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METHODOLOGY FOR ORGANIZING MARKETING ACTIVITIES IN THE CONTEXT OF IMPLEMENTING MARKET MECHANISMS (THE CASE OF THE GRAIN AND FLOUR MARKET)

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Abstract. *This article develops a methodology for organizing marketing activities of grain and flour enterprises in the context of implementing market mechanisms, using the case of the grain and flour market of Uzbekistan. The relevance of the study is determined by the abolition of state procurement and prices for grain, the transition to exchange trading, the growing dependence of the milling industry on imported wheat and the rapid expansion of flour exports. The aim of the research is to substantiate a stage-based methodology that allows flour mills and grain enterprises to organize marketing on the basis of market diagnostics, segmentation, positioning, an adapted marketing mix and a system of performance indicators. The study employs analysis of regulatory acts and official statistics, a supply-and-use balance of wheat and flour, calculation of self-sufficiency and import dependence ratios, the Herfindahl-Hirschman index of market concentration, unit value analysis and a sensitivity model of processing margins. The results show that domestic wheat covers about 79% of domestic use, import dependence is about 46%, and the flour export model is highly concentrated: Afghanistan accounts for over 99% of flour exports, and Kazakhstan for about 95% of flour imports. The export unit value of Uzbek flour was about USD 278 per tonne, 6% lower than that of imported flour, while the gross processing margin varies from a loss of USD 28 to a profit of USD 34 per tonne depending on wheat prices and extraction rates. A five-stage methodology and key performance indicators for marketing services are proposed.*

Keywords: *marketing activities, grain market, flour market, market mechanisms, commodity exchange, market orientation, segmentation, marketing mix, food security, Uzbekistan.*

INTRODUCTION

Grain and flour occupy a special place among food products: bread remains the basic staple for most households in Central Asia, and the stability of its supply and price is a matter of food security and social stability. For decades the grain economy of the post-Soviet countries was organized on administrative principles - state production plans, procurement at fixed prices and centralized distribution through state-owned elevators and mills. In such a system, enterprises did not need marketing: the volume of raw materials, the price and the buyers were determined by the state. The transition to market mechanisms fundamentally changes this situation, because enterprises themselves must now find raw materials, set prices, choose customers and compete for them.

The Republic of Uzbekistan has passed through this transition in recent years. Bread subsidies were ended in 2018 and state regulation of flour prices was abolished the following year [15]. From the 2020 harvest, the practice of setting state production plans for grain was abolished, and from the 2021 harvest state procurement was completely abolished, so that grain can be freely sold to processors, grain clusters and traders through exchange trading or direct contracts [12, 23]. From 1

June 2022, the state switched to market prices in the purchase and sale of grain [6]. At the same time, the market has become more open and more volatile: the price of bread made from first-grade flour rose by 77.6% from 2020 to May 2025 [27], the country remains one of the largest buyers of Kazakh wheat [14], and in 2025 it exported almost 1.6 million tonnes of flour, almost entirely to Afghanistan [20].

In these conditions, the effectiveness of grain and flour enterprises increasingly depends on their ability to study the market, select target segments, ensure product quality, build pricing on exchange benchmarks and manage relationships with customers - in other words, on the organization of marketing activities. However, most enterprises of the industry were formed in the administrative system, and their marketing functions are often limited to sales. Many mills still focus on the volume of processing rather than on the needs of specific groups of customers, procurement and sales are managed separately, and information about prices, competitors and the quality requirements of buyers is collected unsystematically. As a result, enterprises react to market changes with a delay, compete mainly on price and are exposed to sharp fluctuations in raw material costs and demand. The experience of other countries that have liberalized their grain markets shows that the transition period is accompanied by consolidation of the milling industry, the exit of weak enterprises and the emergence of companies that compete through quality, brands and service. Whether a similar path will be followed in Uzbekistan depends largely on how quickly enterprises master market-oriented management.

Thus, the scientific problem lies in the contradiction between the requirements of the liberalized grain and flour market and the absence of a methodology for organizing marketing activities that takes into account the specifics of this market - the dominance of business-to-business sales, the role of exchange prices, dependence on imported raw materials and the concentration of export markets.

The aim of the study is to develop a methodology for organizing marketing activities of grain and flour enterprises in the context of market mechanisms. To achieve this aim, the following *objectives* were set: (1) to systematize theoretical approaches to marketing and market orientation with reference to commodity markets; (2) to analyse the institutional changes and the current state of the grain and flour market of Uzbekistan; (3) to develop indicators for market diagnostics and to calculate them for the national market; (4) to propose a stage-based methodology and a system of key performance indicators for the marketing services of enterprises.

The object of the research is the grain and flour market of the Republic of Uzbekistan. *The subject* is the set of organizational and economic relations involved in organizing the marketing activities of grain and flour enterprises. *The hypothesis* of the study is that, after the transition to market mechanisms, the main risks for flour enterprises - concentration of sales and supply markets and thin processing margins - can be managed only through systematic market diagnostics and segment-based marketing rather than through volume-oriented sales.

The scientific novelty of the research consists in the following: a system of market diagnostic indicators for the grain and flour market has been proposed, including self-sufficiency, import dependence, concentration and processing margin indicators; these indicators have been calculated for Uzbekistan for the first time on the basis of current data; and a five-stage methodology for organizing marketing activities with a set of key performance indicators adapted to flour enterprises has been developed.

LITERATURE REVIEW

The literature relevant to the topic can be grouped into four streams: the theory of marketing management; the concept of market orientation; research on agri-food value chains; and studies of wheat policy and markets in Central Asia.

Marketing management. P. Kotler and K. Keller describe marketing management as a process that includes market analysis, segmentation, targeting and positioning, the development of the marketing mix and the control of results [10]. This process logic underlies most methodologies of

organizing marketing at enterprises. F. Webster emphasized that the role of marketing in the corporation is shifting from a functional department responsible for sales and advertising towards a management philosophy that focuses on long-term relationships with customers and strategic partnerships [31]. These ideas are important for the grain and flour market, where sales are predominantly business-to-business and are based on long-term relations with bakeries and processors. At the same time, classical marketing management was developed mainly for consumer markets with established competition and gives little guidance on how enterprises formed in an administrative system should build marketing from the ground up.

Market orientation. A. Kohli and B. Jaworski defined market orientation as the organization-wide generation of market intelligence about current and future customer needs, its dissemination across departments and the organization-wide responsiveness to it [9]. J. Narver and S. Slater conceptualized market orientation as consisting of customer orientation, competitor orientation and interfunctional coordination and found a positive relationship between market orientation and profitability [17]. A meta-analysis by A. Kirca, S. Jayachandran and W. Bearden confirmed that market orientation has a positive effect on organizational performance and identified top management emphasis, interdepartmental connectedness and market-based reward systems as its main antecedents [8]. For enterprises of transition economies, these findings imply that marketing must be organized as a system of information collection and coordination rather than as an isolated sales function. However, the market orientation literature assumes that markets already function freely and does not consider the process of transition from administrative allocation.

Service-dominant logic. S. Vargo and R. Lusch argued that marketing is shifting from a goods-dominant view, in which value is embedded in products, to a service-dominant view, in which value is co-created with customers through the application of knowledge and skills [30]. For flour mills, this approach means that competition is not only about the grade of flour but also about technical support for bakeries, stable quality, delivery reliability and flexible packaging. This perspective has rarely been applied to bulk commodities, although it explains why customers may pay a premium for flour from a reliable supplier.

Agri-food value chains. C. Barrett, T. Reardon, J. Swinnen and D. Zilberman reviewed the transformation of agri-food value chains in low- and middle-income countries and showed that their modernization is accompanied by the spread of contracts, quality standards, vertical coordination and new intermediaries [2]. J. Swinnen and R. Kuijpers analysed value chain innovations as a mechanism for technology transfer and identified the role of contracts and private standards in overcoming market failures [24]. These studies show that, after liberalization, coordination between stages of the chain shifts from the state to market participants, which increases the importance of marketing and procurement functions. However, they focus mainly on farmers and modern retail, while the marketing of processing enterprises in business-to-business markets has received less attention.

Wheat policy and markets in Central Asia. I. Pugach, Y. Yusupov and Z. Berdinazarov analysed agricultural policy in wheat production and crop diversification in Uzbekistan under the state procurement system [22]. I. Bobojonov, I. Duric and T. Glauben studied the impact of wheat price spikes on supply chain actors in Central Asia and the Caucasus and found a very limited effect of price interventions and trade restrictions on dampening domestic wheat prices [3]. L. Lombardozzi and N. Djanibekov assessed the wheat self-sufficiency policy of Uzbekistan and its implications for different actors in the value chain and for food security [16]. Industry reviews note that, after price liberalization, investment in private milling capacity increased and Uzbek millers took market share from Kazakh millers in exports to Afghanistan [32]. These works provide a rich picture of policy and market dynamics, but they do not address the question of how enterprises themselves should organize marketing under the new conditions.

Marketing of commodities and business-to-business relations. Bulk food commodities such as flour differ from branded consumer goods in several respects: products are relatively standardized, the price of raw materials accounts for the largest part of costs, customers are mainly businesses, and transactions are often repeated. In such markets, the marketing mix shifts its emphasis from

advertising towards product specifications, contract terms, logistics and technical service. F. Webster's argument that marketing is becoming a function of managing long-term relationships and partnerships [31] is particularly relevant here, because the loss of a large industrial bakery or an export buyer can affect a significant part of a mill's sales. At the same time, the price of flour is closely linked to the price of wheat, so pricing decisions require constant monitoring of raw material markets. This combination of relationship management and price monitoring distinguishes marketing in the grain and flour market from marketing in consumer markets. P. Kotler and K. Keller also note that in business markets the buying decision involves several participants - technologists, purchasing managers and owners - whose criteria differ [10]; for a flour mill, this means that marketing communications must address the baking properties of flour for technologists, price and payment terms for purchasing managers and reliability for owners.

The role of exchanges and price information. After liberalization, commodity exchanges become one of the main institutions of market coordination: they provide publicly observable prices, standardize contract terms and reduce search costs. For enterprises, exchange prices serve as a benchmark for procurement, for setting selling prices and for indexation clauses in long-term contracts. The literature on market orientation emphasizes that the advantage is obtained not by the availability of information itself but by the speed and quality of its use within the organization [9, 8]. Consequently, the transition to exchange trading creates an opportunity for enterprises to build marketing information systems based on exchange data, but only those enterprises that integrate this information into decisions on procurement, pricing and sales can benefit from it.

Food security and marketing. For staple foods, marketing decisions of enterprises have consequences beyond the enterprise. The studies of wheat policy in Central Asia show that governments tend to respond to price spikes with interventions and trade restrictions, which have a limited effect on domestic prices [3], and that self-sufficiency policies affect different actors in the value chain in different ways [16]. Under market mechanisms, the stability of supply increasingly depends on how efficiently private enterprises manage procurement, stocks and sales. This links the organization of marketing at the enterprise level with the broader goals of food security set out in the national agricultural development strategy [4]. In other words, under market mechanisms the marketing service of a flour mill becomes not only a tool of competition but also an element of the system that ensures the stable supply of a socially important product.

Critical comparison. The streams reviewed complement each other. Marketing management provides the process logic, market orientation explains why information and coordination matter for performance, service-dominant logic shows how commodity producers can differentiate, and value chain and policy studies describe the institutional context in which enterprises operate. Their common limitation for the grain and flour market of Uzbekistan is that none of them combines market-level diagnostics - self-sufficiency, import dependence, concentration and margins - with the enterprise-level organization of marketing. A comparative summary is presented in Table 1.

Table 1

Comparison of theoretical approaches relevant to marketing in the grain and flour market

Approach	Key authors	Main contribution	Limitation for the grain and flour market of Uzbekistan
Marketing management	Kotler, Keller [10]; Webster [31]	Process of analysis, segmentation, targeting, positioning and marketing mix; marketing as a management function	Developed for consumer markets with established competition
Market orientation	Kohli, Jaworski [9]; Narver, Slater [17]; Kirca et al. [8]	Generation and use of market intelligence; customer and competitor orientation; link with	Assumes free markets; transition from administrative allocation not considered

		performance	
Service-dominant logic	Vargo, Lusch [30]	Value is co-created with customers through service	Rarely applied to bulk commodities
Agri-food value chains	Barrett et al. [2]; Swinnen, Kuijpers [24]	Modernization of value chains; contracts, standards and coordination	Focus on farmers and retail; milling and B2B marketing less studied
Wheat policy in Central Asia	Pugach et al. [22]; Bobojonov et al. [3]; Lombardozzi, Djanibekov [16]	Effects of procurement, self-sufficiency and price interventions	Enterprise-level marketing not addressed

Thus, the analysis of the literature reveals a research gap: there is no methodology for organizing the marketing activities of grain and flour enterprises that is based on quantitative diagnostics of a market in transition from administrative to market mechanisms and that links these diagnostics with segmentation, the marketing mix and performance indicators. The present study aims to fill this gap.

METHODOLOGY

The research was designed as an applied study combining institutional analysis, quantitative analysis of secondary data and methodological modelling. This design was chosen because the aim was not to test the behaviour of individual enterprises but to develop a methodology that could be applied by any enterprise of the industry; therefore, the parameters of the market were first established empirically, and the methodology was then built on their basis.

Data. The study used regulatory acts on the reform of the grain market [23, 4]; official data of the National Statistics Committee on flour exports and imports and on industrial production in 2025 [20, 19, 18]; data on grain and wheat production [29, 7, 13, 5]; data on wheat imports from Kazakhstan [14]; the results of the Central Bank study on bread prices [27]; and data of the Uzbek Commodity Exchange on wheat trading [26, 28]. As a regional reference for the price of imported wheat, the average price of Kazakh wheat imported by Kyrgyzstan in January-August 2025 was used [25], because comparable official data on the price of wheat imported by Uzbekistan were not available. When sources differed, both values were reported.

Market balance. The domestic use of wheat in grain equivalent was estimated from the supply-and-use balance:

$$D = P + M_w + M_f/k - X_f/k\,, \quad (1)$$

where D is domestic use; P is wheat production; M_w is wheat imports; M_f and X_f are flour imports and exports; k is the flour extraction rate, which was set at 0.75. The self-sufficiency ratio and the import dependence ratio were calculated as:

$$SSR = P / D\,, \quad IDR = (M_w + M_f/k) / D\,. \quad (2)$$

Concentration. The concentration of export destinations and import sources was measured by the Herfindahl-Hirschman index:

$$HHI = \Sigma_i\, s_i^2\,, \quad (3)$$

where s_i is the share of country i in the volume of exports or imports, %. Values above 2,500 indicate high concentration.

Unit values and processing margin. Unit values of flour exports and imports were calculated as the ratio of value to volume. The gross processing margin per tonne of flour was estimated as:

$$GM = p_f - p_w / k\,, \quad (4)$$

where p_f is the price of flour (export unit value) and p_w is the price of wheat, USD per tonne. Because wheat prices and extraction rates vary by quality and season, a sensitivity analysis was carried out for p_w = 190, 206 and 220 USD/t and k = 0.72, 0.75 and 0.78. The margin is gross: it does not include processing, transport and other costs and does not include revenue from bran and other by-products.

The extraction rate of 0.75 was chosen as an average value for the production of baking flour

from soft wheat; the sensitivity range of 0.72-0.78 covers the typical variation depending on grain quality, flour grade and the technological level of the mill. The reference wheat price of USD 206 per tonne was supplemented by values of USD 190 and USD 220 to reflect seasonal and quality differences. The threshold of 2,500 for the Herfindahl-Hirschman index corresponds to the level conventionally used to identify highly concentrated markets. *Methodological modelling.* The methodology was developed by adapting the process of marketing management [10] and the components of market orientation [9, 17] to the specifics identified in the diagnostics. For each stage, its content, the information required and the indicators of results were defined. Segments of the flour market were distinguished on the basis of the type of customer, the requirements for product quality and the sales channel. The key performance indicators were selected so that each of them could be calculated from the accounting and sales data of an enterprise, would be directly linked to one of the risks identified in the diagnostics and could be monitored at least quarterly. When choosing the indicators, preference was given to those that reflect both the financial result of marketing (margin, price premium) and its market result (segment structure, concentration, retention), in accordance with the concept of market orientation, which links information use and customer relations with performance [17, 8].

Because the data refer to different periods - wheat production to the 2024/25 marketing year, wheat imports from Kazakhstan to 2024 and flour trade to 2025 - the balance calculations were treated as an approximate characteristic of the structure of the market rather than as an exact annual balance. The verification of data included cross-checking of figures from statistical, exchange and media sources, checking the consistency between production, trade and use, and the derivation of 2024 values from the reported changes in 2025 where direct data were not available. The choice of indicators was guided by three criteria: they must be calculable from publicly available or internal enterprise data, they must reflect the specific risks of a market in transition, and they must be interpretable by managers without special training. The methodology itself was formulated in such a way that its stages could be applied both by large mills with established departments and by small enterprises, with different depth of analysis. The research was carried out in four stages: analysis of the regulatory framework; collection and verification of statistical data; calculation of diagnostic indicators; and development of the methodology and the system of indicators. Calculations were performed in Python 3, and all intermediate results are reported in the tables of the next section so that they can be reproduced from the sources indicated.

ANALYSIS AND RESULTS

The main stages of the transition of the grain market to market mechanisms are summarized in Table 2.

Table 2

Main stages of introducing market mechanisms in the grain and flour market of Uzbekistan

Period	Measure	Change for enterprises
2018-2019	Bread subsidies ended; state regulation of flour prices abolished [15]	Free pricing of flour and bread
2019	Agriculture Development Strategy for 2020-2030 adopted [4]	Course towards market pricing
2020	State production plans for grain abolished; state grain may be stored by enterprises of any ownership [12, 23]	Access to storage services market
2021	State procurement and state purchase prices abolished; grain sold freely via exchange or direct contracts [12]	Independent procurement of raw materials
2022	Transition to market prices in state purchases and sales from 1 June; 1.78 million t of Fund wheat put on the exchange [6, 21]	Exchange price becomes the benchmark

2024-2025	More than 1.2 million t of 2024 grain sold through the exchange [28]; regular weekly wheat trading [26]	Transparent, competitive procurement

In the week of 27 October - 2 November 2025, 35,592 tonnes of wheat were sold on the exchange, with an average of 163 buyers per day; the average daily price decreased from 3,172.6 to 3,140.5 thousand soums per tonne [26].

The main indicators of the grain and flour market are presented in Table 3.

Table 3

Main indicators of the grain and flour market of Uzbekistan

Indicator	2024	2025
Grain and leguminous crops, mln t	9.0	10.1 / *8.4**
Wheat production (2024/25 marketing year), mln t	6.7	-
Wheat imports from Kazakhstan, mln t	3.3	-
Flour exports, thous. t	≈1,118	1,591
Flour exports, mln USD	-	441.7
Flour imports, thous. t	470.9	422.6
Flour imports, mln USD	-	124.6
Flour production by large enterprises, thous. t	-	1,227.5
Export unit value of flour, USD/t	-	277.6
Import unit value of flour, USD/t	-	294.8

Flour exports increased by 42.3% in 2025 and flour imports decreased by 10.3%. Afghanistan received 1,590.2 thousand tonnes, or 99.9% of flour exports, and Kazakhstan supplied 399.8 thousand tonnes, or 94.6% of flour imports [20, 19]. The export unit value of flour was 5.8% lower than the import unit value. Flour exports exceeded the flour output of large enterprises by 30%. In 2024, Uzbekistan received 3.3 million tonnes of wheat from Kazakhstan, or over 40% of Kazakh rail grain shipments [14]. The price of bread made from first-grade flour increased by 77.6% from 2020 to May 2025, and that of bread from highest-grade flour by 52.5% [27].

The results of the balance and concentration calculations are given in Table 4.

Table 4

Diagnostic indicators of the wheat and flour market

Indicator	Value	Formula
Domestic use of wheat (grain equivalent), mln t	8.44	(1)
Flour exports in grain equivalent, mln t	2.12	(1)
Self-sufficiency ratio (SSR), %	79.4	(2)
Import dependence ratio (IDR), %	45.8	(2)
Flour exports in grain equivalent to wheat imports, %	64.2	-
HHI of flour export destinations	≈9,990	(3)
HHI of flour import sources	≈8,980	(3)

Domestic wheat covered 79.4% of domestic use, while imports of wheat and flour together corresponded to 45.8% of it. Flour exports in grain equivalent amounted to 64.2% of wheat imports from Kazakhstan. Both indices of concentration exceeded the threshold of high concentration by more than three times. Earlier industry estimates indicated that domestic wheat production covered about 78% of expected consumption [1].

The sensitivity of the gross processing margin to the price of wheat and the extraction rate is shown in Table 5.

Table 5

Gross processing margin per tonne of exported flour, USD

Wheat price, USD/t	k = 0.72	k = 0.75	k = 0.78
190	13.7	24.3	34.0

206	−8.5	2.9	13.5
220	−28.0	−15.7	−4.5

At the reference wheat price of USD 206 per tonne [25] and an extraction rate of 0.75, the gross margin was USD 2.9 per tonne of flour; across the range considered it varied from −28.0 to +34.0 USD per tonne. A change in the extraction rate of three percentage points changed the margin by about USD 11 per tonne. For comparison, Kazakh analysts estimate the added value generated by processing one tonne of wheat into flour domestically at about USD 50 [11].

On the basis of the diagnostics, a five-stage methodology for organizing marketing activities of grain and flour enterprises was developed (Figure 1).

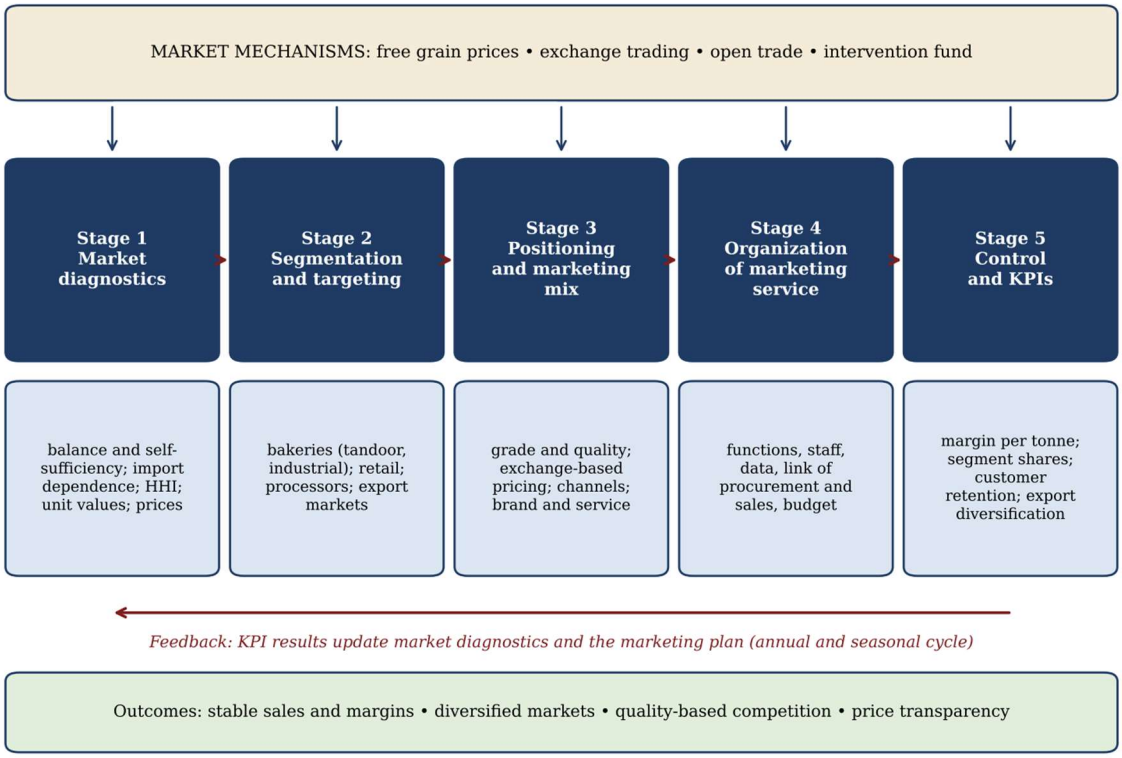


Figure 1. Methodology for organizing marketing activities of grain and flour enterprises

The segments of the flour market and the corresponding elements of the marketing mix are presented in Table 6, and the system of key performance indicators of the marketing service in Table 7.

Table 6

Segments of the flour market and elements of the marketing mix

Segment	Key requirements	Product and price	Channel and communication
Tandoor and small bakeries	Stable baking properties, price, credit terms	First grade; exchange-based price with small premium	Direct delivery, dealer network, technologist visits
Industrial bakeries and confectioners	Specified gluten and moisture, consistency, documents	Premium and special grades; long-term contracts	Key account management, quality certificates
Retail and households	Packaging, brand, availability	Packaged 1-50 kg; price lines	Retail chains, brand promotion
Pasta and food processors	Technical specifications	Special flours; contract price	Technical service, joint development
Export markets	Price, logistics, payment security	Bulk flour; indexation to wheat price	Exchange and trade houses, new destinations

Table 6 presents a differentiated approach to marketing management in the flour industry, identifying five major market segments and their corresponding requirements regarding product quality, pricing, distribution channels, and customer communication. The findings indicate that an effective marketing strategy should account for the specific purchasing behavior and operational needs of each customer category.

Tandoor and small bakeries primarily prioritize stable baking properties, competitive prices, and flexible credit arrangements, whereas industrial bakeries and confectionery enterprises require standardized quality parameters, technical documentation, and reliable long-term supply agreements. In the retail segment, packaging, brand recognition, and product availability become particularly important, creating opportunities for product differentiation and brand-based pricing strategies. Pasta manufacturers and other food processors demonstrate a greater demand for specialized flour products that meet specific technological requirements, emphasizing the importance of technical support and collaborative product development.

Meanwhile, export markets are characterized by increased sensitivity to pricing, logistics efficiency, and payment security. Consequently, the proposed segmentation framework highlights the necessity of combining product differentiation, flexible pricing mechanisms, targeted distribution strategies, and relationship-oriented marketing to strengthen the competitive position of flour-producing enterprises.

Table 7

Key performance indicators of the marketing service of a flour enterprise

Indicator	Calculation	Purpose
Gross margin per tonne	Price of flour and by-products minus wheat cost per tonne of flour	Profitability of sales and procurement
Segment structure of sales	Share of each segment in sales volume, %	Balance between segments
HHI of the customer base and export markets	Formula (3) by customers and countries	Concentration risk
Price premium over exchange benchmark	Average selling price to exchange price of flour, %	Value of brand and service
Customer retention	Share of customers retained over the year, %	Relationship quality
Quality complaints	Number of complaints per 1,000 t sold	Product stability

Table 7 outlines a system of key performance indicators designed to evaluate the economic efficiency, market positioning, and customer relationship management performance of flour-producing enterprises. The proposed indicators integrate financial, structural, competitive, and quality-related dimensions of marketing effectiveness. Gross margin per tonne provides an assessment of the contribution generated by flour and by-product sales relative to wheat procurement costs, thereby supporting pricing and purchasing decisions. The segment structure of sales reflects the distribution of sales volumes across customer categories and enables management to assess the balance and diversification of the enterprise's market portfolio.

The Herfindahl–Hirschman Index (HHI), calculated for both the customer base and export markets, serves as an instrument for identifying concentration risks associated with dependence on individual buyers or geographical destinations. The price premium over the exchange benchmark indicates the enterprise's ability to obtain additional value through product quality, branding, and service differentiation. Customer retention reflects the stability of commercial relationships and the effectiveness of long-term customer engagement strategies. Finally, the frequency of quality complaints per 1,000 tonnes sold provides an operational measure of product consistency and

customer satisfaction. Taken together, these indicators establish an analytical foundation for monitoring marketing performance, identifying areas requiring managerial intervention, and improving the competitiveness and commercial sustainability of flour enterprises.

DISCUSSION

The results make it possible to answer the research questions formulated in the introduction. First, the institutional analysis showed that the grain market of Uzbekistan has moved from an administrative to a predominantly market model in a relatively short period: state plans, procurement and fixed prices have been abolished, and the exchange has become the main benchmark for wheat prices. This means that the functions previously performed by the state - the provision of raw materials, the setting of prices and the allocation of products - have been transferred to enterprises. In the terminology of A. Kohli and B. Jaworski [9], enterprises must now generate market intelligence themselves and respond to it. The daily participation of more than one hundred buyers in wheat trading indicates that procurement has become competitive, and therefore enterprises that do not monitor exchange prices and the quality of offered grain are at a disadvantage. At the same time, the transfer of these functions has not been accompanied by a corresponding development of marketing competences: many enterprises have retained the organizational structures of the administrative period, in which the sales department executed plans rather than studied the market. The gap between the new institutional environment and the old organizational practices is, in our view, the main reason why the methodology proposed in this study is needed.

Second, the diagnostics revealed a market structure with high external dependence. A self-sufficiency ratio of about 79% is close to the earlier industry estimate of about 78%, which supports the reliability of the balance. At the same time, import dependence of about 46% and the fact that flour exports in grain equivalent correspond to almost two thirds of wheat imports show that the export model is based largely on processing imported wheat. This confirms the observation that Uzbek mills buy Kazakh wheat, turn it into flour and export it [32]. From the marketing standpoint, this means that the competitiveness of enterprises depends simultaneously on two foreign markets - the Kazakh wheat market and the Afghan flour market.

Third, both markets are extremely concentrated. With an HHI close to the maximum, the export of flour depends almost entirely on one country, and the import of flour on one supplier. Such concentration creates risks of a sharp fall in sales in case of changes in demand, payment conditions or trade policy in the destination country, as well as risks of supply disruptions. Studies of wheat markets in Central Asia show that price spikes are transmitted along the entire supply chain and that state interventions have only a limited effect on domestic prices [3]. Therefore, the diversification of export destinations and supply sources should be one of the central tasks of enterprise marketing, and the HHI of customers and markets is included among the key performance indicators.

Fourth, the analysis of unit values and margins reveals the economic weakness of the volume-oriented export model. The export unit value of Uzbek flour is lower than that of imported flour, which indicates that exports consist mainly of mass grades sold on price, while imported flour occupies higher-quality segments, in particular for tandoor bakers. The gross processing margin, which at reference prices is only a few dollars per tonne and becomes negative when wheat prices rise, shows that profit in this model is generated mainly by by-products, scale and procurement timing rather than by the product itself. Compared with the estimated added value of about USD 50 per tonne of processed wheat, capturing a larger part of this value requires a shift from selling tonnes to selling quality and service.

Fifth, the sensitivity of the margin to the extraction rate shows that marketing and production are closely linked. An increase in extraction by three percentage points changes the margin by about USD 11 per tonne, which is comparable to the entire margin at reference prices. This means that the purchase of grain with the right quality characteristics is a marketing task: procurement must be guided by the requirements of target segments and by the yield and quality of flour that a particular batch of wheat will provide. This finding supports the inclusion of procurement in the organizational

structure of the marketing service (Stage 4 of the methodology).

Sixth, the segment-based approach proposed in Table 6 reflects the ideas of service-dominant logic [30]: in business-to-business markets, flour mills compete not only through the grade of flour but also through technical support, consistency of quality and delivery reliability. This approach is consistent with the conclusions of the value chain literature that the modernization of agri-food chains is accompanied by the spread of contracts and quality standards [2, 24]. For Uzbek enterprises, the development of long-term contracts with industrial bakeries and processors, packaged retail products and special flours can reduce dependence on price-based exports and on a single foreign market.

Seventh, the results have social implications. The strong rise in bread prices in 2020-2025 [27] shows that liberalization has transferred price risks to consumers. The marketing activities of enterprises cannot eliminate the effects of world wheat prices, but transparent exchange-based pricing, the development of price lines for different consumer groups and the stability of supply can reduce the risk of sharp price jumps. The literature on wheat self-sufficiency policy in Uzbekistan emphasizes that food security depends on the functioning of the entire value chain [16]; marketing at the processing stage is one of its key links.

The results also have implications for the organizational structure of enterprises. In many mills, the functions of procurement, production planning and sales are performed by separate departments that report to different managers and use different information. The diagnostics showed that the margin depends simultaneously on the price and quality of wheat, on the extraction rate and on the segment to which the flour is sold. Therefore, these functions should be coordinated within a single marketing service or at least through regular joint planning. This corresponds to the idea of interfunctional coordination as a component of market orientation [17] and to the view of marketing as a management function rather than a sales department [31]. For small and medium-sized mills, which cannot afford a large marketing department, the same functions can be performed by one specialist supported by exchange data and simple analytical tools, or through cooperation within grain clusters and the industry association.

The stage-based structure of the methodology also makes it suitable for gradual implementation. At the first stage, enterprises can introduce regular market diagnostics and monitoring of exchange prices without significant costs. At the second and third stages, they can build segment-specific offers and contract terms, starting with the most profitable or most stable segments. The fourth and fifth stages require changes in the organizational structure and management accounting, which can be carried out as enterprises gain experience. The annual and seasonal feedback cycle is important because the grain market has a pronounced seasonality: prices, quality of available grain and export demand change between the harvest period and the rest of the marketing year.

The proposed methodology differs from general marketing methodologies [10] in three respects: it begins with quantitative diagnostics of the market rather than with a description of the enterprise; it includes procurement of raw materials as a marketing function; and it uses indicators of concentration and margin as key performance indicators. In this way, it operationalizes the market orientation concept [17, 8] for a commodity industry in transition.

Finally, the results suggest directions for state policy that would support the marketing activities of enterprises without returning to administrative regulation. These include improving the coverage and timeliness of statistics on flour production, stocks and prices; developing standardized quality grades and laboratory certification of wheat and flour, which would allow enterprises to compete on quality rather than only on price; supporting the participation of enterprises in exhibitions and trade missions to diversify export markets; and expanding exchange instruments such as forward contracts, which would allow mills to manage price risks. The intervention fund remains an important tool for preventing sharp price spikes, but its operations should be predictable and transparent so as not to distort the price signals on which the marketing decisions of enterprises are based. In this sense, the effectiveness of market mechanisms in the grain sector depends on the combination of competent marketing at the enterprise level and a stable, information-rich institutional environment created by

the state.

The hypothesis of the study is confirmed: the diagnostics showed that the main risks of flour enterprises are related to concentration and thin margins, and that they cannot be managed by increasing volumes alone.

The study has several limitations. The market balance combines data for different periods and uses an assumed extraction rate; the price of imported wheat was taken from regional data; official sources report different grain harvest figures for 2025; and the flour output of large enterprises does not cover the entire industry. The methodology has not yet been tested on individual enterprises, and its effectiveness should be verified through case studies and surveys of marketing practices in the industry.

CONCLUSION

The study developed a methodology for organizing marketing activities of grain and flour enterprises in the context of market mechanisms. It was established that the grain market of Uzbekistan has moved to market pricing and exchange trading, that domestic wheat covers about 79% of domestic use, that import dependence is about 46%, and that both flour exports and flour imports are concentrated on a single country. The export unit value of flour is lower than the import unit value, and the gross processing margin is very sensitive to wheat prices and extraction rates. The research hypothesis was confirmed: in the new conditions the main risks of enterprises can be managed only through systematic diagnostics and segment-based marketing.

The practical significance of the study lies in the five-stage methodology - market diagnostics, segmentation and targeting, positioning and marketing mix, organization of the marketing service and control by key performance indicators - which can be applied by flour mills, grain clusters and the industry association. It is recommended that enterprises establish marketing services that combine market analysis, procurement and sales; use exchange prices as the basis for pricing and contracts; develop products and services for industrial bakeries, retail and processors; diversify export destinations; and regularly monitor margins, concentration and customer retention. At the industry level, it is advisable to improve statistics on flour production and to publish regular information on prices and quality on the exchange. The implementation of the methodology will make it possible for enterprises to move from volume-oriented sales to the management of margins and customer relationships, to reduce dependence on a single export market and a single source of raw materials, and to contribute to the stability of supply of the domestic market with flour and bread. For the state, the development of marketing competences in the industry is a condition for the sustainability of the market mechanisms introduced in the grain sector.

The answer to the main research question is therefore that marketing in grain and flour enterprises after liberalization should be organized as a continuous cycle that starts with quantitative diagnostics of the market and ends with control of margins and concentration, and that integrates procurement of raw materials, product and segment management and pricing based on exchange benchmarks. Such an organization of marketing turns market mechanisms from a source of risk into a source of competitive advantage for enterprises.

The contribution of the study consists in linking the concepts of marketing management and market orientation with quantitative diagnostics of a commodity market in transition. Future research should focus on testing the methodology at individual enterprises, on surveys of the level of market orientation in the industry and on econometric analysis of price transmission from wheat to flour and bread.

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