DOI: 10.5281/zenodo.24455182
Link: https://zenodo.org/records/24455182

APPROACHES TO STRATEGIC PLANNING FOR THE MANAGEMENT OF MARKETING ACTIVITIES IN GRAIN-PROCESSING ENTERPRISES

Boyjigitov Sanjarbek Komiljon ugli
Independent researcher (DSc) at Samarkand institute of economics and services
Tel.: +99893 350 06 09
E-mail: 00_bek94@mail.ru

Abstract. *This article examines approaches to strategic planning for the management of marketing activities in grain-processing enterprises, using the example of flour mills operating in Uzbekistan. The relevance of the study is determined by the liberalization of the grain market, the high dependence of the milling industry on imported wheat, the concentration of flour exports on a single market and recent changes in the trade policies of neighbouring countries. The aim of the research is to compare the main approaches to strategic planning and to substantiate an adaptive model of strategic marketing planning suited to the volatile environment of grain processing. The study employs a comparative analysis of the literature on strategic planning and marketing strategy, environmental scanning based on official statistics and industry data, sensitivity analysis of the gross processing margin to strategic risk factors, scenario planning based on two key uncertainties, the Ansoff product–market matrix and the Balanced Scorecard. The results show that at reference prices the gross processing margin of exported flour is about USD 2.9 per tonne, while an increase of three percentage points in the Afghan tariff on flour would reduce it by USD 8.3 and a 10% rise in wheat prices by USD 27.5 per tonne. Four scenarios are identified, in three of which the current volume-oriented export model becomes loss-making without strategic adjustment. An adaptive model of strategic marketing planning is proposed that combines a deliberate annual plan with emergent quarterly reviews triggered by indicators, together with a Balanced Scorecard for the marketing service.*

Keywords: *strategic planning, marketing management, grain processing, flour mills, scenario planning, SWOT/TOWS, Ansoff matrix, Balanced Scorecard, export markets, Uzbekistan.*

INTRODUCTION

Grain processing is one of the core branches of the food industry: flour mills transform grain into the main ingredient of bread, pasta and confectionery and thus link agriculture with the consumer market. In most countries the industry operates on thin margins, because the price of grain accounts for the largest part of the cost of flour and products are relatively standardized. Under such conditions, long-term success depends not only on technology and scale, but also on how enterprises plan their marketing: which markets they choose, which products they develop, how they manage price risks and how quickly they adapt to changes in the environment.

For grain-processing enterprises of Uzbekistan these questions have become particularly acute after the liberalization of the grain market. Since the 2021 harvest, state procurement and state purchase prices for grain have been abolished, and grain is sold freely through exchange trading and direct contracts [23]. The milling industry has grown rapidly and has become export-oriented: in 2025 the country exported about 1.6 million tonnes of flour worth USD 441.7 million, of which almost the entire volume went to Afghanistan [21]. At the same time, mills depend heavily on imported Kazakh

wheat: in 2024 Uzbekistan received 3.3 million tonnes of wheat from Kazakhstan [13], and the production of 1.6 million tonnes of exported flour is estimated to have required about 2.2 million tonnes of Kazakh grain [29].

This model has proved successful, but it is exposed to external changes that individual enterprises cannot control. Afghanistan has raised its import duty on flour from 5% to 8% while lowering duties on wheat in order to support its own mills [6]. Kazakhstan, the main supplier of wheat, has in the past imposed quotas on wheat and flour exports [25], and its wheat harvest is forecast to decline in the 2026/27 marketing year [4]. In such an environment, traditional annual sales planning, focused on volumes, is no longer sufficient; enterprises need strategic planning approaches that allow them to anticipate alternative futures and adjust their marketing in time. In practice, however, many mills still plan their activities on an annual basis, in terms of tonnes to be processed and sold, while marketing is understood mainly as the search for buyers. Strategic documents, where they exist, are often formal and are not linked to the monitoring of markets or to the indicators by which managers are evaluated. As a result, enterprises react to external shocks after they have occurred, rather than preparing for them in advance, and the marketing service has little influence on decisions about procurement, products and markets. The question of which approaches to strategic planning are suitable for such enterprises, and how they should be combined, therefore has both theoretical and practical significance for the industry and for the food security of the country.

Thus, the scientific problem lies in the contradiction between the increasing volatility and concentration of the markets in which grain-processing enterprises operate and the predominance of short-term, volume-oriented planning of their marketing activities.

The aim of the study is to compare the main approaches to strategic planning and to substantiate an adaptive model of strategic marketing planning for grain-processing enterprises. To achieve this aim, the following *objectives* were set: (1) to systematize approaches to strategic planning and marketing strategy; (2) to analyse the strategic environment of grain-processing enterprises of Uzbekistan; (3) to quantify the sensitivity of the processing margin to key strategic factors and to develop scenarios; (4) to propose growth directions, a planning model and a system of indicators for the marketing service.

The object of the research is grain-processing (flour milling) enterprises of the Republic of Uzbekistan. *The subject* is the set of methods and organizational procedures of strategic planning used in managing their marketing activities. *The hypothesis* of the study is that, under high volatility and concentration of markets, a combination of deliberate planning with scenario analysis and indicator-based adaptive review is more suitable for grain-processing enterprises than any single planning approach.

The scientific novelty of the research consists in the following: the main approaches to strategic planning have been evaluated against criteria reflecting the specific features of grain processing; the sensitivity of the processing margin to strategic risk factors has been quantified for the case of Uzbek flour exports; four scenarios based on two key uncertainties – Afghan trade policy and regional wheat supply – have been developed with corresponding marketing strategies; and an adaptive model of strategic marketing planning with trigger indicators and a Balanced Scorecard for the marketing service has been proposed.

LITERATURE REVIEW

The literature on the topic can be divided into four streams: classical approaches to strategic planning; the debate on deliberate and emergent strategy; tools for situational analysis, scenarios and performance measurement; and research on marketing strategy and on the context of grain markets in Central Asia.

Classical approaches. H. Ansoff proposed a product–market framework in which a firm chooses between market penetration, market development, product development and diversification, each associated with a different level of risk [1]. M. Porter linked strategy with the structure of the industry and identified cost leadership, differentiation and focus as generic routes to competitive

advantage [22]. Both approaches assume that strategy is formulated by management on the basis of systematic analysis and then implemented through plans. For grain-processing enterprises, they offer a useful structure for choosing growth directions and competitive positioning, but they were developed for relatively stable environments in which the main parameters of demand and supply can be forecast.

Deliberate and emergent strategy. H. Mintzberg and J. Waters distinguished between deliberate strategies, which are realized as intended, and emergent strategies, which form as patterns of action in the absence of or despite intentions [17]. Later H. Mintzberg criticized formal strategic planning for its tendency to confuse strategy with programming and argued that planning should support strategic thinking rather than replace it [16]. C. Wolf and S. Floyd, reviewing research on strategic planning, concluded that planning remains widespread in organizations and can contribute to performance, but that its effects depend on how it is designed and on the environment in which it is applied [34]. These works suggest that in volatile environments planning should combine formal elements with mechanisms for learning and adaptation.

Tools for situational analysis. H. Weihrich developed the TOWS matrix, which turns SWOT analysis into a tool for generating strategies by systematically matching internal strengths and weaknesses with external opportunities and threats [33]. E. Gürel and M. Tat, in a theoretical review of SWOT analysis, noted its simplicity and wide use, but also its limitations: the subjective selection of factors, the lack of prioritization and the static character of the analysis [9]. For grain processing, where the most important external factors – grain prices, trade measures, exchange rates – are quantitative, this means that SWOT should be supplemented by quantitative assessment of the effect of each factor.

Scenario planning. P. Schoemaker described scenario planning as a disciplined method for imagining several plausible futures and testing strategies against them, in contrast to planning on the basis of a single forecast [24]. The method is particularly appropriate when uncertainty is high and when a few key uncertainties determine the outcome. In the grain sector of Central Asia, such uncertainties include harvests in exporting countries, export restrictions and the trade policies of importing countries; studies of the region show that price spikes are transmitted along the entire wheat supply chain and that state interventions only partly dampen them [3].

Performance measurement. R. Kaplan and D. Norton proposed the Balanced Scorecard, which complements financial indicators with indicators of customers, internal processes and learning and growth, thereby translating strategy into operational measures [10]. For the marketing service of a grain-processing enterprise, the Balanced Scorecard can link strategic goals – diversification of markets, product development, margin stability – with measurable indicators. However, the indicators proposed in the original framework need to be adapted to the business-to-business character of flour sales and to the role of procurement.

Marketing strategy. R. Varadarajan defined the domain of strategic marketing as the study of organizational, inter-organizational and environmental phenomena concerned with the behaviour of firms in the marketplace and their interactions with customers and competitors [32]. N. Morgan and co-authors reviewed research in marketing strategy and distinguished between strategy formulation – decisions on markets, value offerings and timing – and strategy implementation; they noted that research on how firms actually plan and adjust marketing strategies remains limited [18]. P. Kotler and K. Keller describe the strategic marketing plan as the link between corporate strategy and the marketing mix [11].

Context of grain markets. Research on agri-food value chains in low- and middle-income countries shows that their modernization is accompanied by consolidation, new forms of coordination and growing exposure to international markets [2]. For Uzbekistan, L. Lombardozzi and N. Djanibekov analysed the wheat self-sufficiency policy and its effects on actors of the value chain [14], while the national agricultural strategy for 2020–2030 sets the course for market-based development of the sector [7]. These works describe the environment of grain-processing enterprises, but do not address how they should plan their marketing strategically. National studies on the

management of food industry enterprises in Uzbekistan mostly consider strategic planning in general terms, emphasizing its importance for competitiveness and innovative development, but rarely propose specific planning procedures for particular branches. In the milling industry, where the main risks are associated with the prices of raw materials and foreign trade policy, the absence of such procedures is especially noticeable, because general recommendations do not tell managers which indicators to monitor and when to revise their plans.

Strategic planning in commodity processing. Commodity processing industries have several features that affect the choice of planning approach. First, the raw material accounts for most of the cost, and its price is formed on regional or world markets beyond the control of the enterprise. Second, products are relatively standardized, so that differentiation is achieved mainly through quality consistency, service and specialized products. Third, sales are concentrated on a limited number of business customers and export markets, and the loss of one of them can significantly affect the results of the enterprise. Fourth, the industry is closely connected with food security and is therefore subject to state regulation and trade measures in both exporting and importing countries. These features mean that the external environment of grain-processing enterprises is not only uncertain but also asymmetric: a small number of factors determine most of the outcome. Under such conditions, the most valuable function of strategic planning is not to produce a detailed forecast but to identify these key factors, to assess their possible effects and to prepare responses in advance.

Critical comparison of approaches. The approaches reviewed differ in their assumptions about the predictability of the environment and the role of management. The rational approach of H. Ansoff and M. Porter assumes that the environment can be analysed and that management can choose a strategy and allocate resources accordingly. The emergent approach of H. Mintzberg emphasizes learning and adaptation and is sceptical of detailed plans. Scenario planning occupies an intermediate position: it accepts that the future cannot be predicted, but argues that it can be structured into several plausible alternatives for which strategies can be prepared. The Balanced Scorecard focuses on implementation and control rather than on the choice of strategy. In the literature these approaches are often presented as competing, but the empirical evidence summarized by C. Wolf and S. Floyd suggests that organizations in practice combine formal planning with flexible adjustments [34]. For grain-processing enterprises, such a combination appears to be particularly appropriate, but its design has not yet been described.

A comparative summary of the approaches is presented in Table 1.

Table 1

Comparison of approaches to strategic planning relevant to marketing management

Approach	Key authors	Main idea	Limitation for grain-processing enterprises
Rational (design) planning	Ansoff [1]; Porter [22]	Analysis of environment and resources, choice of growth and competitive strategy	Assumes predictable environment; long planning cycle
Situational analysis (SWOT/TOWS)	Weihrich [33]; Gürel, Tat [9]	Matching strengths and weaknesses with opportunities and threats	Qualitative, static; factors rarely quantified
Emergent strategy	Mintzberg, Waters [17]; Mintzberg [16]	Strategy forms through learning and adaptation	Weak guidance for resource allocation
Scenario planning	Schoemaker [24]	Several plausible futures instead of a single forecast	Requires identification of key uncertainties and data
Performance-based planning	Kaplan, Norton [10]	Translating strategy into balanced indicators	Indicators must be adapted to commodity B2B markets
Marketing strategy research	Varadarajan [32]; Morgan et al. [18]	Domain and content of marketing strategy; formulation and implementation	Mostly based on firms in developed consumer markets

Thus, the analysis reveals a research gap: the approaches to strategic planning have been developed and tested mainly in other industries and countries, and there is no study that evaluates them with respect to grain-processing enterprises operating in a liberalized, import-dependent and export-concentrated market and that proposes a combined planning model with quantitative scenario assessment. The present study aims to fill this gap.

METHODOLOGY

The research was designed as an applied study combining a comparative analysis of strategic planning approaches with quantitative analysis of secondary data and strategic modelling. This design was chosen because the aim was to select and adapt planning approaches for a specific type of enterprise, which required both a theoretical comparison and an empirical assessment of the environment in which these approaches would be applied.

Data. Official data of the National Statistics Committee on flour exports and imports and on food production in 2025 [21, 20, 19]; data on wheat imports from Kazakhstan [13, 29, 12]; information on trade measures and market developments in Afghanistan and Kazakhstan [6, 5, 27, 4, 8, 25, 28]; data of the Uzbek Commodity Exchange [30]; and the Central Bank study of bread prices [31] were used. As a regional reference price of imported wheat, the average price of Kazakh wheat imported by Kyrgyzstan in January–August 2025 was taken [26], since comparable official data for Uzbekistan were not available.

Environmental scanning. External factors were grouped into political and regulatory, economic and market, and technological factors, and for each of them evidence from the sources listed above was recorded. The factors were then classified as opportunities or threats and matched with typical strengths and weaknesses of Uzbek mills using the TOWS logic [33].

Sensitivity of the processing margin. The gross processing margin per tonne of exported flour was calculated as:

$$GM = p_f - p_w / k, \quad (1)$$

where p_f is the export unit value of flour, USD per tonne (calculated as the ratio of export value to volume); p_w is the price of wheat, USD per tonne; k is the flour extraction rate. Reference values were p_f = 277.6 USD/t, p_w = 206 USD/t and k = 0.75. The effect of each strategic factor was calculated as the change in GM:

$$\Delta GM_\tau = -\tau \cdot p_f, \quad \Delta GM_w = -\Delta p_w / k, \quad \Delta GM_k = p_w / k_0 - p_w / k_1, \quad (2)$$

where τ is the increase in the import tariff in the destination market absorbed by the exporter; Δp_w is the change in the wheat price; k_0 and k_1 are the initial and improved extraction rates. The margin is gross and does not include processing, transport and other costs or revenue from by-products; therefore, it was used to compare the relative importance of factors rather than to measure profitability.

Scenario planning. Following the procedure described by P. Schoemaker [24], the two most important and most uncertain external factors were selected on the basis of the environmental scanning – the trade policy of Afghanistan with respect to flour and wheat imports and the availability and price of regional wheat. Combining their extreme states produced four scenarios. For each scenario, the gross margin was estimated by formulas (1)–(2), assuming an absorbed tariff increase of three percentage points in the protection scenarios and a 10% rise in wheat prices in the tight-supply scenarios, and marketing strategies were formulated.

Growth directions and planning model. Growth directions were systematized using the Ansoff matrix [1], with evidence on market size and trends for each direction. The planning approaches were evaluated by the author against five criteria reflecting the features of grain processing: ability to cope with volatility, use of quantitative data, support for resource allocation, speed of adaptation and link with performance measurement. On this basis, an adaptive planning model and a Balanced Scorecard for the marketing service [10] were developed.

The choice of the two key uncertainties for the scenarios was based on two criteria: the

magnitude of their potential effect on the margin, as shown by the sensitivity analysis, and the degree of uncertainty, as indicated by recent policy changes and forecasts. The tariff increase of three percentage points corresponds to the actual change in the Afghan duty on flour, and the 10% change in wheat prices reflects the typical amplitude of seasonal and year-to-year fluctuations in the regional market. The criteria for evaluating planning approaches were derived from the features of commodity processing identified in the literature review: volatility of raw material prices and trade policies, availability of quantitative market data, the need for investment decisions, the speed of market changes and the importance of control. Each approach was rated on a three-level scale (low, medium, high) on the basis of its characteristics described in the literature. The assessment was qualitative and was used to identify the relative strengths and weaknesses of the approaches rather than to produce a precise ranking. The Balanced Scorecard indicators were selected so that each of them corresponds to one of the risks identified in the scenario analysis and can be calculated from the internal data of an enterprise. The research was carried out in four stages: comparative analysis of planning approaches; environmental scanning and data verification; quantitative sensitivity and scenario analysis; and development of the planning model and indicators. Data for different periods were combined where necessary, and in such cases the results were interpreted as approximate characteristics of the situation. Calculations were performed in Python 3.

ANALYSIS AND RESULTS

The main external factors identified by environmental scanning are summarized in Table 2.

Table 2

Key external factors of the strategic environment of Uzbek grain-processing enterprises

Group	Factor and evidence	Type
Regulatory	Market pricing and free sale of grain since the 2021 harvest [23]	Opportunity
Market	Flour exports of about 1.6 mln t (USD 441.7 mln) in 2025, +42.3%; 99.9% to Afghanistan [21]	Opportunity / threat (concentration)
Market	Afghanistan's cereal import requirement of 3.7 mln t in 2025/26, mostly flour, due to limited milling capacity [27]	Opportunity
Trade policy	Afghan import duty on flour raised from 5% to 8%, duties on wheat lowered; wheat imports up 345% [6]	Threat
Supply	Wheat imports from Kazakhstan of 3.3 mln t in 2024 [13]; Kazakh wheat harvest forecast to fall by 4.3 mln t in 2026/27 [4]	Threat
Competition	Kazakhstan exported a record 2.174 mln t of flour in 2025/26 [28]; Russian wheat expanding in Central Asia [8]	Threat
Domestic market	Food production of 152.1 trln UZS in 2025, +9.7% [19]; flour imports down 10.3% to 422.6 thous. t [20]	Opportunity
Technological	Projects for deep processing: premium flour, gluten, protein, pasta [15]	Opportunity

Imports of Afghanistan from Central Asian countries increased from USD 1.679 billion in 2024 to USD 2.399 billion in 2025 [5]. In 2025 Kazakhstan supplied about 1.05 million tonnes of flour to Afghanistan, compared with about 1.6 million tonnes from Uzbekistan [29], which corresponds to about 60% of the combined supplies of the two countries. On the domestic market, the price of bread made from first-grade flour increased by 77.6% from 2020 to May 2025 [31].

The effect of individual strategic factors on the gross margin, calculated by formulas (1)–(2), is presented in Table 3.

Table 3

Effect of strategic factors on the gross processing margin of exported flour

Factor	ΔGM, USD/t	GM after change, USD/t
Reference situation	–	2.9

Destination tariff +3 p.p. absorbed by exporter	-8.3	-5.4
Wheat price +10%	-27.5	-24.5
Extraction rate +2 p.p. (0.75 → 0.77)	+7.1	10.0
Price premium of 6% on 40% of sales	+6.7	9.6
Both improvements combined	+13.8	16.7

The effect of a 10% rise in wheat prices was 9.5 times the reference margin, and the effect of the tariff increase 2.9 times. Improvements in extraction and pricing together added USD 13.8 per tonne.

The scenario matrix based on the two key uncertainties is shown in Figure 1.

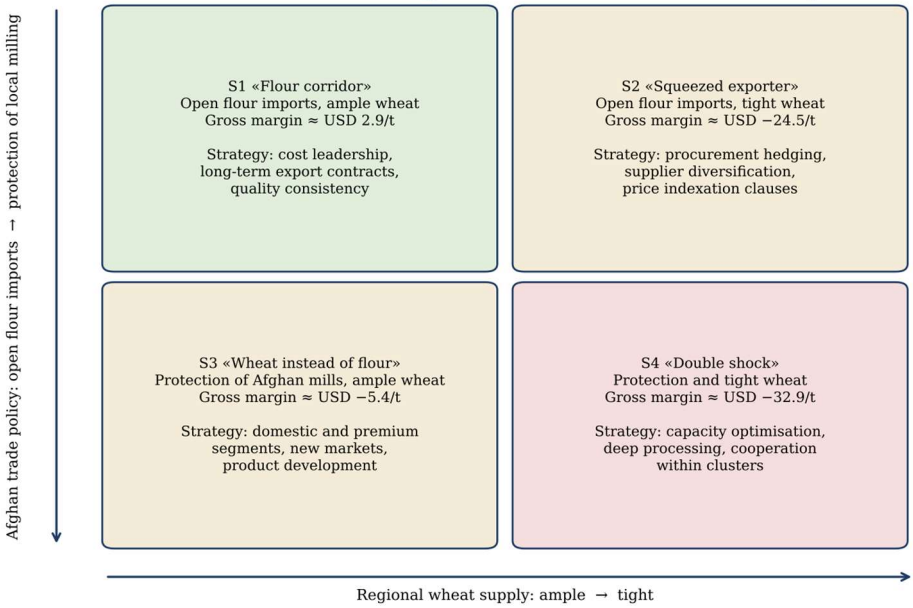


Figure 1. Scenario matrix for grain-processing enterprises

Without strategic adjustment, the gross margin was positive only in scenario S1 and ranged from -5.4 to -32.9 USD/t in the other three scenarios. With the combined improvements from Table 3, the margin was 16.7 USD/t in S1, 8.4 in S3, -10.7 in S2 and -19.1 USD/t in S4.

Table 4

Growth directions of grain-processing enterprises according to the Ansoff matrix

Direction	Content for flour mills	Market evidence
Market penetration	Strengthening positions in Afghanistan and the domestic market through quality and service	About 60% of Uzbek–Kazakh flour supplies to Afghanistan; flour imports falling [29, 20]
Market development	New export destinations; domestic regions and segments with low presence	Exports to countries other than Afghanistan below 1 thous. t [21]
Product development	Premium and special flours, packaged retail flour, flour mixes	Imported flour in higher-quality segments; growing food industry [20, 19]
Diversification	Pasta, gluten, protein products, feed from by-products	Deep-processing investment projects [15]

The results of the evaluation of planning approaches against the criteria are presented in Table 5.

Table 5

Evaluation of strategic planning approaches against the features of grain processing

Approach	Volatility	Quantitative data	Resource allocation	Speed of adaptation	Link with KPIs
Rational planning	Low	Medium	High	Low	Medium

SWOT/TOWS	Low	Low	Medium	Low	Low
Emergent strategy	High	Low	Low	High	Low
Scenario planning	High	Medium	Medium	Medium	Low
Balanced Scorecard	Medium	High	Medium	Medium	High
Adaptive combined model	High	High	High	High	High

The adaptive model of strategic marketing planning developed on this basis is shown in Figure 2, and the Balanced Scorecard for the marketing service in Table 6.



Figure 2. Adaptive model of strategic marketing planning for grain-processing enterprises

Figure 2 presents an adaptive model of strategic marketing planning for grain-processing enterprises, while Table 6 outlines a Balanced Scorecard (BSC) designed to translate strategic marketing objectives into measurable performance indicators. The proposed approach emphasizes the integration of financial performance, market diversification, operational efficiency, and organizational development to support strategic decision-making under changing market conditions.

As shown in Table 6, the financial perspective focuses on maintaining stable profitability through effective pricing and cost management. Gross margin per tonne serves as a key indicator of economic performance, while the share of sales with price indexation reflects the enterprise's ability to manage fluctuations in grain prices and protect margins. The customers and markets perspective prioritizes diversification and the development of sustainable commercial relationships. Indicators such as the share of the largest export market, the number of active export destinations, and customer retention enable enterprises to assess market concentration, geographical diversification, and the stability of their customer base.

Table 6

Balanced Scorecard for the marketing service of a grain-processing enterprise

Perspective	Strategic goal	Indicator
Financial	Stable margin	Gross margin per tonne; share of sales with price indexation
Customers and markets	Diversified markets and segments	Share of the largest export market; number of active export destinations; customer retention
Internal processes	Efficient procurement and product quality	Extraction rate; share of wheat bought under contracts; quality complaints per 1,000 t
Learning and growth	Market intelligence and new products	Share of sales from new products; frequency of scenario reviews; staff trained in analytics

The internal processes perspective addresses procurement efficiency and product quality, which directly influence production costs and customer satisfaction. The extraction rate reflects the efficiency of grain processing, while the share of wheat purchased under contracts indicates the predictability and stability of raw material procurement. Quality complaints per 1,000 tonnes provide a measurable assessment of product consistency and the effectiveness of quality management practices.

The learning and growth perspective emphasizes the development of market intelligence, analytical capabilities, and product innovation. The share of sales generated by new products measures the commercial contribution of innovation, while the frequency of scenario reviews reflects the adaptability of strategic planning to changing market conditions. The number or proportion of employees trained in analytics indicates the development of organizational competencies required for evidence-based marketing decisions.

Overall, the integration of the adaptive strategic marketing planning model with the Balanced Scorecard provides a structured mechanism for linking strategic objectives with operational performance. Regular monitoring of these indicators can facilitate timely adjustments to marketing strategies, reduce exposure to market and procurement risks, strengthen competitive positioning, and support the long-term sustainability of grain-processing enterprises.

DISCUSSION

The results allow us to answer the research questions formulated in the introduction. First, the environmental scanning showed that the strategic environment of Uzbek grain-processing enterprises is characterized by a combination of large opportunities and significant threats. On the one hand, the liberalization of the grain market, the large import requirement of Afghanistan and the growth of the domestic food industry create favourable conditions for expanding sales. On the other hand, the business model of the industry is built on two external dependencies – on imported wheat and on a single export market – and both are subject to policy changes in neighbouring countries. The recent increase of the Afghan duty on flour together with the reduction of duties on wheat shows that the importing country is seeking to develop its own milling, which directly threatens the export model of Uzbek mills.

Second, the sensitivity analysis showed how thin the economic basis of the volume-oriented export model is. At reference prices the gross margin is only a few dollars per tonne, and plausible changes in the environment – a tariff increase of three percentage points or a 10% rise in wheat prices – turn it negative. This result is consistent with the observation that in commodity processing the price of raw materials dominates costs and that price shocks are transmitted along the entire supply chain [3]. In terms of strategic planning, it means that the main risks of grain-processing enterprises lie outside their control, and that plans based on a single forecast of prices and volumes are likely to fail. This supports the argument of H. Mintzberg that formal planning should be complemented by strategic thinking and adaptation [16].

Third, the scenario analysis demonstrated the value of the approach described by P. Schoemaker [24]. Instead of predicting which future will materialize, enterprises can prepare strategies for each of them. The scenarios show that only in the most favourable case does the current model remain profitable, while in the others enterprises need either procurement and pricing measures (in the case of tight wheat supply), market and product diversification (in the case of Afghan protection) or more radical restructuring (in the case of a double shock). Importantly, the combined improvements in extraction and pricing restore a positive margin in the protection scenario and substantially reduce losses in the tight-supply scenarios. This indicates that internal marketing and procurement capabilities, although they cannot eliminate external shocks, considerably increase the resilience of enterprises.

Fourth, the Ansoff matrix shows that the growth strategy of Uzbek mills has so far relied almost entirely on market penetration in one export market. Market development, product development and diversification remain underused, although there is evidence of demand for higher-

quality flour on the domestic market, where imported flour still occupies premium segments, and of investment interest in deep processing. According to H. Ansoff [1], product development and diversification carry higher risks than penetration; however, in the current situation the concentration of sales on one market is itself a major risk, so the balance of risks shifts in favour of diversification. This conclusion is consistent with the view that the modernization of agri-food value chains involves the move towards higher-value products and new forms of coordination [2].

Fifth, the evaluation of planning approaches confirms the conclusion of C. Wolf and S. Floyd that the effect of strategic planning depends on its design and on the environment [34]. Rational planning is strong in resource allocation but weak in volatile conditions; emergent strategy adapts quickly but provides little guidance for investment; SWOT is simple but static; scenario planning addresses uncertainty but is not linked to performance measurement; the Balanced Scorecard links strategy with indicators but does not in itself identify alternative futures. The proposed adaptive model combines their strengths: the deliberate annual plan sets long-term goals and investment priorities, scenarios define the range of possible conditions, and trigger indicators initiate quarterly reviews, which introduces an emergent component in the sense of H. Mintzberg and J. Waters [17].

Sixth, the trigger mechanism is the main practical innovation of the model. Grain-processing enterprises cannot revise their strategies continuously, but they can define in advance the thresholds at which a review is required – for example, a deviation of the wheat price from the planned level, a change in trade measures of Afghanistan or Kazakhstan, or an increase in the share of the largest export market above a set level. Such thresholds link scenario planning with operational monitoring and make strategic planning a continuous process rather than an annual exercise.

Seventh, the Balanced Scorecard adapted to the marketing service helps to translate strategy into action, as proposed by R. Kaplan and D. Norton [10]. Unlike the indicators traditionally used in flour mills – volume of sales and production – the proposed indicators reflect the strategic risks identified in this study: margin per tonne, concentration of markets, quality of procurement and development of new products. This corresponds to the distinction made by N. Morgan and co-authors between strategy formulation and implementation [18]: the scorecard is the instrument through which the formulated marketing strategy is implemented and controlled.

The implementation of the adaptive model also requires organizational changes in grain-processing enterprises. Strategic marketing planning cannot be carried out by the sales department alone; it requires the participation of procurement, production, finance and top management. In larger enterprises this can be organized through a strategic planning committee that meets quarterly to review trigger indicators and scenarios, while in smaller mills the same function can be performed by the owner or general manager with the support of a marketing specialist. The quality of planning depends largely on the availability of information; therefore, enterprises should systematically collect data on exchange prices, export and import statistics, trade measures of neighbouring countries and the requirements of key customers. Such a system of market intelligence corresponds to the sensing function emphasized in the strategic management literature and is a precondition for the timely adjustment of strategy.

It should also be emphasized that the proposed strategies are not mutually exclusive across scenarios. Several measures – improvement of extraction, development of premium and packaged products, diversification of export destinations and the use of price indexation in contracts – are beneficial in all scenarios, although to different degrees. In scenario planning terms, these are robust strategies, which should be implemented regardless of which future materializes. Other measures, such as investment in deep processing or the reduction of capacity, are contingent strategies that should be prepared in advance but launched only when trigger indicators signal the onset of the corresponding scenario. Distinguishing between robust and contingent strategies allows enterprises to avoid both inaction and premature, costly decisions. For example, investment in gluten or starch production may be justified if Afghan protection of flour imports intensifies, but would be premature while the flour export market remains open and profitable. Conversely, measures to improve extraction and procurement are justified in any case, because they increase the margin in all four

scenarios. This logic allows enterprises to allocate limited financial resources more rationally and links the strategic plan with the investment programme.

The results have implications for industry and state policy as well. Because the main threats are associated with the policies of neighbouring countries, enterprises would benefit from regular exchange of market intelligence through the industry association and from state support in trade negotiations and in opening new markets. The development of exchange instruments for managing price risks and the improvement of statistics on the milling industry would also support strategic planning at the enterprise level. At the same time, the strong increase in bread prices in recent years [31] shows that the domestic market is sensitive to the costs of the industry; diversification and efficiency improvements therefore contribute not only to the competitiveness of enterprises but also to price stability for consumers.

The hypothesis of the study is confirmed: none of the individual approaches meets all the requirements of the environment of grain processing, while their combination in an adaptive model covers all the criteria considered.

The study has several limitations. The margin calculations use a regional reference price of wheat and an assumed extraction rate and do not include processing costs and by-products, so they show the relative importance of factors rather than the actual profitability of enterprises. The scenarios are based on two uncertainties and stylized parameter changes. The evaluation of planning approaches is based on the author's assessment and should be verified through expert surveys and case studies of enterprises.

CONCLUSION

The study compared approaches to strategic planning for the management of marketing activities in grain-processing enterprises and substantiated an adaptive model suited to the conditions of Uzbekistan. It was established that the business model of the industry depends on imported wheat and on a single export market, that the gross processing margin of exported flour is very thin and that plausible changes in trade policy and wheat prices make it negative. Of the four scenarios developed, the current volume-oriented model remains profitable only in the most favourable one. The hypothesis was confirmed: no single planning approach meets the requirements of this environment, while their combination does.

The practical significance of the study lies in the adaptive model of strategic marketing planning, which combines an annual deliberate plan, environmental scanning and TOWS analysis, the Ansoff matrix, scenarios and a Balanced Scorecard, and introduces trigger indicators for quarterly reviews. It is recommended that grain-processing enterprises develop scenario-based marketing plans, set thresholds for strategic review, diversify export markets and product portfolios, strengthen procurement and pricing capabilities and evaluate the marketing service on the basis of balanced indicators rather than sales volumes alone. At the industry level, it is advisable to organize the exchange of market intelligence and to develop instruments for managing price risks. For state bodies, the results indicate the importance of trade diplomacy aimed at predictable access to export markets and raw materials, as well as of support for the modernization and diversification of the milling industry.

The implementation of these recommendations will allow enterprises to move from reactive to anticipatory management of marketing, to reduce losses in unfavourable scenarios and to use favourable conditions more fully. Robust strategies – improvement of extraction, product development, diversification of markets and price indexation – should be implemented immediately, while contingent strategies such as deep processing or capacity adjustment should be prepared and launched when trigger indicators signal the corresponding changes in the environment.

Thus, the answer to the main research question is that strategic planning of marketing in grain-processing enterprises should be adaptive: it should rely on quantitative scenarios rather than a single forecast and should be revised when predefined indicators signal changes in the environment. The contribution of the study consists in adapting general approaches to strategic planning to the specific

conditions of a commodity processing industry in a transition economy. Future research should test the model on individual enterprises of different size and ownership, survey the planning practices used in the industry and develop quantitative methods for setting trigger thresholds.

REFERENCES

1. Ansoff H.I. Strategies for diversification // Harvard Business Review. - 1957. - Vol. 35, No. 5. - P. 113–124.
2. Barrett C.B., Reardon T., Swinnen J., Zilberman D. Agri-food value chain revolutions in low- and middle-income countries // Journal of Economic Literature. - 2022. - Vol. 60, No. 4. - P. 1316–1377.
3. Bobojonov I., Duric I., Glauben T. Heterogeneous impact of price spikes across countries and supply chain actors: an evidence from Central Asia and the Caucasus. A review // Agricultural Economics – Czech. - 2020. - Vol. 66, No. 2. - URL: https://agricecon.agriculturejournals.cz/pdfs/age/2020/02/05.pdf
4. CropGPT. Kazakhstan – wheat: six-month import restriction on road, water, and rail deliveries [Electronic resource]. - 2026. - URL: https://cropgpt.ai/kazakhstan-wheat-six-month-import-restriction-on-road-water-and-rail-deliveries
5. Dawat Media. Afghanistan's trade with Central Asia surges amid shifting regional dynamics [Electronic resource]. - 2026. - URL: https://dawatmedia24.com/?p=206734
6. Dawat Media. Kazakhstan reports 2.3-fold surge in grain exports to Afghanistan [Electronic resource]. - 2026. - URL: https://dawatmedia24.com/?p=206526
7. Decree of the President of the Republic of Uzbekistan No. UP-5853 of 23.10.2019 "On approval of the Strategy for the development of agriculture of the Republic of Uzbekistan for 2020–2030" [Electronic resource]. - URL: https://lex.uz
8. Eurasianet. Russia aiming to take away Central Asian wheat markets from Kazakhstan [Electronic resource]. - 2026. - URL: https://eurasianet.org/russia-aiming-to-take-away-central-asian-wheat-markets-from-kazakhstan
9. Gürel E., Tat M. SWOT analysis: a theoretical review // The Journal of International Social Research. - 2017. - Vol. 10, No. 51. - P. 994–1006.
10. Kaplan R.S., Norton D.P. The balanced scorecard – measures that drive performance // Harvard Business Review. - 1992. - Vol. 70, No. 1. - P. 71–79.
11. Kotler P., Keller K.L. Marketing Management. 15th ed. - Boston: Pearson, 2016.
12. Kun.uz. From wheat buyer to flour export leader: Uzbekistan reshapes Central Asia's grain trade [Electronic resource]. - Tashkent, 2026. - URL: https://kun.uz/en/news/2026/06/24/from-wheat-buyer-to-flour-export-leader-uzbekistan-reshapes-central-asias-grain-trade-15380c
13. Kun.uz. Uzbekistan remains major importer of wheat from Kazakhstan [Electronic resource]. - Tashkent, 2025. - URL: https://m.kun.uz/en/news/2025/01/13/uzbekistan-remains-major-importer-of-wheat-from-kazakhstan
14. Lombardozzi L., Djanibekov N. Can self-sufficiency policy improve food security? An inter-temporal assessment of the wheat value-chain in Uzbekistan // Eurasian Geography and Economics. - 2021. - Vol. 62, No. 1. - P. 1–20.
15. Ministry of Investment, Industry and Trade of the Republic of Uzbekistan. Investment proposal: organization of grain processing and flour production [Electronic resource]. - Tashkent, [n.d.]. - URL: https://invest.miit.uz
16. Mintzberg H. The fall and rise of strategic planning // Harvard Business Review. - 1994. - Vol. 72, No. 1. - P. 107–114.
17. Mintzberg H., Waters J.A. Of strategies, deliberate and emergent // Strategic Management Journal. - 1985. - Vol. 6, No. 3. - P. 257–272.
18. Morgan N.A., Whitler K.A., Feng H., Chari S. Research in marketing strategy // Journal of the Academy of Marketing Science. - 2019. - Vol. 47, No. 1. - P. 4–29.
19. National Statistics Committee of the Republic of Uzbekistan. In 2025, food products worth

152.1 trillion soums were produced [Electronic resource]. - Tashkent, 2026. - URL: https://stat.uz/ru/press-tsentr/novosti-goskomstata/67003
20. National Statistics Committee of the Republic of Uzbekistan. More than 422 thousand tons of flour imported to Uzbekistan [Electronic resource]. - Tashkent, 2026. - URL: https://stat.uz/en/press-center/news-of-committee/66934
21. National Statistics Committee of the Republic of Uzbekistan. Uzbekistan exported almost 1.6 million tons of flour in 2025 [Electronic resource]. - Tashkent, 2026. - URL: https://stat.uz/en/press-center/news-of-committee/67037
22. Porter M.E. Competitive Strategy: Techniques for Analyzing Industries and Competitors. - New York: Free Press, 1980. - 396 p.
23. Resolution of the President of the Republic of Uzbekistan No. PP-4634 of 06.03.2020 "On measures for the widespread introduction of market principles in the production, purchase and sale of grain" [Electronic resource]. - URL: https://lex.uz
24. Schoemaker P.J.H. Scenario planning: a tool for strategic thinking // Sloan Management Review. - 1995. - Vol. 36, No. 2. - P. 25–40.
25. Tashkent Times. Kazakhstan imposing quotas on wheat and flour exports [Electronic resource]. - Tashkent, 2022. - URL: https://www.tashkenttimes.uz/world/8736-kazakhstan-imposing-quotas-on-wheat-and-flour-exports
26. The Times of Central Asia. Kazakhstan reclaims role as Kyrgyzstan's main wheat supplier [Electronic resource]. - 2025. - URL: https://timesca.com/?p=36446 (accessed: 18.11.2026).
27. The Times of Central Asia. Wheat: news and analysis [Electronic resource]. - 2026. - URL: https://timesca.com/tag/wheat/
28. UkrAgroConsult. Kazakhstan posts record flour exports after shifting to new markets [Electronic resource]. - 2026. - URL: https://ukragroconsult.com/en/news/kazakhstan-posts-record-flour-exports-after-shifting-to-new-markets/
29. UkrAgroConsult. Uzbekistan overtakes Kazakhstan in flour exports by processing Kazakh grain [Electronic resource]. - 2026. - URL: https://ukragroconsult.com/en/news/uzbekistan-overtakes-kazakhstan-in-flour-exports-by-processing-kazakh-grain/
30. Uzbek Commodity Exchange. Weekly UZEX digest (October 27 – November 2) [Electronic resource]. - Tashkent, 2025. - URL: https://uzex.uz/en/news/uzex-weekly-digest-october-27-november-2 (accessed: 18.11.2026).
31. UzDaily. Bread prices in Uzbekistan rise 77.6% over five years - Central Bank study [Electronic resource]. - Tashkent, 2025. - URL: https://uzdaily.ru/en/bread-prices-in-uzbekistan-rise-776-over-five-years-central-bank-study (accessed: 18.11.2026).
32. Varadarajan R. Strategic marketing and marketing strategy: domain, definition, fundamental issues and foundational premises // Journal of the Academy of Marketing Science. - 2010. - Vol. 38, No. 2. - P. 119–140.
33. Weihrich H. The TOWS matrix – a tool for situational analysis // Long Range Planning. - 1982. - Vol. 15, No. 2. - P. 54–66.
34. Wolf C., Floyd S.W. Strategic planning research: toward a theory-driven agenda // Journal of Management. - 2017. - Vol. 43, No. 6. - P. 1754–1788.