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MASTER'S QUALIFICATION THESIS

on topic:
“Management of export operations of an enterprise”

Specialty **073 “Management”**

Educational program **Management of International Activity**

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Guarantor of educational programme
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NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE
Faculty of Agricultural Management

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TASK
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_____GUIRGUIS MICHAEL_____

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List of questions, that subject to research:
1. THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF EXPORT OPERATIONS MANAGEMENT OF AN AGRICULTURAL ENTERPRISE
2. ANALYSIS OF EXPORT OPERATIONS MANAGEMENT AT LLC "AGRO STAR UKRAINE"
3. IMPROVEMENT OF EXPORT OPERATIONS MANAGEMENT AT LLC "AGRO STAR UKRAINE"

List of graphic material (if necessary) tables, figures, diagrams_____

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ABSTRACT

Relevance of the Research Topic In the contemporary architecture of the global economy, the agricultural sector of Ukraine occupies a pivotal position, acting not merely as a segment of the national industrial complex but as a critical guarantor of global food security. For decades, Ukraine has been recognized internationally as the "breadbasket of Europe," holding leading positions in the export of sunflower oil, corn, wheat, and rapeseed. However, the operational environment for domestic agricultural enterprises has undergone a radical and traumatic transformation in recent years. The onset of full-scale geopolitical instability, characterized by the blockade of deep-sea ports in the Black Sea region, the destruction of traditional supply chains, and the fundamental restructuring of logistics routes towards the western borders, has created an unprecedented crisis for the industry.

Under these conditions, the traditional management models that served Ukrainian farmers for thirty years have become obsolete. Previously, export management was a passive process characterized by low logistics costs and high margins. Today, this model is no longer viable as logistics costs have skyrocketed, often consuming up to half of the final selling price. Furthermore, regulatory requirements in the European Union—now the primary market for Ukrainian goods—have become increasingly stringent, demanding compliance with complex "Green Deal" standards. Consequently, the survival of an agricultural enterprise depends not on its ability to produce, but on its ability to manage the export process effectively. This thesis addresses this urgent problem, arguing that export operations must be transformed into a sophisticated strategic function involving risk management and direct integration into European supply chains.

Object and Subject of the Study The object of the study is the process of managing the foreign economic activity (FEA) of agricultural enterprises under conditions of logistical and geopolitical uncertainty. The subject of the study is the theoretical, methodological, and practical aspects of improving the efficiency of export operations at LLC "AGRO STAR UKRAINE", specifically focusing on logistics optimization and sales channel diversification.

Purpose and Tasks of the Study The purpose of the work is to substantiate theoretical provisions and develop practical recommendations for improving the management of export operations at LLC "AGRO STAR UKRAINE" to ensure sustainable development and economic efficiency.

To achieve this purpose, the following tasks were defined and solved in the thesis:

- to clarify the theoretical foundations: To reveal the essence, forms, and types of export operations in the agricultural sector and analyze the specific features of managing agricultural exports, such as seasonality, perishability, and price volatility.
- to develop a methodological approach: To substantiate a system of indicators for assessing export efficiency, distinguishing between economic effect and economic efficiency, and introducing metrics such as "Logistics Intensity" and "Export Profitability".

- to conduct a comprehensive diagnostic: To analyze the organizational and economic condition of LLC "AGRO STAR UKRAINE" and diagnose the efficiency of its current export operations for the period 2021–2023.
- to identify bottlenecks: To determine the structural weaknesses in the enterprise's current export model, specifically the reliance on intermediaries and high logistics costs.
- to forecast market trends: To develop a forecast for the European agricultural market and construct scenarios (Pessimistic, Inertial, Optimistic) for the enterprise's development.
- to propose strategic improvements: To justify the transition to an "Active Export Strategy" involving the creation of an FEA department, direct contracting, and logistics optimization.

Summary of Main Findings The study establishes that standard management practices cannot be blindly applied to agriculture due to unique risks like biological seasonality and the status of the exporter as a "price taker". The practical analysis of LLC "AGRO STAR UKRAINE" reveals a contradictory picture: while production volumes remain stable and export volumes have recovered to pre-war levels, the financial efficiency of these operations has collapsed. The primary cause is identified as the "Logistics Intensity Index," which has risen to 38%, and a heavy reliance on indirect exports (selling to traders), which results in a loss of 15–20% of potential value.

To address these challenges, the thesis proposes a comprehensive strategy for upgrading export management. This includes transitioning to direct contractual relationships with European processing plants to capture the "trader's margin," optimizing logistics through long-term forwarding contracts, and diversifying the export portfolio to include value-added products.

Practical Value The final section provides an economic justification for these measures. Through scenario modeling, it is demonstrated that by implementing the proposed "Optimistic Scenario," LLC "AGRO STAR UKRAINE" can significantly increase its net export profitability. The recommendations outlined in this work offer a concrete roadmap for transforming export operations from a passive sales function into a core competitive advantage.

KEYWORDS: export operations, management efficiency, agricultural enterprise, logistics optimization, strategic development, European integration.

CONTENT

INTRODUCTION

Relevance of the Research Topic. Historically, the agricultural sector of Ukraine has functioned as the primary engine of the national economy, guaranteeing stability in foreign currency revenue and reinforcing the nation's status as a key guarantor of global food security. However, the military-political and economic environment in which domestic agricultural enterprises have operated since 2022 is defined by an unprecedented level of instability. The blockade of traditional logistical routes through Black Sea ports, the damage to energy infrastructure, and the continuous fluctuation of global commodity prices have fundamentally altered the paradigm of foreign economic activity (FEA).

Under these circumstances, the traditional "resource-based" export model-wherein an enterprise merely sells raw grain to a multinational trader at the port-has lost its economic viability. The sharp increase in logistics costs, which now account for up to 40% of the final price, combined with the strict regulatory requirements of the European Union market, necessitates a radical revision of management approaches. Today, the survival and development of an agricultural enterprise depend not only on the capacity to cultivate a high yield but also on the ability to manage the entire export supply chain effectively. Consequently, the search for new strategies to optimize export operations, minimize logistical risks, and diversify sales channels is of critical importance, which confirms the relevance of the chosen research topic.

Analysis of Recent Research and Publications. The theoretical and methodological foundations of managing the foreign economic activity of enterprises have been the subject of research by numerous domestic and foreign scholars. The fundamental principles of strategic management and competitive advantage in international trade are established in the classic works of M. Porter and P. Drucker.

The specific characteristics of the agricultural sector and its export potential have been deeply investigated by leading Ukrainian economists. In particular, V. Andriychuk and P. Sabluk have made significant contributions to the theory of agricultural economics and food security. The issues of export logistics and the

transformation of supply chains under martial law are reflected in the recent works of O. Nivyevskiy, Y. Lupenko, and T. Zinchuk. However, despite the significant volume of scientific publications, the issue of the practical adaptation of export management systems of medium-sized enterprises to the conditions of the "logistics crisis" of 2022–2024 remains insufficiently studied, which necessitated this research.

Purpose and Tasks of the Study. The purpose of the thesis is to substantiate theoretical provisions and develop practical recommendations for improving the management of export operations at LLC "AGRO STAR UKRAINE" to ensure economic efficiency and strategic sustainability in the European market.

To achieve this goal, the following *tasks* were defined:

- to clarify the economic essence of export operations and classify their forms within the agricultural sector.
- to analyze the specific features of managing agricultural exports, taking into account factors of seasonality, perishability, and price volatility.
- to develop a methodological approach for assessing the efficiency of export operations using indicators of logistics intensity and profitability.
- to conduct a comprehensive analysis of the current state of export management at LLC "AGRO STAR UKRAINE" and identify the primary "bottlenecks" in its business model.
- to determine the economic and structural efficiency of the enterprise's export operations for the period 2021–2023.
- to justify strategic directions for improving export management, including the transition to direct contracting and optimization of logistics routes.
- to calculate the economic effectiveness of the proposed managerial decisions using scenario modeling.

Object and Subject of the Study. The *object* of the study is the process of managing the foreign economic activity (FEA) of agricultural enterprises under conditions of market instability. The *subject* of the study is the set of theoretical, methodological, and practical aspects of improving the efficiency of export operations at LLC "AGRO STAR UKRAINE".

Research Methods. To solve the set tasks, a complex of general scientific and special *research methods* was utilized:

- Analysis and Synthesis: To clarify the theoretical content of export operations (Chapter 1).
- Statistical and Comparative Analysis: To study the dynamics of export volumes, revenue, and logistics costs of the enterprise (Chapter 2).
- SWOT Analysis: To identify the strengths, weaknesses, opportunities, and threats facing the enterprise in the external market.
- PESTEL Analysis: To assess the impact of political and legal factors (EU regulations) on the enterprise.
- Scenario Modeling: To forecast the development of the enterprise under optimistic, inertial, and pessimistic scenarios (Chapter 3).

Practical Value of the Results. The practical significance of the obtained results lies in the development of concrete recommendations that can be directly implemented in the economic activity of LLC "AGRO STAR UKRAINE". The main *practical proposals* include:

1. Project for the creation of an FEA Department: A substantiated plan for staffing and organizing a specialized unit to manage exports.
2. Strategy of Direct Contracting: A mechanism for switching from sales to intermediaries (traders) to direct contracts with European processors, which allows capturing an additional margin of $20-25 per ton.
3. Logistics Optimization Model: A calculated justification for the transition to long-term railway forwarding contracts to reduce the logistics intensity index.
4. Economic Calculation: It is proven that the implementation of the proposed measures will increase the net profit from exports by approximately $249,500 per year and increase the profitability of operations by 5.2 percentage points.

CHAPTER 1
THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF EXPORT OPERATIONS MANAGEMENT OF AN AGRICULTURAL ENTERPRISE

1.1. The essence of the concept of “export operations,” their types, forms, and structure

In the context of the modern global economy, international trade serves as a fundamental engine for the development of national industries, particularly in the agricultural sector. For Ukraine, where the agrarian complex accounts for a significant portion of GDP, understanding the theoretical nature of foreign economic activity is not merely an academic exercise but a practical necessity. At its core, the concept of "export operations" represents a complex category that has been interpreted in various ways by economists and scholars, evolving from simple trade definitions to complex management systems.

From a theoretical standpoint, an export operation is traditionally defined as the commercial activity of selling goods, services, raw materials, or capital manufactured or sourced in the domestic market to a foreign buyer, accompanied by the crossing of the state customs border. However, this definition is somewhat narrow. In a broader managerial sense, we should view an export operation not as a single act of sale, but as a systematic *process*. It involves a sequence of organizational, legal, and economic actions aimed at entering a foreign market. For an agricultural enterprise, this means that "export" begins long before the grain is loaded onto a truck; it begins with the decision to grow a specific crop that meets international quality standards (such as ISO or HACCP).

Scholars typically classify export operations based on several key criteria. The most critical classification for our study is the distinction based on the organization of the sales channel, as this determines the level of management efficiency [1,4].

1. Classification by Method of Organization (Channel Strategy)

- Direct Export: This form involves the agricultural producer establishing a direct commercial link with the foreign buyer (e.g., a Ukrainian farm selling directly to a pasta factory in Italy).
- *The Managerial Implications:* This method is the most complex. The enterprise must have its own [1] Foreign Economic Activity (FEA) department, specialists in international law, and logistics managers.
- *Economic Logic:* While it requires higher administrative costs, it allows the producer to capture the full profit margin. There are no middlemen taking a cut of the price. Furthermore, it builds a long-term reputation for the brand on the global market.
- Indirect Export: This is the most common form for small and medium-sized Ukrainian farmers. Here, the producer sells the crop to a domestic intermediary—a trader, broker, or purchasing organization—who then handles the actual export.
- *The Managerial Implications:* This approach minimizes risk. The farmer effectively treats the transaction as a domestic sale. The currency risks, customs clearance headaches, and logistics issues become the trader's problem.
- *Economic Logic:* The downside is financial. Traders typically purchase grain at a significant discount compared to the FOB (Free on Board) price at the port. By using indirect export, the enterprise effectively "pays" the trader to manage the risk, resulting in lower profitability per ton.
- Cooperative Export (Joint Export): An emerging form where several small producers unite to form an export cooperative. This allows them to pool their harvest to fill a large vessel (e.g., a Panamax ship) and negotiate direct contracts that they could not manage individually.

2. Classification by the Nature of the Object

In the agricultural sphere, it is also vital to distinguish export operations by the *degree of processing [2,3]*:

- Raw Material Export: The sale of unprocessed crops (wheat, corn, rapeseed). This is characterized by high volume but low added value. It is highly sensitive to logistics costs because the profit per ton is relatively low.
- Value-Added Export: The sale of processed goods (sunflower oil, flour, biofuels). This is less sensitive to logistics distance because the price of the final product is higher, allowing it to absorb transportation costs more easily.

3. The Structure and Lifecycle of an Export Operation

To manage an export operation effectively, one must understand its structural lifecycle. It is not a chaotic event but a linear process consisting of four distinct stages [6-9]:

- Stage 1: Preparation and Marketing. This is the analytical phase. The management must analyze target markets (e.g., choosing between the EU market with high prices but strict regulations, versus the Asian market with lower prices but easier entry). This stage also involves price calculation to determine the "break-even point."
- Stage 2: Contracting (The Legal Phase). This involves the negotiation and signing of the international sales contract. Crucial elements here include the choice of Incoterms 2020 rules (e.g., selling EXW means the buyer picks it up; selling DAP means the seller delivers it to the border). For agricultural goods, this stage also involves fixing quality parameters (moisture, protein, foreign material).
- Stage 3: Fulfillment (Logistics and Customs). This is the physical execution. It involves booking rolling stock (train wagons) or grain trucks, obtaining veterinary and phytosanitary certificates, and passing customs control. In the current realities of 2023–2025, this is the most volatile stage due to border delays.
- Stage 4: Financial Settlement. The final stage is the receipt of currency revenue. This may involve complex financial instruments like Letters of Credit or bank guarantees to ensure the buyer pays.

Thus, summarizing the theoretical foundations, we can conclude that export operations are a multifaceted system of economic relations. For an enterprise like LLC "AGRO STAR UKRAINE", choosing between direct and indirect export is not just a question of preference, but a strategic calculation of risk versus reward. While indirect export offers safety, the modern economic environment pushes enterprises toward direct export models to survive. The specific challenges of implementing these models in the agricultural sector will be discussed in the following section.

1.2. Specific features of managing export operations of an agricultural enterprise

Managing the export activities of an agricultural enterprise is a task that differs fundamentally from the management of foreign economic activity in industrial or service sectors. This distinction is not merely technical but is rooted in the specific nature of the product itself—biological assets—and the unique, often unpredictable structure of the global food market. For an enterprise like LLC "AGRO STAR UKRAINE," understanding these specific features is the foundation of economic survival. It is impossible to apply standard management templates used for selling electronics or textiles to the agricultural sector because the risks involved are entirely different.

We can identify and analyze five key specific features that complicate the management of agricultural exports and require specialized managerial approaches [10].

1. The Critical Influence of Seasonality and Production Cycles The most defining feature of agricultural exports is the strict dependence on natural biological cycles. Unlike a factory that can adjust its production schedule based on demand, an agricultural enterprise is bound to the seasons. The production cycle is long, often lasting from six to ten months, while the harvest window is extremely short. This creates a specific financial phenomenon known as the "cash gap," which is the primary challenge for export managers.

During the sowing and growing seasons (Spring and Summer), the enterprise operates in a phase of capital accumulation. It spends significant financial resources on seeds, fertilizers, fuel, and labor without receiving any incoming revenue. The management of cash flow during this period is critical. Then, when the harvest occurs in late summer or autumn, the market experiences a supply shock. Because thousands of farmers are harvesting simultaneously, the domestic supply of grain spikes, causing prices to drop to their annual lows.

This creates a major strategic dilemma for the export manager. There are two choices, each with its own risks. The first choice is to export immediately during the harvest. This provides immediate cash to pay off debts incurred during the sowing season, but it means selling at the lowest price of the year. The second choice is to store the grain in elevators and wait for winter or spring, when global prices typically rise. However, this strategy introduces storage costs and the risk that prices might not rise enough to cover those costs. Therefore, effective management in this sector is not just about sales; it is about the strategic timing of market entry, balancing the urgent need for liquidity against the potential for higher profit margins later in the year.

2. The Factor of Perishability and Quality Standardization Agricultural products are "living" goods. Even after they are harvested, grain and oilseeds continue to interact with their environment. They breathe, absorb moisture from the air, and can be subject to infestation by pests or fungal diseases. This biological reality imposes a strict time limit on the export operation, which does not exist for exporters of durable goods like steel or machinery.

If a shipment of metal pipes is delayed at a customs border for three weeks, the product loses no value. However, if a truck loaded with corn is stuck in a queue at the border during humid weather, the quality of the cargo can degrade rapidly. The moisture content may rise, leading to the development of mycotoxins or self-heating of the grain. This perishability makes logistics not just a matter of transport, but a matter of preservation.

Furthermore, the international market, particularly the European Union, has extremely rigid standards for quality. Export contracts are governed by strict

specifications regarding moisture levels, protein content, impurity levels, and the presence of damaged kernels. If LLC "AGRO STAR UKRAINE" delivers wheat that has even a fraction of a percentage less protein than agreed upon in the contract, the foreign buyer has the legal right to reject the entire shipment or demand a significant retrospective discount. This means that the management team must implement rigorous quality control systems at the point of loading. The manager must be certain that the grain leaving the warehouse will still meet the contract specifications after traveling for days or weeks to the final destination.

3. The Dominance of Logistics in the Cost Structure In the current economic reality of Ukraine, logistics has transformed from a supporting function into the primary factor determining the profitability of exports. Agricultural commodities are essentially "high volume, low value" goods. To generate significant revenue, an enterprise must move thousands of tons of product. This stands in stark contrast to high-tech exports, where a small container can hold millions of dollars worth of goods.

Because of this volume-to-value ratio, the cost of transportation constitutes a massive portion of the final price. Before the geopolitical shifts of 2022, cheap sea transport allowed Ukrainian farmers to reach distant markets in Asia and Africa competitively. However, the current reliance on overland routes—rail and road transport to western borders—has fundamentally changed the economics of the trade. The cost of delivering a ton of grain to a European port or processing plant can now consume thirty to forty percent of the selling price.

This high "logistics intensity" means that the export manager’s primary job is often logistics optimization. The efficiency of the export operation is determined less by how cheaply the crop was grown, and more by how cheaply it can be moved. Managers must navigate a complex web of multimodal transport, dealing with the transshipment of grain from broad-gauge Ukrainian trains to narrow-gauge European trains, and managing the availability of grain trucks. Any inefficiency in this chain directly destroys the profit margin.

4. The Status of "Price Taker" and Global Volatility Another unique feature is the pricing mechanism. In many industries, companies set their prices based on their

production costs plus a desired profit margin. In agriculture, however, the exporter is a "price taker." The selling price is not determined by the farmer but by global stock exchanges, such as the Chicago Board of Trade (CBOT) or Euronext (MATIF) in Paris.

These prices change constantly, minute by minute, driven by factors completely outside the control of the enterprise. A drought in Brazil, a revised yield forecast by the USDA, or a change in biofuel regulations in the EU can cause global prices to spike or crash within days. This extreme volatility creates a high-risk environment. A manager might sign a contract based on today’s profitable price, but if the market shifts before the deal is finalized, that profit can vanish.

To survive this, modern agricultural management requires the use of financial hedging instruments, such as futures and options, which allow the enterprise to lock in a price in advance. However, many smaller enterprises still rely on the "spot" market, leaving them fully exposed to these global swings.

5. Regulatory Complexity and Non-Tariff Barriers Finally, exporting food products involves navigating a dense jungle of international regulations. Food safety is a matter of national security for importing countries, leading to strict non-tariff barriers. Every single export batch requires a comprehensive set of documents, including phytosanitary certificates proving the absence of quarantine pests and diseases.

Moreover, the European market is increasingly influenced by the "Green Deal" agenda. Buyers are beginning to demand not just quality, but sustainability. They require proof that the crops were grown without certain banned pesticides and that the farming practices are environmentally friendly. Managing this documentation is a significant administrative burden. A simple error in a customs declaration or a missing certificate can result in a train of fifty wagons being stopped at the border, incurring massive demurrage charges and reputational damage.

Thus, managing exports for LLC "AGRO STAR UKRAINE" is a multidimensional challenge. It is a balancing act between the biological constraints of the crop, the physical constraints of the logistics infrastructure, and the financial volatility of the global market. Success in this field requires a management team that

is adaptable, knowledgeable about international law, and capable of rapid decision-making in an unstable environment.

1.3. Methodological approaches to assessing the efficiency level of export operations of agricultural enterprises

1. Methodological Approach to Strategic Scenario Planning

In the current conditions of extreme volatility characterizing the Ukrainian agricultural sector, standard linear planning methods—such as simple extrapolation of past trends—are no longer effective. The "past" for LLC "AGRO STAR UKRAINE" consisted of open sea ports and low logistics costs, while the "future" is defined by land borders, European regulations, and high operational risks. Therefore, to determine the optimal development vector for the enterprise, it is necessary to employ the method of scenario modeling.

This methodological approach allows us not to predict a single "correct" future, but to construct a corridor of possibilities. For the purpose of this thesis, we will develop three distinct scenarios for the development of export operations for the period 2024–2026. These scenarios are constructed based on the interaction of two critical variables identified in our previous analysis: (1) The External Logistics & Political Environment (State of borders, EU regulations, global prices) and (2) The Internal Management Strategy (Passive vs. Active).

Developing a robust methodology for assessing the efficiency of export operations is the cornerstone of any analytical research in the field of agricultural economics. Without a clear set of evaluation criteria, it is impossible to determine whether the foreign economic activity of an enterprise is truly successful or merely active. In the academic literature, confusion often exists between two fundamental concepts: "effect" and "efficiency." It is crucial to distinguish between them at the outset of this methodological analysis .

The "economic effect" refers to the absolute result of an activity, usually expressed in monetary terms, such as the total revenue generated from sales or the total net profit. While these numbers are important, they do not provide a complete picture.

A company might earn a million dollars in revenue, but if it expended nine hundred and ninety thousand dollars to earn it, the operation is not efficient. "Economic efficiency," on the other hand, is a relative indicator. It measures the ratio of the result obtained to the resources expended to achieve it. In the context of export operations, efficiency answers the question: "At what cost was this foreign currency revenue obtained?".

Given the complex nature of the agricultural sector- which is influenced by seasonality, logistics, and volatility—a single indicator cannot provide a complete diagnosis. Therefore, this thesis proposes a comprehensive methodological approach based on a multi-dimensional system of indicators. We categorize these indicators into three distinct groups: indicators of commercial and financial efficiency, indicators of structural and strategic efficiency, and indicators of logistical effectiveness.

1. The Methodological Group of Commercial and Financial Efficiency

The first and most direct way to assess export operations is through financial metrics. These indicators serve as the primary signal of whether the export activity is generating value for the enterprise.

The fundamental starting point is the calculation of Gross Export Profit (Pgross). This is an absolute indicator that represents the difference between the revenue received from foreign buyers and the full cost of the goods sold . However, the "full cost" must be calculated with great precision to include specific export expenses (customs, brokerage, insurance) [21,22].

The formula for Gross Export Profit is calculated as follows:

$$Pgross = Rexp – Cfull \quad (1.1)$$

Where:

Rexp — Revenue from export operations (in domestic currency equivalent);

Cfull — Full cost of production and sales, including specific export expenses.

Building on this, the central metric for our analysis is the Profitability of Export Operations (Rexp). This is a relative indicator that expresses profit as a percentage of

costs. To calculate it, we divide the net profit from exports by the total costs incurred. It acts as the "litmus test" of management efficiency:

$$Rexp = (Pnet.exp / Cfull) \times 100\% \quad (1.2)$$

Where:

Pnet.exp — Net profit from export operations (after tax);

Cfull — Total costs incurred for production and export.

Another critical financial indicator is the Return on Export Assets (ROEA). This measures how effectively the company utilizes its specific export-related infrastructure (e.g., elevators, trucks) . This is calculated by dividing the export profit by the value of the assets employed in the export process:

$$ROEA = (Pnet.exp / Aexp) \times 100\% \quad (1.3)$$

Where:

Aexp — Average value of assets employed in the export process.

2. The Methodological Group of Structural and Strategic Efficiency

Financial numbers describe the past, but structural indicators describe the future and the strategic position of the enterprise. This group of methods assesses *how* the company exports [51].

The most widely used indicator in this group is the Export Quota (Qexp). This metric calculates the share of the company's total production that is sold abroad . To find this, we divide the volume of exports by the total volume of production:

$$Qexp = (Vexp / Vprod) \times 100\% \quad (1.4)$$

Where:

Vexp — Volume of products exported (in tons or monetary units);

Vprod — Total volume of products produced.

Closely related to this is the Coefficient of Geographic Diversification (Kgeo). This tool assesses the risk associated with the company’s customer base. It analyzes

the number of different countries the enterprise exports to and the distribution of sales volume among them:

$$Kgeo = 1 - Sum(d^2) \quad (1.5)$$

Where:

d — The share of a specific country in the total export volume;

Sum — The sum of these shares squared for all countries.

3. The Methodological Group of Logistical and Currency Effectiveness

Given the specific challenges identified in the current economic climate, standard financial analysis is insufficient without a dedicated focus on logistics and currency.

The Logistics Intensity of Exports (Lint) is a crucial methodological indicator for the modern Ukrainian agricultural exporter. This metric measures the portion of export revenue that is consumed by transportation and storage costs. To calculate it, we take the total logistics expenditures and divide them by the total export revenue:

$$Lint = (Clog / Rexp) \times 100\% \quad (1.6)$$

Where:

Clog — Total logistics costs (freight, storage, transshipment, customs fees);

Rexp — Total export revenue.

If this indicator exceeds 30-35%, it signals critical inefficiency in the supply chain [51].

Finally, we must apply the Coefficient of Currency Efficiency (Kce). This indicator compares the price obtained on the foreign market with the prevailing domestic price, adjusting for the exchange rate:

$$Kce = (Pexp \times Erate) / Pdom \quad (1.7)$$

Where:

Pexp — The price of the commodity on the foreign market (in foreign currency);

Erate — The currency exchange rate;

Pdom — The price of the same commodity on the domestic market (in domestic currency).

If Kce > 1, the export operation is economically justified compared to domestic sales. If Kce < 1, the export destroys value unless strategic goals (such as currency acquisition) are prioritized.

In the first chapter, the theoretical and methodological foundations of managing export operations were investigated. The study allows for the following conclusions:

1. Theoretical Definition: Export operations in the agricultural sector should not be viewed merely as acts of sale but as complex management systems that encompass marketing, logistics, and compliance with international standards. We classified these operations into direct and indirect forms, determining that while indirect export minimizes administrative burden, it significantly reduces the potential profit margin.

2. Sector Specifics: The management of agricultural exports is uniquely constrained by factors of biological seasonality, product perishability, and high sensitivity to logistics costs. Unlike industrial goods, agricultural commodities require rapid logistics solutions to preserve quality, making the "time factor" a critical determinant of value.

3. Methodological Approach: To assess efficiency objectively, we developed a comprehensive methodology that distinguishes between "economic effect" (absolute revenue) and "economic efficiency" (relative performance). We identified the Logistics Intensity Index (L_{int}) and Net Export Profitability (R_{exp}) as the primary indicators for diagnosing the health of export operations in the current geopolitical context.

CHAPTER 2
ANALYSIS OF EXPORT OPERATIONS MANAGEMENT AT LLC "AGRO STAR UKRAINE"

2.1. General organizational and economic characteristics of LLC "AGRO STAR UKRAINE"

1. Historical Evolution and Legal Status

The object of this comprehensive study is the Limited Liability Company "AGRO STAR UKRAINE" (hereinafter referred to as the Company or the Enterprise), which serves as a representative model of the modern Ukrainian agricultural sector. Founded in 2010, the enterprise has undergone a significant evolutionary path from a small local farming unit to a systemic medium-sized agribusiness player [39].

Legally, the enterprise is registered as a Limited Liability Company (LLC), a form of corporate ownership that provides the optimal balance between operational flexibility and financial liability. The founders of the company are private individuals, citizens of Ukraine, which ensures independent decision-making free from the bureaucratic constraints typical of state-owned enterprises or massive transnational agro-holdings. The Company operates on the general taxation system and is a registered payer of Value Added Tax (VAT). This status is of critical importance for its foreign economic activity, as the ability to claim VAT refunds upon the export of grain significantly influences the final profitability of trade operations[37].

Geographically, the production facilities and central office of LLC "AGRO STAR UKRAINE" are located in the Poltava region. This location is strategically significant for several reasons. First, the region is situated in the "Left-Bank Forest-Steppe" zone, characterized by deep chernozem soils with high humus content. This natural resource allows the enterprise to achieve stable high yields with lower fertilizer costs compared to farms in the southern or northern regions. Second, historically, this region has been the center of the country’s "corn belt." However, in the current geopolitical context, the location poses logistical challenges. Being approximately 800

kilometers from the western border crossings and 450 kilometers from the Black Sea ports, the enterprise faces a substantial "logistics tax" on every ton of exported produce, a factor that will be analyzed in depth later in this work [38].

2. Analysis of Resource Potential and Material-Technical Base

The efficiency of export operations is fundamentally rooted in the production capabilities of the enterprise. An analysis of the resource base of LLC "AGRO STAR UKRAINE" indicates a high level of technical equipment and land consolidation.

- Land Bank Structure:

  As of the end of the 2023 financial year, the total area of arable land under cultivation stands at 4,500 hectares. In the context of the Ukrainian agricultural market, this size classifies the enterprise as a "medium-sized" producer. This scale is advantageous: it is large enough to benefit from economies of scale (reducing the cost per hectare) and to form large export lots (e.g., train trains of 50 wagons), yet it is compact enough to be managed effectively without the rigid hierarchy of giant holdings. The land bank is consolidated into large fields, which facilitates the use of wide-cut machinery and precision farming technologies.

- Machinery and Technical Equipment:

Over the last five years, the management has implemented a strategy of technical modernization, moving away from legacy Soviet-era equipment. The core of the machinery park now consists of imported high-performance units.

- *Traction Power:* The enterprise utilizes heavy tractors such as the *John Deere 8R series*, which allow for deep tillage and efficient sowing.
- *Harvesting:* The harvesting campaign is conducted using *Claas Lexion* combine harvesters. This technical nuance is directly related to export efficiency. Modern combines minimize grain damage (cracked kernels) and reduce the content of foreign material (weeds/straw). This allows the harvested grain to immediately meet the "Grade 2" or "Grade 3" export standards without needing expensive additional cleaning, thereby preserving margins.
- Storage and Infrastructure:

A critical strategic asset is the Company’s own grain storage complex (elevator) with a total capacity of 15,000 tons. This facility is equipped with gas dryers and active ventilation systems. The ownership of storage capacity changes the export strategy fundamentally. Without an elevator, a farmer is forced to sell grain "from the combine" in August-September, when the market is flooded and prices are at their annual low. With 15,000 tons of storage, "AGRO STAR UKRAINE" can accumulate produce, condition it to export specifications (lowering moisture to 14%), and sell it in the winter or spring months when global prices typically rise. This infrastructure is a key tool for hedging against seasonal price fluctuations.

3. Organizational and Management Structure

The management system of LLC "AGRO STAR UKRAINE" is built on the linear-functional principle, a classic structure designed to ensure vertical subordination and clear division of labor.

- Top Management: The hierarchy is led by the General Director, who is responsible for strategic planning, financial security, and external representation.
- Production Block: Subordinate to the Director is the Chief Agronomist, who manages the technological process. This department is responsible for crop rotation planning and yield targets.
- Technical Block: Led by the Chief Engineer, this unit ensures the operational readiness of the machinery fleet.
- Commercial and Financial Block: This is the most critical structural unit for our research. Led by the Commercial Director, this department handles the procurement of inputs (seeds, fuel) and the sales of finished products.
- Structural Gap Analysis:

  A detailed audit of the organizational structure reveals a significant weakness: the enterprise does not possess a specialized Foreign Economic Activity (FEA) Department. The complex functions of export management—including the search for foreign buyers, negotiation of international contracts, freight forwarding, and customs clearance—are distributed among general commercial managers. These employees often lack specialized knowledge of

international trade law (Incoterms 2020), English language proficiency, or currency risk management. As a result, the export strategy is often reactive rather than proactive. The company tends to accept the terms offered by traders rather than negotiating better conditions, a limitation that stems directly from this organizational gap.

4. Analysis of Production Specialization

The production strategy of the enterprise is strictly export-oriented. The crop rotation is designed not for domestic consumption but to maximize the output of liquid commodities with high global demand. The structure of the sown area in 2023 was as follows:

- Corn (Grain): Occupies 40% of the area. This is the "volume" crop, providing the bulk of the export tonnage. It has the highest yield potential (8–10 tons/ha) but requires significant drying costs.
- Winter Wheat: Occupies 35% of the area. This is a strategic crop that ensures early cash flow, as it is harvested in July, providing funds to finance the autumn sowing campaign.
- Sunflower: Occupies 20% of the area. This is the most profitable crop per hectare, often acting as the financial "locomotive" of the farm.

- Niche Crops (Soybeans, Rapeseed): Occupy the remaining 5% for the purpose of soil health (crop rotation) and risk diversification.

5. Analysis of Main Economic Indicators (2021–2023)

To evaluate the "economic health" of the enterprise before diagnosing its specific export operations, we must analyze its financial dynamics over the last three years. This period is illustrative as it covers three distinct phases: the pre-war stability (2021), the shock of the full-scale invasion (2022), and the period of adaptation (2023).

Table 2.1.

Main Economic Indicators of LLC "AGRO STAR UKRAINE" (2021–2023)

Indicator	Unit	2021	2022	2023	Deviation (+/-)	Growth Rate (%)
1. Total Revenue	thsd. UAH	155,200	148,500	185,400	+30,200	119.4%
2. Cost of Production	thsd. UAH	98,400	115,000	142,800	+44,400	145.1%
3. Gross Profit	thsd. UAH	56,800	33,500	42,600	-14,200	75.0%
4. Administrative Costs	thsd. UAH	8,200	9,100	10,500	+2,300	128.0%
5. Marketing & Logistics Costs	thsd. UAH	2,100	5,500	6,200	+4,100	295.2%
6. Net Profit	thsd. UAH	45,200	18,100	25,300	-19,900	56.0%
7. Net Profit Margin	%	29.1%	12.2%	13.6%	-15.5 p.p.	-

Source: developed by author [35]

Detailed Analytical Commentary on Financial Trends:

- The Phenomenon of "Inflationary Revenue":

  If we analyze line 1 (Total Revenue), the situation appears superficially positive. Revenue in 2023 reached 185.4 million UAH, the highest in the company's history. However, this growth is largely an illusion caused by inflation and the devaluation of the national currency (UAH). The real purchasing power of this revenue has decreased. The company is generating more Hryvnias, but these Hryvnias buy fewer dollars of inputs.

- The "Price Scissors" Effect:

The most alarming trend is visible in line 2. The Cost of Production grew by 45.1%, significantly outpacing revenue growth (19.4%). This disparity is known in economics as the "price scissors." The cost of inputs—specifically imported diesel fuel, mineral fertilizers, and plant protection products—skyrocketed due to global energy prices and logistics disruptions. For example, the price of nitrogen fertilizers increased by nearly 80% in 2022. This dramatically raised the "break-even point" for every ton of wheat and corn.

- The Explosion of Sales Costs:

Line 5 deserves special attention. Marketing and logistics costs increased by nearly 300% (from 2.1 million to 6.2 million UAH). This massive jump reflects the fundamental change in the export model. In 2021, the buyer (trader) often picked up the grain from the farm (EXW terms). In 2023, "AGRO STAR UKRAINE" was forced to pay for delivery to the border or ports (DAP terms), absorbing the colossal transport costs. This confirms that logistics has become the second largest cost center after production.

- The Collapse of Profitability:

The cumulative result of these factors is a drastic decline in efficiency. The Net Profit (Line 6) in 2023 is barely half of what it was in 2021 (25.3 million vs 45.2 million UAH). The Net Profit Margin collapsed from a robust 29.1% to a dangerous 13.6%. In the agricultural sector, where weather risks are high, a margin below 15% is considered the "risk zone." The enterprise is balancing on the edge of profitability. It is working harder, cultivating the same land, moving more grain, and managing more complex logistics, only to retain less value.

6. SWOT Analysis Summary

To synthesize the general characteristics, we can apply a brief SWOT framework:

- Strengths: High-quality assets (land, machinery), experienced production team, own storage facilities.
- Weaknesses: Lack of a dedicated FEA department, high logistic distance from borders, lack of processing capacity (selling only raw materials).

- Opportunities: Entering the EU market directly, processing grain into flour/oil.
- Threats: Further logistics cost increases, loss of skilled personnel, global price drops.

Summarizing the general characteristics, we can conclude that LLC "AGRO STAR UKRAINE" is a production-stable enterprise with a strong technical base. It has successfully maintained its production volumes despite the war. However, its financial model is under severe stress. The traditional margin of safety has been eroded by rising input costs and expensive logistics. The company has entered a phase where operational efficiency—specifically in export operations—is no longer just a way to increase bonuses, but a condition for survival. This context makes the detailed analysis of export operations in the following sections critically important.

2.2. Dynamics and structure of export operations of the studied enterprise

Having analyzed the general economic condition of LLC "AGRO STAR UKRAINE" in the previous section, we must now focus on the core subject of this research: the export operations themselves. For this enterprise, export is not merely a sales channel; it is the fundamental mechanism of survival. With a production volume exceeding 25,000 tons of grain annually, the domestic market of Ukraine—saturated with surplus supply and suffering from low solvency—cannot offer a price that covers the cost of production. Therefore, the dynamics of export shipments serve as the primary barometer of the company's viability [37-39].

The analysis of the period 2021–2023 reveals a dramatic, almost tectonic, transformation in the nature, direction, and structure of these operations. We can divide this timeline into three distinct operational eras: the "Pre-War Stability" (2021), the "Logistical Shock" (2022), and the "Adaptive Stabilization" (2023).

1. Dynamics of Export Volumes: The Chronology of Crisis and Recovery

To understand the current management challenges, we must first examine the quantitative data. The physical movement of goods tells the story of how the enterprise adapted to the blockade of its traditional trade routes.

Table 2.2.

Dynamics of Export Activity of LLC "AGRO STAR UKRAINE" (2021–2023)

Indicator	Unit	2021 (Baseline)	2022 (Shock)	2023 (Recovery)	Deviation (2023/2021)
Total Grain Harvest	tons	24,500	22,100	25,300	+3.2%
Direct Export Volume	tons	2,100	500	3,500	+66.6%
Indirect Export Volume	tons	16,300	13,700	16,000	-1.8%
Total Export Volume	tons	18,400	14,200	19,500	+6.0%
Total Export Revenue	$ thsd.	$4,850	$3,900	$4,150	-14.4%
Average Revenue per Ton	$/ton	$263	$274	$212	-19.4%

Source: developed by author [35]

Detailed Analysis of the Dynamics:

- The Collapse of 2022: The year 2022 was characterized by a catastrophic drop in export activity during the second and third quarters. Following the full-scale invasion and the blockade of the Odesa and Mykolaiv sea ports in February 2022, "AGRO STAR UKRAINE" effectively ceased export operations for three months (March–May). The management faced "logistical paralysis." The traditional route (truck to port Rightarrow vessel) was physically impossible, and the railway system was not prepared for such volumes moving west. As a result, the total export volume

for the year fell to 14,200 tons, the lowest in five years. The only reason it was not lower was the partial opening of the "Grain Corridor" in late 2022, which allowed the company to sell accumulated stocks at a discount.

- The Quantitative Recovery of 2023: In 2023, the enterprise demonstrated high adaptive capability. The management team succeeded in diversifying logistics channels, utilizing both the Danube river ports (Reni, Izmail) and the western railway border crossings. This allowed the company to export a record 19,500 tons of grain, surpassing the pre-war level by 6.0%. This proves that the company has solved the *physical* problem of moving goods out of the country.
- The "Price Paradox" (The Value Trap): A critical observation from Table 2.2 is the discrepancy between volume and value. While the physical volume of exports in 2023 exceeded the 2021 level, the total foreign currency revenue dropped by 14.4%. This is the most dangerous signal for the company's management. The average revenue per ton dropped from $263 to $212. It is important to clarify that this $51/ton loss is not solely due to a drop in global grain prices (which actually remained relatively high historically). Rather, this is the "Logistics Discount." International traders purchasing grain from "AGRO STAR UKRAINE" now subtract the massive costs of war-risk insurance, expensive rail freight, and border delays from the purchase price. Effectively, the enterprise is exporting *more* natural resources to earn *less* money than it did before the war.

2. Transformation of the Geographic Structure

The most profound change in the management of export operations is the geographic shift. This is not just a change of destination on a map; it represents a fundamental change in the business model, legal requirements, and counterparty relationships.

- The 2021 Model (The "Global South" Vector):

In the pre-war period, the geographic structure of the company's exports was oriented toward the Global South. Approximately 40% of the grain was destined for China, 30% for Egypt, and 20% for Turkey. These markets were accessed via Panamax vessels from deep-sea ports. The management model was simple: deliver the grain to

the port terminal in Odesa, pass a standard quality check, and receive payment. The regulatory burden was minimal, as these markets focus primarily on price and volume rather than strict ecological certification.

- The 2023 Model (The "Continental European" Vector):

By 2023, the vector shifted entirely to the European continent. According to the company's customs declarations, the structure is now as follows:

- Poland (45%): The primary destination. This market dominance is driven purely by geographic proximity (approx. 800 km from the farm). However, this market is highly problematic. The Polish agricultural sector is saturated with local grain, leading to political friction, farmer protests, and periodic border blockades. By relying so heavily on Poland, "AGRO STAR UKRAINE" exposes itself to immense regulatory risks.
- Romania (30%): This is largely a transit hub. The company delivers grain to the port of Constanta, from where it is re-exported to traditional buyers in North Africa. However, the transit logistics through Romania are notoriously slow and expensive.
- Other EU Countries (Italy, Spain) (15%): The company has begun small pilot shipments to Southern Europe, where there is a structural deficit of feed corn. This is the most promising vector, but it requires complex railway logistics across three borders (Ukraine-Hungary-Slovenia-Italy).

3. Analysis of the Commodity Structure

The commodity portfolio of "AGRO STAR UKRAINE" remains conservative, which poses a significant strategic risk. The enterprise continues to rely on the export of raw materials rather than processed goods.

- Corn (The "Volume King"):

Corn accounts for 60% of the total export volume.

- *Managerial Rationale:* Corn provides the highest yield per hectare (over 9 tons/ha in Poltava). It is the easiest way to fill trucks and generate massive cash flow turnover.

- *Strategic Flaw:* Corn is the most "logistically heavy" crop. It has a low specific value per ton (approx. $150-$170 FCA in 2023). When transport costs $60-$80 per ton, nearly 40-50% of the value of the corn is lost to logistics. Relying so heavily on corn in a time of expensive logistics is a major inefficiency. The company is effectively paying transport companies to move cheap biomass.
- Wheat (The "Food Security" Crop):

  Wheat comprises 25% of exports. It generally commands a higher price than corn and is easier to sell due to consistent global demand for bread-making grain. However, quality standards for wheat in the EU (protein, gluten, falling number) are much stricter than in Asia. In 2023, "AGRO STAR UKRAINE" faced several instances where its wheat was downgraded from "milling quality" to "feed quality" at the Polish border, resulting in a 20% price penalty.
- Sunflower Seeds (The "Lost Opportunity"):

  Sunflower seeds make up 15% of exports.

- *The Issue:* In 2021, the company mostly sold seeds to domestic crushers (oil factories). In 2022-2023, due to the energy crisis affecting local factories and better cash offers from Bulgaria and Romania, the company began exporting raw seeds. While this generates immediate cash, it is strategically poor. Exporting raw seeds is less profitable than processing them into oil, which has a much higher value-to-weight ratio. By exporting the seed, the company exports the added value to foreign processors.

4. Analysis of Channel Structure (Direct vs. Indirect)

Finally, we must analyze who the company is selling to. The structure of counterparties reveals why the company is losing margin.

Currently, "AGRO STAR UKRAINE" operates primarily through Indirect Export channels (82% of sales).

- The Intermediaries: The company sells on DAP (Delivered at Place) or FCA (Free Carrier) terms to international traders like *Cargill*, *Louis Dreyfus*, or smaller Polish intermediaries operating at the border.

- The Problem: By selling to these intermediaries at the border or elevator, the company accepts a "spot price." The intermediary takes the risk of moving the grain further into Europe or to the port, but they charge a massive premium for this risk.
- Direct Exports (18%): Only a small fraction of sales are Direct Exports to final consumers (e.g., a direct contract with a Polish feed mill). These direct contracts proved to be 15-20% more profitable per ton in 2023. However, the management currently lacks the networking capabilities, language skills, and legal expertise to scale this channel up. The lack of a dedicated FEA department (mentioned in Section 2.1) is the main barrier here.

5. Analysis of Logistics Intensity

To conclude the structural analysis, we must quantify the impact of logistics. In 2021, the cost of delivering a ton of grain to the buyer (logistics intensity) was approximately 12-15% of the final price. In 2023, our analysis of the company's invoices shows that logistics intensity has risen to 35-40%.

This means that out of every $100 earned from a foreign buyer, the company spends $40 just to get the product to them. This is the "Logistics Tax" imposed by the war. It makes the export of low-margin crops like corn barely profitable. This structural reality dictates the necessity of the changes we will propose in Chapter 3: the company *must* either reduce logistics costs (by owning trucks) or increase the value of the product (by processing), as the current model is unsustainable in the long term.

Summarizing the analysis of dynamics and structure, we can conclude that "AGRO STAR UKRAINE" finds itself in a "volume trap." The management has successfully solved the physical problem of moving goods, restoring export volumes to pre-war levels. However, they have not solved the economic problem. The structure of exports—dominated by low-value corn sent to saturated neighboring markets through expensive intermediaries—is inherently inefficient. The company is running faster just to stay in the same place financially. This structural inefficiency necessitates the deep diagnostic calculations that we will perform in the next section.

2.3. Diagnostics of the efficiency of export operations management at LLC "AGRO STAR UKRAINE"

Having analyzed the general economic indicators and the physical dynamics of trade in the previous sections, we now proceed to the final and most critical stage of the audit: the diagnostics of efficiency. In managerial theory, "activity" does not equal "efficiency." The fact that LLC "AGRO STAR UKRAINE" successfully exported 19,500 tons of grain in 2023 is a testament to operational resilience, but it does not definitively prove that the company generated real economic value. To determine the true quality of the export management, we must apply the methodological approach defined in Chapter 1.3, calculating specific indicators of financial, logistical, and structural efficiency [14,49,50].

1. Comparative Analysis of Sales Efficiency: Export vs. Domestic Market

The fundamental strategic question for any agricultural manager is: "Is it worth exporting at all?" To answer this, we must compare the profitability of selling grain on the domestic market (to local processors or traders at the farm gate) versus selling it for export. In 2023, this calculation became the primary dilemma for "AGRO STAR UKRAINE."

Table 2.3.

Comparative Analysis of Economic Efficiency: Domestic vs. Export Sales (Corn, 2023)

Indicator	Unit	Domestic Sales (Ex-Elevator)	Export Sales (DAP Poland)	Deviation (+/-)
1. Base Selling Price	$/ton	**$145.00**	$212.00	+$67.00
2. Production Cost (COGS)	$/ton	$130.00	$130.00	0.00
3. Administrative Expenses	$/ton	$2.50	$4.00	+$1.50

Indicator	Unit	Domestic Sales (Ex-Elevator)	Export Sales (DAP Poland)	Deviation (+/-)
4. Logistics & Commercial Costs	$/ton			
4.1 Loading & Handling	$/ton	$2.00	$3.50	+$1.50
4.2 Freight (Transport)	$/ton	$0.00	**$55.00**	+$55.00
4.3 Customs Brokerage	$/ton	$0.00	$2.50	+$2.50
4.4 Certification (Phyto/Vet)	$/ton	$0.00	$1.50	+$1.50
4.5 Insurance	$/ton	$0.00	$2.50	+$2.50
5. Total Full Cost	$/ton	**$134.50**	$199.00	+$64.50
6. Net Profit per Ton	$/ton	**$10.50**	$13.00	+$2.50
7. Return on Sales (ROS)	%	7.2%	6.1%	-1.1 p.p.

Source: developed by author [35]

Diagnostic Analysis of Table 2.3:

The data reveals a startling "Efficiency Paradox" that characterizes the company's current position.

- The "Price Illusion": On the surface, the export option appears highly attractive. The export price ($212) is significantly higher than the domestic price ($145). This $67 difference acts as a "magnet," drawing the management into export operations.
- The "Cost Reality": However, to capture that higher price, the company must incur massive specific export costs. The logistics and commercial block (Lines 4.1–4.5) adds up to $65.00 per ton for export, compared to just $2.00 for domestic sales. The largest component is freight ($55.00), which acts as a massive tax on the operation.

- The "Profit Trap": As a result, the *Net Profit* per ton is almost identical ($10.50 vs. $13.00). The company takes on the risk of cross-border transport, currency fluctuations, and potential non-payment by foreign buyers, all for a marginal gain of just **$2.50 per ton**.
- The ROS Indicator: Even more concerning is the Return on Sales (ROS). The export operation actually has a *lower* profitability percentage (6.1%) than the domestic operation (7.2%). This mathematically proves that the current export model is *less efficient* per dollar of revenue than simply selling to a neighbor. The company is generating turnover, not value.

2. Diagnostics of Logistics Intensity: The "Logistics Tax"

Since logistics has been identified as the primary cost driver, we must perform a deeper dive into this metric. We will calculate the Logistics Intensity Index (L_{int}) to quantify exactly how much of the company's revenue is being consumed by the transport sector.

Table 2.4.

Dynamics of Logistics Intensity of Exports (2021–2023)

Indicator	2021 (Pre-War / Sea)	2022 (Crisis / Blockade)	2023 (Current / Land)
Total Export Revenue ($ thsd)	4,850	3,900	4,150
Total Logistics Costs ($ thsd)	582	1,365	1,577
Breakdown of Logistics Costs:			
- *Rail Tariffs*	300	600	750
- *Road Transport (Trucks)*	150	650	700
- *Port/Border Handling*	132	115	127

Indicator	2021 (Pre-War / Sea)	2022 (Crisis / Blockade)	2023 (Current / Land)
Logistics Intensity (L_{int})	12.0%	35.0%	38.0%

Source: developed by author [35]

Detailed Analysis of Logistics Intensity:

The calculation shows a catastrophic trend in the cost structure.

- The "Golden Age" (2021): In the pre-war era, "AGRO STAR UKRAINE" spent only 12 cents of every dollar earned on transport. This 12% intensity allowed for a healthy profit margin of nearly 30%.
- The "New Normal" (2023): Today, the logistics intensity has reached 38.0%. This means that more than one-third of the revenue generated by the hard work of agronomists, combine operators, and engineers is immediately transferred to external transport companies and railway operators.
- Modal Analysis (Rail vs. Road): The breakdown shows a sharp increase in Road Transport costs (from $150k to $700k). This is a sign of inefficiency. Trucks are the most expensive way to move grain ($/ton/km). The company is forced to use them because it lacks access to sufficient railway wagons or cannot navigate the bureaucratic railway planning system effectively.
- *Managerial Insight:* When logistics intensity exceeds 30%, the exporter effectively loses control over their margin. The business transforms from an agricultural enterprise into a "logistics subsidy machine." The management of "AGRO STAR UKRAINE" has failed to control this cost because they rely on the "spot market" for trucks rather than securing long-term forwarding contracts or investing in their own fleet.

3. Analysis of Structural Inefficiency: The "Intermediary Tax"

Another critical inefficiency stems from the sales channel structure. As noted in Section 2.2, the company sells 82% of its grain to intermediaries (traders) at the border or elevator, rather than to end-users (processors) in Europe. We can estimate the "Lost

Profit" caused by this lack of direct contracts. This is not a hypothetical loss; it is real money that the company allows others to earn on its product.

Methodology of Calculation: We compare the price "AGRO STAR UKRAINE" received (DAP Poland Border) with the market price at a processing plant in Germany or the Netherlands, subtracting the additional transport cost to get there.

Table 2.5.

Calculation of Lost Profit Due to Indirect Export (2023)

Indicator	Corn	Wheat	Total Impact
1. Price at EU Processing Plant (DAP)	$260.00	$280.00	-
2. Less: Transport from Border to Plant	-$25.00	-$25.00	-
3. Potential Net Price at Border	**$235.00**	$255.00	-
4. Actual Price Received (Sold to Trader)	$212.00	$225.00	-
5. "Trader's Margin" (Loss per Ton)	$23.00	$30.00	-
6. Volume Exported (tons)	11,700	4,875	16,575
7. Total Lost Profit ($)	$269,100	$146,250	$415,350

Source: developed by author [35]

Structural Diagnosis:

The calculations in Table 2.5 reveal that the company left approximately $415,350 on the table in 2023.

- *Context:* This sum is equivalent to the cost of buying two brand-new *John Deere* tractors or building a new grain drying complex.

- *Root Cause:* This loss is the "price of incompetence." Because "AGRO STAR UKRAINE" does not have a specialized Foreign Economic Activity (FEA) department capable of negotiating directly with German or Dutch buyers, it relies on Polish intermediaries. These intermediaries perform a simple arbitrage function: they buy at the border, move the grain 500km west, and sell it to the factory, keeping the $23-$30/ton margin. The diagnosis is clear: the company is outsourcing its profit center.

4. Currency Efficiency and Financial Cycle Analysis

Beyond pure profit, we must assess the financial mechanics of the export operations, specifically regarding currency and VAT.

- Currency Efficiency Coefficient (K_{ce}):

One of the main justifications for exporting despite low profitability is the need for hard currency (USD/EUR) to hedge against the devaluation of the Ukrainian Hryvnia (UAH).

- *Current State:* The company receives revenue in Euros. However, an analysis of bank statements shows that 80% of this currency is immediately converted back to UAH to pay for domestic costs (salaries, taxes, local logistics).
- *Inefficiency:* This creates a "double conversion loss." The company loses approx. 1% on the spread when selling Euros to the bank. A more efficient strategy would be to keep the funds in currency to pay for imported fuel, seeds, and machinery directly, creating a "natural hedge."
- VAT Refund Efficiency:

For an exporter, the refund of Value Added Tax (20%) from the state budget is often the only source of real net profit.

- *The Problem:* The audit reveals that the average delay for VAT refunds for "AGRO STAR UKRAINE" in 2023 was 95 days.

- *Financial Impact:* With an annual export revenue of roughly 150 million UAH, the VAT amount is 30 million UAH. Having this amount frozen for 3 months is equivalent to an interest loss of roughly 1.5 million UAH (at current commercial loan rates of 20% per annum). This "frozen capital" further degrades the efficiency of the export cycle.

5. Return on Export Assets (ROEA)

Finally, we assess how well the company utilizes its specific export-oriented assets: the grain storage elevator and the small fleet of 5 grain trucks.

- Elevator Utilization: The 15,000-ton elevator turned over 25,000 tons of grain in 2023 (turnover ratio of 1.6). This is a positive indicator. It means the asset is working actively.

- Truck Fleet Efficiency: The analysis of the internal truck fleet shows low efficiency. The "cost per km" for the company's own trucks was calculated at 45 UAH/km, while the market rate for hiring third-party trucks was 42 UAH/km.

- *Diagnosis:* The company's own logistics are *more expensive* than the market. This is likely due to poor fleet management, fuel theft, or lack of return loads (trucks driving back empty). This finding reinforces the need for a dedicated logistics optimization strategy in Chapter 3.

6. Comprehensive SWOT Diagnosis of Export Operations

To synthesize the diagnostic findings into a clear managerial picture, we present a focused SWOT analysis specifically for the Export Department.

Table 2.6.

SWOT Analysis of Export Operations of LLC "AGRO STAR UKRAINE"

Strengths (Internal)	Weaknesses (Internal)
1. High Product Quality: Grain consistently meets EU standards (protein, moisture). 2. Volume Consistency: Ability to form large export lots (train-sized). 3. Infrastructure: Own elevator allows for timing sales to avoid harvest lows.	1. Passive Sales Strategy: 82% reliance on intermediaries; lack of direct contracts. 2. Logistics Inefficiency: Logistics intensity of 38% is unsustainable. 3. Organizational Gap: No dedicated FEA department or English-speaking staff. 4. Low Value-Add: Portfolio dominated by raw corn (60%).
Opportunities (External)	Threats (External)
1. European Niche Markets: Growing demand for "traceable" non-GMO corn in Southern Europe.	1. Border Blockades: continued political instability at the PL-UA border.

Strengths (Internal)	Weaknesses (Internal)
2. Processing: Partnering with EU mills for tolling schemes. 3. Logistics Optimization: acquiring own rail wagons or creating a logistics cluster with neighbors.	2. Price Volatility: Global grain prices dropping while logistics costs remain high. 3. Regulatory Changes: New EU "Green Deal" requirements blocking imports.

Source: developed by author

The diagnostic analysis of the current state of export management at LLC "AGRO STAR UKRAINE" conducted in the second chapter reveals a contradictory economic situation:

1. The "Volume vs. Value" Paradox: The enterprise successfully adapted to the blockade of sea ports, restoring physical export volumes to 19,500 tons in 2023. However, despite this recovery in volume, financial efficiency has deteriorated. The Net Profit Margin from exports dropped to 6.1%, which is lower than the profitability of domestic sales.

2. Logistics Crisis: The primary cause of this inefficiency is the critical rise in logistics costs. The Logistics Intensity Index increased from 12% in 2021 to 38% in 2023. This indicates that over one-third of the revenue generated is consumed by transportation, effectively depriving the enterprise of its working capital.

3. Structural Weakness: The analysis confirmed that the reliance on Indirect Export (82% of sales) is a strategic vulnerability. By selling to intermediaries at the border, the enterprise loses approximately $23 per ton in potential value, equating to an annual opportunity cost of roughly $415,000. The current management model is reactive and financially unsustainable [14,49,50].

CHAPTER 3
IMPROVEMENT OF EXPORT OPERATIONS MANAGEMENT AT LLC "AGRO STAR UKRAINE"

3.1. Forecast of the European market and export opportunities for the enterprise

The Necessity of Strategic Forecasting

Based on the diagnosis conducted in Chapter 2, it became evident that the current "reactive" management model of LLC "AGRO STAR UKRAINE" is exhausted. The strategy of "growing grain harvesting looking for a buyer" leads to financial losses because the company inevitably sells during price lows and pays peak logistics rates. To transition to a "proactive" model, the management must base its decisions not on the current situation at the elevator, but on a clear forecast of the target market. Since 85% of the company’s exports are now reoriented toward the European Union, the object of our forecasting is the EU agricultural market for the period 2024–2026.

We can identify three fundamental trends that will dictate the rules of the game for Ukrainian exporters in the near future: the structural deficit of feed grains in Southern Europe, the rise of "Green" non-tariff barriers, and the stabilization of logistics corridors [11-13].

1. Market Structural Forecast: The "North-South" Divide

A common mistake made by Ukrainian exporters, including "AGRO STAR UKRAINE," is treating the "EU Market" as a single monolithic entity. Our forecast shows a sharp divergence between Eastern/Northern Europe and Southern Europe.

- The "Buffer Zone" (Poland, Romania, Slovakia, Hungary):
- *Forecast:* These countries are net exporters of grain themselves. They do not *need* Ukrainian corn or wheat for their own consumption. The friction we observed in 2023 (border blockades, protests) is not a temporary anomaly but a structural reality.
- *Implication for LLC "AGRO STAR UKRAINE":* Continuing to view Poland as the "final destination" is a strategic dead end. The forecast suggests that political

pressure in these countries will only increase. Any export strategy relying on selling to Polish intermediaries will be subject to high risks of embargoes or quotas [12].

The "Deficit Zone" (Spain, Italy, Portugal):

- *Forecast:* Southern Europe is structurally deficit in feed grains. Spain and Italy have large livestock industries (pork and poultry) but cannot grow enough corn due to climate change and droughts. For example, Spain imports over 10 million tons of corn annually.
- *The Opportunity:* Currently, these markets are supplied by Brazil and the USA via sea. However, Ukrainian corn has a logistical advantage—it can be delivered by rail or small coasters faster than Trans-Atlantic shipments.
- *Strategic Vector:* The forecast dictates that "AGRO STAR UKRAINE" must bypass the "Buffer Zone" and target the "Deficit Zone." The demand for corn in Italy is projected to grow by 3-5% annually, providing a stable long-term market.

2. Price Forecast: The End of "Cheap Agflation"

The era of extreme price volatility (2022–2023) is stabilizing. Utilizing data from the MATIF (Paris) and CBOT (Chicago) futures markets, we can construct a price corridor forecast for the company's main crops for the 2024/2025 marketing year.

- Corn:
- *Trend:* Global production is high (record harvests in the USA and Brazil), which puts pressure on prices. However, European production is suffering from heatwaves.
- *Price Forecast:* We expect the price of Corn (DAP Italy) to stabilize in the range of €205–€225 per ton. This is lower than the crisis peaks of 2022 (€300+) but higher than the pre-war average.
- *Margin Implications:* At this price level, export is only profitable if logistics costs are kept below €50/ton. This confirms the conclusion of Chapter 2: price alone will not save the company; cost optimization is required.
- Sunflower Seeds vs. Oil:

- *Trend:* The EU is aggressively reducing the use of palm oil, replacing it with sunflower and rapeseed oil.
- *Price Forecast:* The demand for high-oleic sunflower oil is projected to rise. The "crush margin" (profit from processing seeds into oil) in European factories is high.

- *Implication:* Exporting raw seeds will become less profitable as the EU imposes tariffs or quotas to protect its own crushers. The forecast suggests "AGRO STAR UKRAINE" should look for "tolling" partners—processing the seeds in Ukraine or the EU and selling the oil [13].

3. Regulatory Forecast: The "Green Deal" and Non-Tariff Barriers

The most significant shift in the next 3 years will not be price, but regulation. The European "Green Deal" and the "Farm to Fork" strategy are moving from political slogans to strict import requirements.

- Pesticide Residues: By 2025, the EU will lower the Maximum Residue Limits (MRLs) for several common pesticides used in Ukraine (e.g., chlorpyrifos).
- *Risk:* If "AGRO STAR UKRAINE" continues its current agronomic practices without change, its grain might be rejected at the border not because of politics, but because of chemistry.
- *Opportunity:* There is a growing premium (approx. €10–€15 per ton) for "Sustainable Grain"—corn or wheat that comes with a Carbon Footprint certificate. Our forecast shows that by 2026, access to the premium segment of the EU market will be impossible without sustainability certification (ISCC or equivalent).

- Traceability: European buyers (e.g., Nestlé, Danone) are demanding full traceability "from field to fork." They want to know exactly which field the corn came from and when it was harvested. The current model of selling to a trader who mixes everyone's grain in one silo destroys this traceability. Direct contracts are the only way to meet this future requirement.

4. Logistical Forecast: The "New Normal"

We must assume that the Black Sea deep-water ports will remain high-risk or partially restricted zones for the near future. Therefore, the "Plan B" logistics (Danube ports and Western Rail) must become "Plan A."

- Railway Capacity: The forecast suggests that the congestion at the Ukrainian-Polish border will persist, but efficiency will improve slightly as more private wagon fleets enter the market.
- Freight Rates: We predict a stabilization of road freight rates but no return to pre-war lows. The driver shortage in Ukraine (due to mobilization) and in Europe will keep trucking costs high.

The forecast indicates that "multimodal" transport will be the only viable long-term solution. Relying solely on trucks for 1000km distances will remain economically unfeasible.

Summary of the Forecast (SWOT-Forecast)

Based on these trends, we can summarize the outlook for LLC "AGRO STAR UKRAINE":

- Positive Scenario: The company successfully pivots to the Southern European market (Italy/Spain), obtains sustainability certification (ISCC), and signs direct contracts. Result: Stable demand and a price premium of €15-20/ton.
- Negative Scenario: The company continues to dump raw corn into the saturated Polish market. Result: Falling under new embargoes, facing price penalties for quality, and eventually losing the margin to logistics costs.

Strategic Conclusion:

The European market is not closed, but it is changing. It is shifting from a "commodity market" (buy anything that is cheap) to a "compliance market" (buy what is safe, green, and traceable). "AGRO STAR UKRAINE" has the production base to succeed in this market, but only if it changes its management approach. The forecast clearly dictates the need for Diversification (away from Poland), Certification (Green Deal compliance), and Direct Contracting. These three pillars will form the basis of the development scenarios we will model in the next section [11-13].

3.2. Development of scenarios for the prospects of export operations of the studied enterprise

The three scenarios are defined as follows:

1. The Pessimistic Scenario ("The Survival Trap"): Assumes a deterioration of the external environment (continued border blockades, falling prices) combined with a passive internal strategy (doing nothing to change the business model).

2. The Inertial Scenario ("Stabilization"): Assumes the external environment remains as it is in 2023, and the enterprise continues its current trajectory without major structural changes.

3. The Optimistic Scenario ("Strategic Breakthrough"): Assumes a moderate improvement in external conditions, but more importantly, a radical proactive transformation of the enterprise's management system (direct exports, processing, hedging).

2. Scenario A: The Pessimistic Scenario ("The Survival Trap")

- Hypothesis: This scenario models the risks of the "worst-case" development. It assumes that the geopolitical situation worsens (e.g., complete closure of the Polish border for transit), global grain prices decline due to overproduction in Brazil, and LLC "AGRO STAR UKRAINE" maintains its current passive management style.

- Detailed Narrative of the Scenario: In this scenario, the enterprise faces a "perfect storm." The management continues to rely on the export of raw corn to Polish intermediaries. However, under pressure from local farmers, the Polish government introduces strict quotas or a total embargo on Ukrainian grain. At the same time, logistics costs for the alternative route (via Romania) increase due to congestion. Internally, the lack of a specialized Foreign Economic Activity (FEA) department means the company cannot quickly pivot to new markets like Italy or Germany. The company is forced to sell grain at "distress prices" just to clear the elevator for the next harvest.

- Projected Economic Impact (2025-2026):

- Logistics Intensity: Will skyrocket to 50-55% of revenue. The cost of transporting a ton of corn will exceed the profit margin.
- Profitability: The Net Profit Margin will turn negative (-5% to -10%). The enterprise will begin to burn through its working capital reserves.
- Operational Consequence: To cover losses, the company will be forced to reduce the application of fertilizers and switch to cheaper, lower-quality seeds. This will lead to a spiraling decline in yield (from 9 tons/ha to 6 tons/ha), further deepening the crisis.
- Strategic Outcome: The enterprise loses its financial independence and risks bankruptcy or a hostile takeover by a larger agro-holding that has better logistics capabilities.
- Managerial Conclusion on Scenario A: This scenario highlights the existential danger of "doing nothing." It proves that the current model is fragile. If external pressure increases even slightly, the company's safety margin will vanish.

3. Scenario B: The Inertial Scenario ("Stagnation and Drift")

- Hypothesis: This is the "most likely" outcome if the management makes only minor cosmetic changes. It assumes that the war continues, the "Grain Corridor" operates intermittently, and the western borders remain open but slow. The company continues its current policy: exporting raw materials via intermediaries, solving problems as they arise but not planning strategically.
- Detailed Narrative of the Scenario: Under this scenario, LLC "AGRO STAR UKRAINE" functions as a "resource colony" for European traders. The company successfully exports its harvest (approx. 20,000 tons), but all the surplus value is captured by the logistics and trading partners.
- *Sales Structure:* 80% of sales remain Indirect (DAP Border). The company fails to enter the direct end-user market because it lacks English-speaking staff and ISCC certification.
- *Logistics:* The management continues to hire trucks on the spot market. During harvest peaks, they pay premium rates; during lulls, they pay average rates. There is no systemic optimization.

- *Financials:* The company remains profitable, but barely. The "inflationary revenue" grows, but real purchasing power stagnates. The company has enough money to sow the next crop but not enough to invest in modernization (e.g., buying new trucks or building a flour mill).

- Projected Economic Indicators (2025):

  - Export Volume: Stable at ~19,000 – 20,000 tons.

  - Net Profit Margin: Stagnates at 8–10%. This is dangerously low for agriculture, where one bad weather season can wipe out 10% of the margin.

  - Opportunity Cost: By remaining in this scenario, the company effectively loses approximately $300,000–$400,000 annually—money that ends up in the pockets of Polish intermediaries and transport companies.

- Risk Assessment of the Inertial Scenario: The greatest risk here is the "slow death" of competitiveness. While "AGRO STAR UKRAINE" stagnates, European competitors are becoming more efficient (precision farming, green energy), and larger Ukrainian holdings are building their own logistics fleets. In 3–5 years, the Inertial Scenario inevitably degrades into the Pessimistic Scenario as the company's equipment wears out and cannot be replaced due to low profits.

4. Scenario C: The Optimistic Scenario ("The Strategic Breakthrough")

- Hypothesis: This scenario represents the core proposal of this thesis. It assumes that the external environment remains challenging (volatility, logistics constraints), but the management of LLC "AGRO STAR UKRAINE" implements a radical, proactive transformation of its export model. The goal is not merely to survive, but to recapture the added value currently lost to intermediaries and logistics providers. This scenario is built on the implementation of the "Active Export Strategy."

- Strategic Pillars of the Optimistic Scenario:

To realize this scenario, the enterprise must execute three simultaneous strategic maneuvers:

1. Vertical Integration of Logistics: Moving from "spot market" hiring to long-term forwarding contracts or acquiring a dedicated fleet.

2. Disintermediation (Direct Contracting): Establishing direct sales channels with end-users in the "Deficit Zone" (Italy, Spain, Germany).

3. Product Differentiation: Transitioning from selling "generic corn" to selling "certified sustainable corn" (ISCC) or processed products.

Detailed Roadmap for Implementing the Optimistic Scenario (2024–2026)

Phase 1: Institutional Capacity Building (Months 1–6)

Before the company can export differently, it must organize differently.

- *Action 1: Creation of the FEA Unit.* The company hires a specialized Export Manager with fluency in English and knowledge of EU commercial law. This manager's KPI is not "volume sold" but "average price per ton."

- *Action 2: Certification Audit.* The company initiates the ISCC EU (International Sustainability and Carbon Certification) audit. This is the "ticket" to the premium European market. Without this, the grain is treated as "non-compliant" and sold at a discount.

- *Action 3: Logistics Tendering.* Instead of calling trucks day-by-day, the new manager announces a tender for a 6-month volume contract (e.g., 5,000 tons). This allows the company to fix transport rates 10-15% below the spot market peak.

Phase 2: Market Diversification and Pilot Shipments (Months 7–12)

- *The "Italian Vector":* The company signs a pilot contract for 1,000 tons of corn with a feed mill in Northern Italy. Why Italy? Because the price differential between Poland and Italy (the "basis") is often €30–€40 per ton, which covers the extra rail cost and leaves a higher margin.

- *The "Tolling" Experiment:* Instead of exporting raw sunflower seeds, the company signs a tolling agreement with a Ukrainian oil crushing plant. "AGRO STAR UKRAINE" delivers the seeds, pays for the processing (approx. $30/ton), and receives the sunflower oil.

- *Efficiency Logic:* One truck of oil (22 tons) is worth approx. $20,000. One truck of seeds is worth $9,000. By exporting oil, the *Logistics Intensity* drops by half because the cargo is twice as valuable.

Phase 3: Scaling and Systematization (Year 2)

- *Direct Rail Contracts:* The company moves from truck logistics to direct rail contracts. It rents a "block train" (route train) to move grain to the border. This reduces the per-ton logistics cost by 15% compared to road transport.
- *Financial Hedging:* The company begins using "Forward Contracts" on the MATIF exchange. This allows them to "lock in" a selling price of €220/ton in March for a harvest that will happen in October, protecting against price crashes.

5. Projected Economic Impact of the Optimistic Scenario

If these managerial actions are implemented, the economic model of the enterprise changes fundamentally.

- Revenue Quality: The Average Selling Price per ton increases by $20–$25. This comes from:
- +$10/ton: The "Trader's Margin" captured by bypassing the Polish intermediary.
- +$10/ton: The "Quality Premium" for ISCC certified grain.
- +$5/ton: Seasonal price optimization (selling in winter due to better cash flow planning).
- Cost Optimization: The Logistics Intensity Index decreases from 38% to 28%.
- This 10% reduction is not magic; it comes from switching 50% of volume to rail and avoiding peak-season truck rates.

Net Profit Margin: Under this scenario, the Net Profit Margin recovers to 20–22%. The company returns to the zone of "sustainable growth," generating enough free cash flow to invest in new technology (e.g., a drone spraying fleet or soil analysis lab).

6. Risk Management Matrix for the Optimistic Scenario

Implementing such a complex strategy involves risks. A professional management plan must anticipate them.

Table 3.1

Risk Mitigation Matrix for the Strategic Scenario

Risk Factor	Probability	Impact	Mitigation Strategy (The "Plan B")
1. Non-Payment by Foreign Buyer	Medium	Critical	Credit Insurance: Use "Export Credit Agency" (ECA) insurance policies. Require 20% prepayment or Letter of Credit (LC) for new partners.
2. Border Blockade (Poland)	High	High	Diversification: Maintain the "Romanian Route" (via Constanta) active for 30% of volume, even if slightly more expensive, to keep the channel open.
3. Rejection of Quality (Phyto)	Medium	Medium	Pre-Shipment Inspection: Hire independent surveyors (SGS/Bureau Veritas) to check quality *at the farm elevator* before the truck leaves, not at the border.
4. Currency Fluctuation	High	Low	Natural Hedging: Keep export earnings in EUR/USD accounts to pay for imported fuel and seeds directly, avoiding conversion losses.

Source: developed by author

Table 3.2

Strategic Scenarios for Export Development of LLC "AGRO STAR UKRAINE" (2024–2026)

Feature	Scenario A: Pessimistic ("The Survival Trap")	Scenario B: Inertial ("Stagnation")	Scenario C: Optimistic ("Strategic Breakthrough")
Basic Hypothesis	Deterioration of external conditions + Passive management.	Status Quo continues + Cosmetic changes only.	Moderate external conditions + Active management transformation.

Feature	Scenario A: Pessimistic ("The Survival Trap")	Scenario B: Inertial ("Stagnation")	Scenario C: Optimistic ("Strategic Breakthrough")
Sales Strategy	100% Indirect Export (selling to traders at the border).	80% Indirect / 20% Direct. No systematic changes.	Transition to Direct Export (60%) + ISCC Certification.
Logistics Model	Spot market reliance. High exposure to price spikes.	Mixed model. Occasional delays at borders.	Vertical Integration: Long-term rail contracts + Own fleet optimization.
Product Portfolio	Raw Corn (Low Margin).	Corn + Wheat.	Differentiation: Certified Sustainable Corn + Niche crops.
Projected Logistics Intensity	> 50% (Critical)	35–38% (High)	< 28% (Optimized)
Projected Net Margin	Negative (-5%)	Stagnant (8–10%)	Growth (20–22%)
Strategic Outcome	Loss of financial independence; potential bankruptcy.	"Treading water"; gradual loss of competitiveness.	Restoration of profitability; investment in modernization.

Source: developed by author

To conclude Section 3.2, we must compare the trajectories.

- *The Pessimistic path* leads to the erosion of capital and eventual loss of independence. The company becomes a "zombie farm" working only to pay its debts.
- *The Inertial path* offers stability but no growth. It leaves the company vulnerable. It is a "treading water" strategy—working hard just to stay afloat.
- *The Optimistic path* is the only viable long-term strategy. It requires effort (hiring new people, learning new laws, taking risks), but it offers the only way to escape the "Logistics Trap." By capturing the added value currently given to traders and transporters, "AGRO STAR UKRAINE" can secure its future.

The scenario modeling clearly demonstrates that the future of LLC "AGRO STAR UKRAINE" is not pre-determined by the war or the market. It is determined by the quality of management decisions. The difference between the Inertial and Optimistic scenarios is approximately $400,000 – $500,000 of Net Profit per year. This is the "Price of Management." In the final section of this chapter (3.3), we will calculate the specific economic justification for the most critical element of this strategy: the switch to direct contracting.

3.3. Economic justification of the managerial decision regarding export operations of LLC "AGRO STAR UKRAINE"

1. The Essence of the Proposed Managerial Decision

Based on the forecast in Section 3.1 and the scenario modeling in Section 3.2, the central recommendation of this thesis is the transition of LLC "AGRO STAR UKRAINE" from a passive strategy (Indirect Export) to an active strategy (Direct Export) [33-37].

This is not an abstract concept; it is a specific investment project. We propose the implementation of a project titled: "Establishment of an Internal Foreign Economic Activity (FEA) Department and Transition to Direct Contracting."

To implement this decision, the enterprise must incur specific Project Costs:

1. Personnel: Hiring a qualified Export Manager (salary + bonus).
2. Certification: Obtaining ISCC (International Sustainability and Carbon Certification) to access premium EU markets.
3. Software: Purchasing specialized logistics management software (TMS).
4. Marketing: Budget for visiting trade expos (e.g., Biofach in Germany) to find direct buyers.

2. Calculation of Project Implementation Costs

First, we must calculate the investment required to launch this new strategy.

Table 3.2.

Budget for the Implementation of the FEA Department (Annual)

Cost Item	Monthly Cost (UAH)	Annual Cost (UAH)	Annual Cost ($ equivalent)
1. Export Manager Salary (incl. taxes)	60,000	720,000	$18,000
2. ISCC Certification Audit (Annual Fee)	-	120,000	$3,000
3. Legal Consulting (Contract Review)	10,000	120,000	$3,000
4. Business Travel (EU Negotiations)	-	200,000	$5,000
5. Analytical Subscriptions (Price Data)	5,000	60,000	$1,500
TOTAL INVESTMENT COSTS	-	1,220,000 UAH	$30,500

Source: developed by author

Analysis: The project requires an annual investment of approximately $30,500. For a company with millions in turnover, this is a relatively low entry barrier. The key question is: will the economic benefit exceed this $30,500 cost? [34].

3. Calculation of Expected Economic Benefits

The economic benefit comes from two sources:

1. The "Disintermediation Effect": Eliminating the middleman (trader) allows the company to capture the margin that currently stays in Poland. As calculated in Section 2.3, this margin is approx. $23 per ton for corn.
2. The "Logistics Optimization Effect": Direct rail contracts are expected to save $5 per ton compared to spot truck rates.
3. Total Benefit per Ton: $23 + $5 = $28 per ton.

Conservative Estimate: We assume that in the first year, the new Export Manager will switch only 50% of the export volume (approx. 10,000 tons) to direct contracts, while the remaining 50% will still be sold to traders as a safety net.

Calculation of Total Additional Profit:

Economic Effect = (Volume × Benefit per ton) − Project costs

Economic Effect = (10,000 tons × $28) − $30,500

Economic Effect = $280,000 − $30,500 = +$249,500

Result: The project pays for itself almost ten times over. The Net Present Value (NPV) is highly positive.

4. Comparative Efficiency Analysis: "Before vs. After"

To formally justify this decision, we present a comparative table showing how the key efficiency indicators (defined in Chapter 1.3) will change after implementation.

Table 3.3

Projected Efficiency Indicators of LLC "AGRO STAR UKRAINE"

Indicator	Current State (2023)	Projected State (2025)	Deviation (+/-)
1. Export Volume (tons)	19,500	20,000	+500
2. Share of Direct Contracts (%)	18%	65%	+47 p.p.
3. Average Net Price (FCA)	$147 / ton	$175 / ton	+$28
4. Total Export Revenue	$4.15 mln	$4.94 mln	+$0.79 mln
5. Logistics Intensity (L_{int})	38.0%	28.5%	-9.5 p.p.
6. Net Profit from Exports	$253,000	$502,500	+$249,500
7. Export Profitability (R_{exp})	6.1%	11.3%	+5.2 p.p.

Source: developed by author

Analytical Conclusion to Table 3.3:

The implementation of the proposed strategy radically transforms the economic health of the enterprise.

- Profit Doubling: The Net Profit from exports nearly doubles (from $253k to $502k).
- Efficiency Recovery: The Profitability rises to 11.3%, moving the company out of the "survival zone" and into the "development zone."
- Structural Change: The Logistics Intensity drops below the critical 30% threshold, meaning the company regains control over its margins.

5. Final Recommendation

Based on the calculations above, the managerial decision to establish an FEA Department is economically justified and urgent. The cost of delay (opportunity cost) is approximately $20,000 per month in lost profits. Therefore, it is recommended to commence the recruitment of an Export Manager immediately in Q1 2024 to prepare for the 2024 harvest season [32].

1. Calculation of Project Implementation Costs (C_IMP) First, we must determine the cost of the structural changes. The creation of an internal Foreign Economic Activity (FEA) function does not require a large department, but it does require specific expertise. The annual budget for the implementation of the strategy is calculated as follows:

- Salary of Export Manager: $1,500/month × 12 months = $18,000
- ISCC Certification Costs: Audit fees and consulting = $3,000
- Marketing & Business Travel: Participation in EU expos (e.g., Biofach, Anuga) = $9,500

Total Annual Implementation Cost (C_IMP) = $30,500

2. Calculation of Additional Revenue from Direct Contracting (E_MARGIN) The primary source of profit is the price differential. Currently, intermediaries purchase corn at the border (DAP Izov) at a discount. By selling directly to a processing plant in Italy, the enterprise captures the "Trader's Margin."

- V_DIRECT (Volume for Direct Contracts): 10,000 tons (Conservative estimate, 50% of total export).
- P_PREMIUM (Price Premium): $23 per ton (The difference between the trader's price and the direct contract price).

The formula for additional margin revenue is:

E_MARGIN = V_DIRECT X P_PREMIUM

Calculation: E_MARGIN = 10,000 tons X $23 = $230,000

3. Calculation of Savings from Logistics Optimization (E_LOG) By switching from spot-market truck logistics to long-term rail forwarding contracts, the enterprise reduces the cost per ton.

- S_LOG (Logistics Saving per Ton): $5 per ton.

The formula for logistics savings is:

E_LOG = V_DIRECT X S_LOG

Calculation: E_LOG = 10,000 tons X $5 = $50,000

4. Calculation of Total Additional Profit (E_TOTAL) Finally, we calculate the Total Economic Effect by summing the benefits and subtracting the implementation costs.

The formula is defined as:

E_TOTAL = (E_MARGIN + E_LOG) - C_IMP

Substituting the calculated values:

1. Sum of Benefits: $230,000 + $50,000 = $280,000
2. Subtract Costs: $280,000 - $30,500
3. E_TOTAL = $249,500

5. Return on Investment (ROI) To demonstrate the efficiency of this managerial decision, we calculate the Return on Investment ratio for the export project:

ROI = (E_TOTAL / C_IMP) X 100%

Calculation: ROI = ($249,500 / $30,500) X 100% = 818%

In the third chapter, strategic directions for improving the efficiency of export operations were substantiated and economically justified [51,52]:

1. Scenario Forecast: Through scenario modeling, we determined that the "Inertial Scenario" (maintaining the status quo) leads to stagnation with a low margin of 8–10%. The "Pessimistic Scenario" carries the risk of bankruptcy if border blockades intensify. Therefore, the "Optimistic Scenario," based on active management transformation, was selected as the only viable development vector.

2. Strategic Solution: The core recommendation is the transition to an "Active Export Strategy." This involves the creation of an internal Foreign Economic Activity (FEA) function, the establishment of direct contracts with European processors, and the optimization of logistics through long-term rail forwarding.

3. Economic Justification: The calculations prove the high efficiency of the proposed measures. With an annual investment of $30,500 for staffing and certification, the enterprise will generate an additional $249,500 in net profit. The implementation of this strategy is projected to increase the Net Export Profitability to 11.3% and reduce Logistics Intensity to 28.5%, securing the strategic sustainability of LLC "AGRO STAR UKRAINE".

CONCLUSIONS

In this thesis, we have conducted a comprehensive theoretical and practical study of the management of export operations at the agricultural enterprise LLC "AGRO STAR UKRAINE". Based on the research tasks set in the Introduction, we have reached the following conclusions:

1. We determined that under modern geopolitical conditions, the essence of "export operations" has shifted from simple sales to complex supply chain management. The efficiency of an agricultural exporter is no longer defined by yield per hectare, but by logistics intensity and structural flexibility. We established that "Direct Export" is the most efficient form of organization, as it allows the producer to capture the full value-added margin, whereas "Indirect Export" (selling to traders) serves only as a risk-mitigation tool with low profitability.

2. The diagnostic analysis of LLC "AGRO STAR UKRAINE" revealed a "profitability paradox." While the enterprise successfully restored its physical export volumes in 2023 (19,500 tons), its economic efficiency collapsed. The company suffers from a Logistics Intensity of 38%, meaning over one-third of revenue is lost to transport costs. The sales structure is passive, with 82% of grain sold to intermediaries at the Polish border. As a result, the enterprise loses approximately $415,000 annually in potential margin that is captured by traders. The diagnosis confirmed that the current business model is a "survival strategy" that depletes the company's potential.

3. To resolve these inefficiencies, we developed a strategic improvement plan (Chapter 3) based on European market forecasting. The forecast identified a structural deficit of grain in Southern Europe (Italy/Spain) and a growing demand for certified sustainable products. We proposed the "Active Export Strategy," which consists of: Institutional Change: Creating a dedicated Foreign Economic Activity (FEA) department. Market Diversification: Bypassing Polish intermediaries to sign direct contracts with Italian feed mills. Certification: Obtaining ISCC certification to unlock a price premium.

4. Economic Justification. The calculations in Section 3.3 prove the feasibility of this strategy. The investment required to launch the FEA department is $30,500 per year. However, the expected economic benefit from disintermediation and logistics optimization is $249,500 per year. The implementation of this strategy will increase the Net Export Profitability from 6.1% to 11.3% and reduce Logistics Intensity to 28.5%.

The hypothesis of the thesis is confirmed. The improvement of export operations management at LLC "AGRO STAR UKRAINE" is not only possible but necessary. By transitioning from a "passive resource supplier" to an "active market player," the enterprise can secure its financial sustainability and ensure long-term development despite the challenging external environment.

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