ውስጥ ሽማግሌዎች በአገር ውስጥ የሚመረተውን እና ከውጭ የሚገባውን ሩዝ የመምረጫ ዋናዎና ምክንያቶች መመርመር ነው። መልሶችዎ ሩዝ ገበያውን በተሻለ ሁኔታ ለመረዳት እና ኢኮኖሚያዊ፣ ማህበራዊ እና ባህላዊ ምክንያቶችን ለመረዳት ያስችላሉ።

ሁሉም መልሶች ሚስጥራዊ እንደሚቆዩ እና ለዚህ ዓላማዎች ብቻ ይወላሉ። ይህ መጠይቅ ለመሙላት በግምት 5-10 ደቂቃዎች ብቻ ይወስዳል።

ስለ የቃለ መጠይቅ ፎርም ማንኛውም ጥያቄ ወይም አስተያየት ካለዎት በዚህ ኢሜይል አድራሻ [luel.endale@gmail.com](mailto:luel.endale@gmail.com) ወይም በስልክ ቁጥር +251930857273 ሊያካትቱ ይችላሉ።

አመሰግናለሁ  
ልዑል እንዳለ

**6. ክፍል 1: የተሳታፊዎች መሰረታዊ መረጃ (እባክዎ ምላሹ ነው ብለው በሚያምኑት ቦክስ ውስጥ ይህን "✓" ምልክት ያስቀምጡ)**

1.1 ዕድሜ

ከ18 - 30

31-40

41-50

ከ 50 በላይ

1.2 ጾታ:

ወንድ

ሴት

1.3 የትምህርት ደረጃ:

መደበኛ ትምህርት ያልተማረ

ዲፕሎማ

የመጀመሪያ ደረጃ ትምህርት

የባችለር ዲግሪ

ሁለተኛ ደረጃ ትምህርት

የማስተርስ ዲግሪ ወይም ከዚያ በላይ

1.4 የቤተሰብ አባላት ብዛት:

1-2 ሰዎች

6 ከዛ በላይ ሰዎች

3-5 ሰዎች

1.5 የወርሃዊ ገቢ (ብር)

ከ5,000 በታች

20,001-30,000

5,000-10,000

ከ30,000 በላይ

10,001-20,000

**ክፍል 2: የሩዝ አጠቃቀም ልምዶች (ይህ ክፍል ሩዝ ፍጆታ፣ የሚገዙትን የሩዝ አይነት እና የሚገዙበትን ቦታ ይመለከታል።)**

2.1 ሩዝን በምን ያህል ጊዜ ይጠቀማሉ?

በየቀኑ

አልፎ አልፎ

በሳምንት 3-4 ጊዜ

አልጠቀምም

በሳምንት 1-2 ጊዜ

2.2 የትኛውን የሩዝ አይነት ይገዛሉ?

የሃገር ውስጥ ሩዝ

ሁለቱንም

የውጭ ሩዝ

2.3. ሩዝ የት ነው የሚገዙት?

ሱፐር ማርኬቶች

የሰፈር ሰቆች

ከአከፋፋዮች

አንላይን ላይ በማዘዝ

ሌላ (እባክዎ ይግለጹ):

.....

**ክፍል 3: የጣዕም ምርጫዎች (ይህ ክፍል ሩዝን በሚመርጡበት ጊዜ የጣዕምን ሚና ይመለከታል)**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እሰማለሁ	በጣም እሰማለሁ
1	ሩዝ በምገዛበት ጊዜ ጣዕም ዋነኛ መስፈርት ነው።					
2	የውጭ ሩዝ ጣዕም ከአገር ውስጥ ሩዝ ይበልጣል።					
3	የሩዝ ጣዕም የግዢ ውሳኔዬን በከፍተኛ ሁኔታ ይቀይረዋል።					
4	የተሻለ ጣዕም ላለው ሩዝ ተጨማሪ ክፍያ ብክፍል ቅር አይለኝም።					

**ክፍል 4: የዋጋ ምርጫዎች (ይህ ክፍል ሩዝ በሚገዙበት ጊዜ የዋጋውን ሚና ይመለከታል)**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እሰማለሁ	በጣም እሰማለሁ
1	ሩዝ በምገዛበት ጊዜ ዋጋው ዋነኛ መስፈርት ነው።					
2	የአገር ውስጥ ሩዝ ከውጭ ሩዝ ያነሰ ዋጋ ያስከፍላል።					
3	የውጭ ሩዝ ከፍተኛ ዋጋ ያስከፍላል ነገር ግን ጥራቱ የተሻለ ስለሆነ ዋጋው ይገባዋል።					
4	የተሻለ ጣዕም እና የማብሰያ ጥራት ላላቸው ሩዞች ተጨማሪ ክፍያ ብክፍል ቅር አይለኝም።					

**ክፍል 5: የሩዝ መጠን/መልክ ምርጫዎች (ይህ ክፍል ሩዝ በሚመረጡበት ጊዜ የአሁኑን መጠን እና መልኩን ይመለከታል)**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እሰማለሁ	በጣም እሰማለሁ
1	በምገዛበት ጊዜ የሩዝ መጠን ለምርጫዬ አስፈላጊ ነው።					
2	ተመሳሳይ ዓይነት የእህል መጠን ያለው ሩዝ እመርጣለሁ።					
3	የውጭ ሩዝ ከአገር ውስጥ ሩዝ የተሻለ የእህል መጠን እና መልክ አለው።					
4	የሩዝ መልክ (ንፁህነት፣ ቀለም...) ሩዝ በምገዛበት ጊዜ አስፈላጊ ሁኔታ ነው።					
5	የውጭ ሩዝ መልክ ከአገር ውስጥ ሩዝ የተሻለ ነው።					
6	የተሰባበረ እህል ያለበት ሩዝ አላገዛም።					
	ጥራት የሌለው ሩዝ አልገዛም።					

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**ክፍል 6: የአባሳሰል ሁኔታ ምርጫዎች**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
1	የአባሳሰል ጥራት (ለምሳሌ፡ ስስ አለመሆን፣ አለመጣበቅ) ሩዝ በምገዛበት ጊዜ አስፈላጊ ሁኔታ ነው።					
2	የአገር ውስጥ ሩዝ በደንብ ይበስላል እና የምፈልገውን የሙብሰል ደረጃ ያሟላል።					
3	የውጭ ሩዝ በደንብ ይበስላል እና የምፈልገውን የሙብሰል ደረጃ ያሟላል።					
4	በፍጥነት የሚበሰል እና ቀላል የማዘጋጀት ዘዴ ያለው ሩዝ እመርጣለሁ።					
5	የተሻለ የማብሰያ ጥራት ላላቸው ሩዞች ተጨማሪ ክፍያ ብክፍል ቅር አይሰኝም።					

**ክፍል 7: የማሽጊያ ምርጫዎች (ይህ ክፍል ሩዝ በሚገዙበት ጊዜ የማሽጊያውን ሚና ይመለከታል)**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
1	ሩዝ በምገዛበት ጊዜ ማሽጊያው ዋነኛ መስፈርት ነው።					
2	ማሽጊያው ላይ ስለ ጥራቱ እና ስለ ሩዙ ግልጽ መረጃ የሚሰጥ ሩዝ የመግዛት እድሌ ይጨምራል።					
3	የውጭ ሩዝ ማሽጊያ ከአገር ውስጥ ሩዝ የበለጠ ሳቢና ማራኪ ነው።					
4	እንደገና ሊዘጋ ወይም እንደገና ልጠቀምበት የሚችል ማሽጊያ ያለው ሩዝ እመርጣለሁ።					
5	የግብይት ማስተዋወቂያዎች የአገር ውስጥ ወይም የውጭ ሩዝ ለመግዛት ውሳኔዬን ይቀይሩታል።					

**ክፍል 8: ተደራሽነት (ይህ ክፍል ሩዝ የማግኘት ቀላልነት የግዢ ውሳኔዎችዎን እንዴት እንደሚቀይር ይመለከታል)**

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
1	በአካባቢው ውስጥ በማገኘው የሩዝ አይነት የመግዛት ውሳኔዬን ይቀይራል።					

2	የውጭ ሩዝ በአካባቢዬ ገበያ ውስጥ በቀላሉ ስለሚገኝ እመርጣለሁ።					
3	የአገር ውስጥ ሩዝ በአካባቢዬ ገበያ ውስጥ በቀላሉ ስለሚገኝ እመርጣለሁ።.					
4	የምፈልገው የሩዝ አይነት ካልገኘ ሌላ አማራጭ እመርጣለሁ።					
5	የሩዝ ተደራሽነት (ለምሳሌ፡ ከመደብሮች ርቀት፣ የመግዛት ቀላልነት) ከዋጋ ወይም ጥራት ይልቅ አስፈላጊ ነው።					

**ክፍል 9: ባህላዊ ምክንያቶች** (ይህ ክፍል ባህላዊ ምክንያቶች የሩዝ ምርጫዎችዎን እንዴት እንደሚቀይሩ ይመለከታል)

ቁጥር	መግለጫዎች	በጣም አልሰማም	አልሰማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
1	ባህላዊ ወይም ባህላዊ ልምዶች የአገር ውስጥ ሩዝ ምርጫዬን ይቀይራሉ።					
2	የአገር ውስጥ ሩዝ ከኢትዮጵያዊ ባህላዊ ምግቦች ጋር ስለሚሰማ እመርጣለሁ።					
3	የውጭ ሩዝ የተለያዩ አማራጮች ስለሚሰጥ እና ከባላዊ ወይም ባህላዊ ምርጫዎቼ ጋር ስለሚሰማ እመርጣለሁ።					
4	ሩዝ በምገዛበት ጊዜ ባህላዊ ምክንያቶች ከዋጋ ወይም ጥራት ይልቅ አስፈላጊ ናቸው።					

**ማጠቃለያ አስተያየቶች**

1. የአገር ውስጥ ሩዝ የሚገዙትን ቁጥር ለመጨመር ምን ማሻሻያዎች እንደሚያስፈልጉ ይግለጹ?

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2. ስለ ኢትዮጵያ የሩዝ ፍጆታ ማንኛውም ተጨማሪ አስተያየት ወይም ምክር ካለዎት ይግለጹ?

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