

# Variability in Pre-Packaged Rice, Edible Oil, and Sugar Quantities: Implications for Consumer Welfare

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## 1. Executive Summary

Pre-packaged edible products like rice, sugar, and edible oil are available in diverse sizes, often with unconventional measurements that diverge from standard industry practices. This variability in packaging and pricing raises questions about underlying motivations and implications, necessitating further examination.

This study aims to examine the reasons behind diverse packaging sizes, explore potential influences driving packaging diversification, assess its impact on consumer perceptions and welfare, and evaluate the potential for consumer confusion or misinterpretation regarding product value and quantity.

A mixed-method approach was utilized, incorporating questionnaires distributed to businesses and consumers, along with secondary data sources. Data were collected through field surveys in Thimphu town using convenience sampling techniques.

The study revealed a significant trend of quantity variations in packaged rice, sugar, and edible oil, influenced by diverse factors such as taxation considerations, production optimization strategies, and market competition. Specifically, the emergence of 26 kg packaged rice in the market was found to be driven by tax-related factors, with Indian regulations exempting rice quantities exceeding 25 kg from GST. Consequently, businesses strategically introduced 26 kg packaged rice to avoid GST imposition, resulting in lower unit prices compared to the 25 kg variant. However, certain businesses priced the 25 kg rice similarly to the 26 kg variant, nullifying the benefits of GST exemption for consumers.

In the edible oil market, a trend towards unconventional volumes was observed, driven by factors including price sensitivity, product differentiation, and competition. Manufacturers produced non-standard volumes to accommodate varying price points and consumer budgets, capitalize on product differentiation opportunities, and strategically position their offerings to gain a competitive edge.

In light of these findings, several recommendations for intervention are suggested: Launch consumer awareness campaigns emphasizing the significance of checking net quantity labels and prices before making purchasing decisions, while educating the public about GST exemptions for packaged rice quantities exceeding 26 kg and pricing disparities between 26 kg and 25 kg variants to empower consumers to make informed choices aligned with their preferences and budgets. Continue collecting market price data on essential commodities and disseminate it to the general public, introducing the collection of market price information specifically for unconventional volumes in edible oil to provide consumers with accurate pricing information, enabling them to make informed choices and avoid potential misunderstandings. Conduct comprehensive market inspections to identify businesses pricing the 25 kg packaged rice similarly to the 26 kg variant and take corrective action to ensure fairness and transparency in pricing, safeguarding consumer rights, promoting a level playing field for businesses, and upholding ethical business practices to maintain consumer trust and confidence in the marketplace. Prioritize transparent labeling practices to accurately declare the net quantity of products on packaging, raising awareness among businesses about regulatory requirements for accurate product

labeling and enforcing compliance through consistent market inspections to enhance consumer confidence, promote informed decision-making, and uphold integrity in the marketplace.

## **2. Background**

Pre-packaged edible products, encompassing staples like rice, sugar, and edible oil are available in a diverse array of sizes, often adopting unconventional measurements like 26 kg for rice, 700g for sugar, and 3.75 liters for oil, which diverge from typical norms and standard industry practices. The pricing of these products varies based on their weights and volumes, leading to fluctuating prices across different package sizes. This variability in both packaging and pricing underscores the complexity of the market dynamics surrounding these essential food items. This deviation from the norm raises intriguing questions about the underlying motivations and implications.

Delving deeper, it becomes essential to explore the underlying reasons driving such diversification in packaging. Beyond mere market trends, there may be logistical, economic, or even regulatory factors influencing these decisions. Understanding these rationales is critical, as it directly impacts consumer perceptions and purchasing behavior.

Moreover, there are concerns about whether this variability in packaging and pricing practices might lead to consumer confusion or misinterpretation regarding the actual value and quantity of the products they purchase. Such ambiguity could potentially undermine consumer trust and satisfaction, affecting overall consumer welfare.

Therefore, a comprehensive market study is warranted to unravel the complexities of this phenomenon. By elucidating the rationale behind packaging diversities and assessing their implications on consumer perceptions and welfare, this study aims to provide insights that can inform regulatory policies, industry practices, and consumer education initiatives, ultimately fostering a more transparent and consumer-centric marketplace.

## **3. Objective**

The objective of this market study is to comprehensively:

- a. Examine the reasons behind the diverse packaging sizes and unconventional measurement observed in packaged edible products such as rice, sugar, and edible oil.
- b. Delve beyond surface-level market trends to uncover potential influences such as logistical, economic, and regulatory factors that drive packaging diversification.
- c. Assess the impact of packaging diversities on consumer perceptions, purchasing behavior, and overall consumer welfare.
- d. Evaluate whether the variability in packaging and pricing practices could lead to consumer confusion or misinterpretation regarding product value and quantity.
- e. Provide pertinent recommendations for interventions aimed at fostering a marketplace that is more transparent, efficient, and consumer-centric.

## **4. Methodology**

### **4.1. Research Design**

This study utilized a mixed-method approach, incorporating the distribution of questionnaires to gather qualitative and quantitative data from businesses and consumers. Additionally, available secondary data sources were utilized to complement the primary data collection process.

### **4.2. Data Collection**

To ascertain the quantity variations in packaged rice, oil, and sugar, a field survey was conducted in Thimphu town. Various prominent retailers and wholesalers in the grocery industry were visited to assess the prevalence of this practice. In order to identify potential reasons behind the engagement of producers and distributors in such practices, responses were collected from major grocery wholesalers in Thimphu. Additionally, to comprehend the impact of these practices on consumer welfare, a survey was conducted among consumers in Thimphu.

### **4.3. Sampling Method**

While collecting the data, a convenience sampling technique was used. Participants, both the business entities and consumers were surveyed based on their easy availability and accessibility.

### **4.4. Sample Size**

To collect data from businesses and consumers, a flexible sampling approach was used. Data were collected from 7 wholesalers until no new insights were identified. Similarly, for consumer surveys, 50 consumers (25 literate and 25 illiterate) were surveyed during the course of data collection based on emerging insights or on the principle of data saturation.

### **4.5. Data Analysis**

Quantitative data analysis was done using Microsoft Excel and qualitative data such as open-ended responses and long answer types were analyzed by drawing themes.

## **5. Findings and Discussions**

### **5.1. Quantity Variations in Packaged Rice in the Market**

In recent years, a notable trend has emerged in the market with the introduction of 26 kg packaged rice originating from India, a departure from conventional packaging practices such as 20 kg, 25 kg and 30 kg. This prompted a need for a study aimed at discerning the motives behind the introduction of this packaging and evaluating whether it might mislead consumers regarding quantity and pricing, or if it was intentionally designed to manipulate the market dynamics. Table 1 presents a detailed breakdown of various brands offering 26 kg packaged rice along with their corresponding average retail prices in Thimphu. Based on assertions from Indian suppliers and Bhutanese dealers, the shift

in packaging is predominantly driven by tax-related factors. Insights from them elucidate that Indian regulations exempt rice quantities exceeding 25 kg from the Goods and Services Tax (GST). Furthermore, suppliers emphasize that they are bound by the packaging choices made by Indian manufacturers, who cater to their domestic market demands without much flexibility for adjustments.

Upon closer examination of Legal Metrology Act and its associated rules, as well as Indian GST regulations pertaining to “pre-packaged and labelled” goods, it became apparent that food items such as cereals, pulses, and flours exceeding 25 kg are not subject to GST. Historically, rice packaged in unit containers with a registered brand name attracted a 5% GST. However, as of 18th July 2022, only “pre-packed and labelled” rice quantities of 25 kg and below are subject to GST (Government of India, 2022). Consequently, the emergence of 26 kg packaged rice in the market can be understood as a strategic response to avoid GST imposition, reflecting the complex interplay between regulatory frameworks and market strategies.

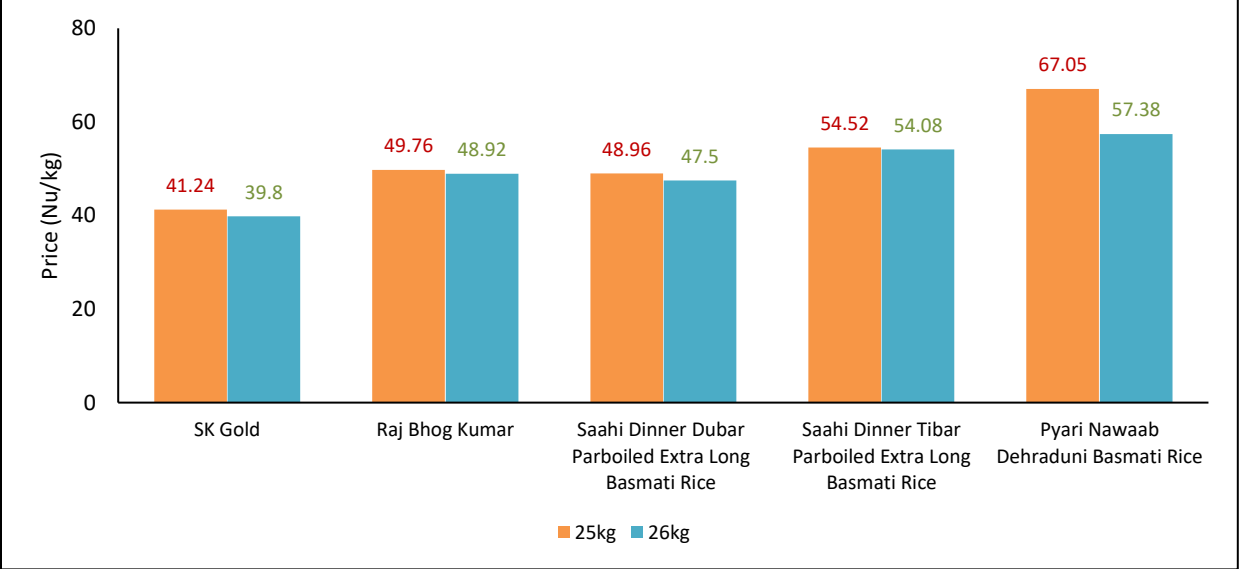
Due to these GST regulations, as confirmed by market surveys, the unit price of 26 kg packaged rice is lower compared to its closest alternative, the 25 kg packaged rice. This price differential reflects the impact of tax exemptions on larger quantities. However, an interesting observation arises as certain businesses price the 25 kg packaged rice at the same level as the 26 kg variant, effectively nullifying the benefits of GST exemption for consumers. This highlights the necessity for consumer education to raise awareness about such practices and for enhanced market monitoring to curb such discrepancies. Furthermore, it underscores the importance of continued collection of market price data for rice and its dissemination to the general consumers, empowering them to make informed purchase decisions based on accurate pricing information.

**Table 1: Prevailing Quantity Variations in Packaged Rice in the Market**

<b>Brand</b>	<b>Available Quantity</b>	<b>Average Price in Nu.</b>	<b>Average Unit Price Per kg</b>
SK Gold	25kg	1031	41.24
	26 Kg	1035	39.80
Raj Bhog Kumar	25 Kg	1244	49.76
	26kg	1272	48.92
Saahi Dinner Dubar Parboiled Extra Long Basmati Rice	25kg	1224	48.96
	26 kg	1235	47.50

Saahi Dinner Tibar Parboiled Extra Long Basmati Rice	25kg	1363	54.52
	26kg	1425	54.08
Pyari Nawaab Dehraduni Basmati Rice	20kg	1341	67.05
	26 Kg	1492	57.38

**Fig. I: Comparison of price of rice on per kg basis when packed in different weight packages**



**5.2. Volume Variations in Edible Oil**

The presence of unconventional quantities in the market, such as 3.75 liters, 0.825 liters, 0.65 liters, and 1.6 liters, prompted a study to investigate their impact on consumer choices, potential misleading effects, and implications for consumer welfare. The presence of unconventional volumes is illustrated in Table 2, which provides the range of volumes offered in the edible oil market in Thimphu, encompassing both conventional and unconventional sizes.

Findings from a survey revealed multifaceted reasons behind the production of such non-standard volumes:

Price sensitivity emerges as one of the factors driving the offering of non-standard volumes, as companies aim to accommodate varying price points and consumer budgets. By pricing smaller quantities lower, they attract budget-conscious consumers, while larger volumes offer better value for money.

Product differentiation plays a pivotal role, where unconventional sizes enable brands to distinguish themselves in competitive markets. This strategy allows companies to stand out and potentially attract consumers looking for unique or specialized options.

Consumer perception is influenced by the perceived value associated with unconventional quantities. For instance, a size like 0.85 liters may be perceived as offering superior value compared to standard sizes, thus influencing consumer preferences.

Competition further propels the adoption of non-standard sizes, as companies strive to differentiate their offerings, target specific consumer segments, and create perceived value. Unconventional sizes allow manufacturers to strategically position their products, gain a competitive edge, and enhance market presence and profitability.

Bhutanese edible oil manufacturers assert that they produce unconventional quantities primarily to optimize production costs and profitability. This is achieved by slightly adjusting volumes to mitigate the need for substantial price increases while maintaining competitiveness in pricing. This strategic adjustment allows them to provide consumers with a reasonable product quantity while striking a balance between profitability and customer satisfaction. Additionally, they maintain that they replicate similar quantities when Indian oil enters the market in unconventional sizes to sustain competitiveness.

Observations on price comparisons across various volumes of the same brand reveal a pattern where per-unit prices decrease as volumes increase, as illustrated in Table 2. Thus, opting for larger volumes becomes economically advantageous, contingent upon consumers' financial capacity, needs, and storage availability. This underscores the importance of consumer education to sensitize them to such market trends for their welfare. Furthermore, there is a need to collect price data on unconventional volumes and disseminate it to consumers to prevent potential misunderstandings and misleading perceptions.

**Table 2: Prevailing Volume Variations in Edible Oil**

<b>Brand</b>	<b>Origin</b>	<b>Volume Available</b>	<b>Average Price in Nu.</b>	<b>Average Unit Price Per liter</b>
Natural Lite Refined Soyabean Oil	Bhutan	0.65L	160	246
		1.3L	280	215
		3.25L	680	209
Natural Gold Refined	Bhutan	5L	441	88

Soyabean Oil				
Bengal Gold Refined Soyabean Oil	India	0.75L	130	173
		1.5L	255	170
		3.75L	615	164
Fortune Soya Oil	India	2L	370	185
		5L	1030	206
Shudh Refined Soyabean Oil	India	1.5L	320	213
		3.75L	750	200
Saffola Gold sunflower oil	India	2L	370	185
		5 L	940	188
Namans First Choice Refined Soyabean oil	India	1.6L	290	181
		3.75L	550	146
Oleev Active	India	2L	590	295
		5L	1395	279
Fortune Sunflower oil	India	1L	190	190
Sun Drop Heart Refined Sunflower oil	India	3L	620	206
Oleev Health Oil	India	5L	1295	259
Kabira Mustard Oil	India	0.825L	270	327
Kabira Sesame	India	0.5L	140	280



Oil				
RST Pure Refined Soyabean Oil	India	3.75L	675	180

### 5.3. Quantity Variations in Sugar

The sugar available in the market was also examined to determine the presence of unconventional quantities. Although no unconventional quantities were observed, there were price discrepancies among different brands offering the same quantity. This observation suggests a potential opportunity for consumers to make more informed purchasing decisions based on price differentials.

Consumers are encouraged to engage in comparison shopping to identify brands offering the best value for their money, considering factors such as price, quality, reputation, taste, purity, and ethical sourcing practices, to make cost-effective choices without compromising on quality.

**Table 3: Prevailing Quantity Variations in Sugar**

Brand	Quantity Available	Average Price in Nu
Happy Crystals	700g	50
Ganesh	700g	45
Amrit Gold Sugar	700g	50
Shankar Sugar	700g	45
Krishna Gold	750g	45
Mohan White Crystal Cane	750g	45
Gobind Crystal Sugar	750g	45
FCB Sugar	1000g	55.44
Bhrigu Crystal Sugar	1000g	45

## **6. Consumers Perception on the Quantity Variation**

Consumers feel that they are being deceived by paying for 5L oil while they actually get only 3.25L oil. In reality, this is not the case. They are paying for the quantity that they have purchased. Consumers respond that they often neglect to check the net quantity labels on common commodities. There is a tendency to assume, for instance, that a largest cooking oil container contains 5L. Similarly, consumers purchase 700g or 750g of sugar under the assumption that it is 1kg without independently verifying the actual weight. It's important to note that in such situations, consumers are not intentionally being deceived. As long as the net quantity is accurately displayed on the product, consumers should avoid being misled by the assumptions rooted in past market trends where sugar would be typically available in 1kg and the biggest container of cooking oil be in 5L. Consumers also said that they rarely check the quantity labels of the commodities unless they find new products in the market. Some consumers feel that when the goods are available in varying quantities or volumes, it is convenient for them as they can purchase based on their need, budget and space. For them, the more the variation in weights or volumes, the better the choice.

## **7. Bhutan Standards Bureaus (BSBs) stand on Weights and Volumes**

The stance of the Bhutan Standard Bureau regarding the permissible variation in the quantity (weight/volume) of packaged rice, sugar, and edible oil aligns with the guidelines established by the Codex Alimentarius Commission. Under the Codex General Standard for the Labeling of Prepackaged Foods (CODEX STAN 1-1985), emphasis is placed on accurately declaring the net quantity of the food product, typically expressed in terms of weight or volume, to facilitate informed consumer decision-making regarding the quantity of product being purchased. However, specific standards pertaining to quantity or volume specifications are not delineated within these guidelines. Any quantity can be used as the weight of the commodity as long as it aligns with the net quantity declared on the labeling and accurately reflects the actual contents of the package. Furthermore, it is noted that variations in packaging sizes for staple foods such as rice, sugar, and oil are commonplace and may be influenced by factors including consumer preferences, market demand dynamics, and regulatory standards established by individual countries.

## **8. Conclusion**

The study findings reveal a pervasive trend of quantity variations in packaged rice, sugar, and edible oil in the market, attributed to diverse factors such as taxation considerations, production optimization strategies, and market demands. While consumers may initially perceive these variations as deceptive, it is crucial to recognize that they are often reflective of legitimate business practices and market dynamics. The Bhutan Standards Bureau (BSB) stance on quantity variations aligns with international guidelines, emphasizing the importance of accurately declaring net quantity on packaging to facilitate informed consumer decision-making. Both businesses and consumers perceive the current labeling standard as sufficient, advocating against quantity standardization to preserve consumer choice and

market flexibility. Thus, the study underscores the need for enhanced consumer awareness and clear communication between retailers and consumers regarding product quantities, rather than imposing rigid quantity standards. Through such measures, consumers can make informed purchasing decisions, mitigating the potential adverse impacts of quantity variations on consumer welfare.

## **9. Recommendations**

Based on the study report highlighting the lack of uniformity in weights and volumes of packaged rice, edible oil, and sugar in the market and its possible implications on consumer welfare, the following recommendations for intervention are suggested:

### **9.1. Consumer Education and Empowerment**

It is imperative to educate consumers about the variations in quantities found in packaged goods and their direct impact on pricing structures. By understanding this correlation, consumers can grasp the advantages of purchasing larger quantities or volumes, which often result in cost savings over time. To achieve this, consumer awareness campaigns should be launched across various platforms. These campaigns should emphasize the significance of carefully checking net quantity labels and prices, as well as comparing them with similar products, before making purchasing decisions. This approach empowers consumers to make informed choices that best suit their needs and preferences.

In particular, it is essential to educate the public about the Goods and Services Tax (GST) exemption for packaged rice quantities exceeding 26 kg. This exemption has significant implications for selling prices, as products exceeding this threshold are not subject to GST. Additionally, consumers should be made aware of the pricing disparities between 26 kg and 25 kg packaged rice. Despite the difference in quantity, some businesses price the 25 kg variant similarly to the 26 kg, which can affect consumer perception, purchasing decisions, and overall welfare.

By providing consumers with this knowledge, they can better understand quantity variations and pricing dynamics, empowering them to make choices aligned with their preferences and budgets. Ultimately, consumer education in these areas can cultivate a more transparent and fairer marketplace, benefiting the general consumer population.

### **9.2. Market Price Information**

It is essential to continue collecting market price data on these essential commodities and disseminate it to the general consumers to facilitate informed purchase decisions. Furthermore, given the diverse range of unconventional volumes in edible oil and the variations in prices across different brands in the market, there is a potential for consumers to be misled by incorrect perceptions of perceived value. Therefore, it is imperative to introduce the collection of Market Price information specifically for these unconventional volumes and ensure that it is made available to the general public. This initiative aims to provide consumers with accurate and up-to-date pricing information, thereby empowering them to

make informed choices and avoid potential misunderstandings or misconceptions regarding product value.

### **9.3. Market Monitoring**

The findings reveal that some businesses have priced the 25 kg packaged rice similarly to the 26 kg variant (Market Price Information, 2024), potentially going unnoticed by consumers due to the minimal difference in weight. This pricing strategy has led to consumer confusion and negatively impacted their economic interests and welfare. Consequently, there is a need for comprehensive market inspections to identify businesses engaging in this practice and take corrective action. By conducting market monitoring, regulatory authority can ensure fairness and transparency in pricing, safeguarding consumer rights and promoting a level playing field for businesses. This proactive approach helps maintain consumer trust and confidence in the marketplace while upholding ethical business practices.

### **9.4. Transparent Labeling**

Manufacturers and retailers must prioritize transparent labeling practices, ensuring that the net quantity of products is accurately declared on packaging. Clear and prominent labeling is essential for consumers to comprehend the actual contents of the package and avoid potential misunderstandings or misinterpretations. To achieve this, ongoing efforts are required to raise awareness among businesses about the regulatory requirements for accurate product labeling. Additionally, consistent market inspections are necessary to monitor businesses' compliance with these labeling standards. By enforcing transparent labeling practices, regulatory authorities can enhance consumer confidence, promote informed decision-making, and uphold integrity in the marketplace.

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